The California Environmental Quality Act (CEQA) requires an Environmental Impact Report (EIR) to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents discussion of CEQA-mandated analysis for cumulative impacts and irreversible impacts associated with the Project. As described below, this section also includes an analysis of the Project's growth inducing impacts.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

INTRODUCTION

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the Project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

> …the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

1) Either:

   (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

   (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

CUMULATIVE SETTING

The cumulative analysis for this EIR is based on the Sonoma County General Plan and associated EIR. The General Plan EIR (see Exhibit 4.1-4) anticipated an increase of 1,539 housing units and 4,631,994 square feet of non-residential uses in the Sonoma Valley Planning Area (a General Plan defined area), which includes the Project and its Plan area.

In addition to the cumulative growth projections and corresponding analysis provided by the Sonoma County General Plan and General Plan EIR, the cumulative traffic analysis also assumed the following:

- Future Conditions – Future increases in traffic volumes within the study area and along the Highway 12 corridor were obtained through use of the Sonoma County Transportation Authority's (SCTA) travel demand model, which includes a horizon year of 2040. A special "run" of the model was conducted in which the existing land uses within the Plan area were assumed to remain unchanged, while regional growth continues to occur. The resulting traffic volumes were used to establish estimates of the future traffic operation in the area without implementation of the Project. By comparing this No Project scenario (General Plan buildout) to the Plus Project scenario, a clear understanding of the Project's contribution to potential future transportation impacts may be established for CEQA purposes.

The cumulative traffic scenarios and assumptions are described in greater detail in Section 3.13. Cumulative Project impacts are addressed and summarized below.

CUMULATIVE EFFECTS OF THE PROJECT

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines 15355[b]). Consistent with state CEQA Guidelines §15130(a), the discussion of cumulative impacts in this Draft EIR focuses on significant and potentially significant cumulative impacts. According to §15130(b) of the State CEQA Guidelines, in part, "[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

The goal of analysis of cumulative impacts is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the Project itself would cause a "cumulatively considerable" (and thus significant) incremental contribution to any such cumulatively significant impacts. (See state CEQA Guidelines §§15130[a]-[b], §15355[b], §15064[h], §15065[c]; *Communities for a Better Environment v. California Resources Agency* [2002] 103 Cal.App.4th 98, 120.) In other words, the required analysis first creates a broad context in which to assess the project's incremental contribution to anticipated cumulative impacts, viewed on a geographic scale well beyond the Plan area itself, and then determines whether the Project's incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., "cumulatively considerable").

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify and assess potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. This EIR uses the projection approach for the cumulative analysis and considers the development anticipated to occur upon buildout of the Sonoma County General Plan.

Project Assumptions

The Project's contribution to environmental impacts under cumulative conditions is based on full buildout of the Project. See Chapter 2.0, Project Description, for a complete description of the Project.

Cumulative Impacts

Cumulative impacts for most issue areas are not quantifiable and are therefore discussed in general terms as they pertain to development patterns in the surrounding region. Exceptions to this are traffic, noise and air quality (the latter two of which are associated with traffic volumes), which may be quantified by estimating future traffic patterns, pollutant emitters, etc. and determining the combined effects that may result. In consideration of the cumulative scenario described above, the Project may result in the following cumulative impacts.

AESTHETICS AND VISUAL RESOURCES

Impact 4.1: Project implementation may contribute to the cumulative degradation of the existing visual character of the region (Cumulatively Considerable and Significant and Unavoidable)

The cumulative setting for aesthetics is the Sonoma Valley Planning Area, as defined in the Sonoma County General Plan. Under cumulative conditions, buildout of the Sonoma County General Plan would result in changes to the visual character of the Sonoma Valley Planning Area and result in impacts to localized views as new development occurs within the County and the Planning Area.

As described in Section 3.1, Aesthetics and Visual Resources, there are no officially designated Scenic Highways in the Plan area. Because the Plan area is not located within a state scenic highway, implementation of the Project would not result in substantial damage to scenic resources within a state scenic highway.

While the Plan area is largely developed, existing scenic views of the Sonoma Valley may be diminished following buildout of the Project. As discussed in Chapter 3.1 under Impact 3.1-1, the Plan area is of High

visual sensitivity and the Project would result in development and improvements that are generally Co-Dominant with the surrounding visual environment. The implementation of the Project, including policies in the Specific Plan Land Use Chapter and the Design Guidelines, the goals, policies, and objectives of the General Plan (listed in Section 3.1.2, Regulatory Setting, of Section 3.1), and the County's Zoning Code requirements (summarized in Section 3.1.2, Regulatory Setting, of Section 3.1), would ensure that impacts are reduced to the greatest extent feasible. Specifically, the Land Use Chapter of the Specific Plan includes Policies SLU-1b, SLU-1c, SLU-1m, SLU-3e, SLU-3j, and SLU-3k, which generally require and/or encourage that future development be compatible with the character of the Springs, include open space or other public spaces, and integrate with the surrounding environment. Additionally, the Design Guidelines include provisions related to building scale and design, surrounding land uses, public spaces, landscaping, and fences. These proposed policies and guidelines would ensure that future development and redevelopment projects would integrate into the surrounding environment.

The design requirements ensure future development is visually compatible with the Springs area, including design of buildings to reduce bulk, use of color consistent with the community, and use of high quality materials. Measure AES-1, further requires development projects to limit the extent of site disturbance, reduce building envelopes, make building colors and textures consistent with the surrounding environment, require screen vegetation and landscape plans prior to design review, require exterior lighting plans to be subject to design review, reduce the impact from exterior lighting, and provide for energy efficient lighting. Further, the County General Plan objectives and policies encourage preservation of open space areas, retention of rural character, and preservation of roadside landscapes. These objectives and policies are further strengthened and implemented through the various Zoning Code requirements, including the Local Area Development Guidelines. The Local Area Development Guidelines for Highway 12 established by Section 26-90-110 do not establish enforceable standards, but rather are permissive in nature providing a series of recommendations for the Plan area. In the Plan area, the Local Area Development Guidelines would be superseded by the Specific Plan, which includes enforceable policies and design standards. Future development would be reviewed to ensure that future projects comply with the Specific Plan, including the Design Guidelines, the County Zoning Code, and the County General Plan.

While the Plan area is largely urbanized and developed, the Project would allow for an increase in intensity and density of the existing land uses. Development would occur on either vacant, infill parcels, or on parcels where redevelopment potential exists. As described above, future development and design review processes would ensure that future uses are pedestrian scale, blend with the existing built environment, and connect to existing and future open space and public space. However, the Project has the potential to modify views along the scenic corridor and introduce dominant and co-dominant features into an area with a High visual sensitivity.

Further, the Specific Plan includes Design Guidelines for exterior lighting that would reduce potential adverse impacts associated with light and glare. The exterior lighting guidelines require the use of light shielding fixtures. The building character guidelines prohibit the use of reflective or mirrored glass in order to reduce glare. Future development within the Plan area is also subject to design review and approval. Implementation of the Design Guidelines in the Specific Plan would ensure that future project lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the design requirements, and the subsequent design review of future projects within the Plan area, would ensure that excessively reflective building materials are not used, and that the Project would not result in significant impacts related to daytime glare. As such, through

implementation of the Specific Plan's Design Guidelines, the County can ensure that adverse impacts associated with daytime glare and nighttime lighting are less than cumulatively considerable.

However, future development would result in densification of urban uses along the Highway 12 corridor and in the Donald/Verano neighborhood, including increased building heights and building mass. Use of conspicuous colors would be allowed that have the potential to focus a viewers' attention on Plan area development and divert the focus from views of the existing development, landscape, and background views of the Sonoma Valley. The Project has also the potential to modify views along the scenic corridor and introduce dominant and co-dominant features into an area with a High visual sensitivity. Therefore, cumulative impacts related to the existing visual character of the region and changes to scenic views would be **cumulatively considerable** and **significant and unavoidable**.

AIR QUALITY

Impact 4.2: Project implementation may contribute to cumulative impacts on the region's air quality (Less than Cumulatively Considerable)

CEQA requires lead agencies to determine whether a project is consistent with all applicable air quality plans. The Bay Area Air Quality Management District's most current plan is the 2017 Clean Air Plan. The primary goals of the 2017 Clean Air Plan are to protect public health and the climate. The 2017 Clean Air Plan contains 85 individual control measures that describe specific actions to reduce emissions of air and climate pollutants from the full range of emission sources. The control measures are categorized based upon the economic sector framework used by the Air Resources Board for the AB 32 Scoping Plan Update.

As discussed under Impact 3.2-1 in Section 3.2, Air Quality, the Project is consistent with the 2017 Clean Air Plan and includes goals and policies that are consistent with and support components of the 2017 Clean Air Plan's integrated, multi-pollutant control strategy to reduce emissions of particulate matter, TACs, ozone precursors, and greenhouse gases, including Specific Plan goals, policies, and planned circulation infrastructure in support of transit, bicycling, walking, electric vehicles, and energy efficiency. The Project would also comply with the latest state legislation relating to water and waste management, which ensures that the Project would not conflict with the key elements of the 2017 Clean Air Plan relating to the water and waste management sectors. Separately, the Project does not include new stationary sources (i.e., industrial facilities, landfills, wastewater treatments plants, etc.), and therefore would not conflict with the key elements of the 2017 Clean Air Plan relating to stationary sources. Moreover, the Project does not propose agricultural land uses, or land uses that would use "super-GHGs', such as methane, black carbon, or fluorinated gases, which can have very large greenhouse gas effects.

If approval of the Project would cause the disruption, delay, or otherwise hinder the implementation of any air quality plan control measure, it may be inconsistent with the 2017 Clean Air Plan. The Project does not cause the disruption, delay, or otherwise hinder the implementation of any quality plan control measure; therefore, it is consistent with the 2017 Clean Air Plan. Additionally, the Project is consistent with the existing Sonoma County General Plan policies related to air quality. The existing Sonoma County General Plan Open Space and Resource Conservation Element includes an extensive list of objectives and policies that are specifically aimed at improving air quality. The Project is consistent with these objectives and policies, which are presented under the Regulatory Setting in Section 4.2, by promoting a compact urban development form, emphasizing infill development, and ensuring that land use patterns do not expose sensitive receptors to pollutant concentrations.

The BAAQMD's May 2017 CEQA Guidelines also identify thresholds of significance for criteria air pollutants and precursors for planning-level documents. As described in Section 2.7.1 of the 2017 CEQA Guidelines, proposed plans (except regional plans) must show the following over the planning period of the plan to result in a less than significant impact:

- Consistency with current air quality plan control measures.
- A proposed plan's projected vehicle miles traveled (VMT) or vehicle trips (VT) (either measure may be used) increase is less than or equal to its projected population increase.

The analysis provided under Impact 3.2-1 in Section 3.2, Air Quality, demonstrates that the Project would be consistent with the current air quality plan control measures.

The following discussion describes VMT and population increases associated with implementation of the Project.

The Project is intended to foster a vibrant, attractive, multimodal community with increased opportunities for housing and improved circulation for pedestrians, bicyclists, and transit. The Project will accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential development. In order to analyze the proposed Plan's consistency with the BAAQMD thresholds listed above, this analysis looks at population growth when analyzing relative increases in local VMT.

According to the Sonoma County Transportation Authority travel model, future daily VMT in Sonoma County (under regional buildout) would be 28,570,046 miles (W-Trans, 2021). The "Project-only" daily VMT under regional buildout would be 51,459 miles. Sonoma County has an existing population of 504,217 (U.S. Census, 2017). Full buildout of the Springs Specific Plan is expected to generate approximately 1,977 residents (consistent with the scenario modelled by W-Trans).

Implementation of the Project would result in an approximately 0.18% increase in County-wide VMT, compared to a 0.39% increase in County-wide population. Therefore, the VMT increase associated with the Project is lower than the population growth associated with the General Plan. The Project would not result in VMT increases that would exceed the adopted thresholds.

The Project would further the fundamental goals of the BAAQMD in reducing emissions of criteria pollutants associated with VMT, increase opportunities for transit ridership, and improve circulation for pedestrians and bicyclists in the Plan area and the surrounding areas.

Moreover, the implementation of the relevant Sonoma County General Plan objectives and policies, and implementation of Specific Plan Measures Air-B and Air-C (as identified in Section 3.2: Air Quality), would ensure that TAC impacts associated with the Specific Plan are minimized to the maximum extent feasible. Separately, the Specific Plan area does not propose any land uses within the vicinity of any potential source of objectionable odors and does not include uses that are anticipated to result in significant levels of objectionable odors or other emissions not previously analyzed. Individual developments with the Plan Area that have the potential to generate objectionable odors, such as restaurants, would be required to comply with all State and local regulations associated with cooking equipment and controls Therefore, implementation of the Project would have a **less than cumulatively considerable** impact relative to this topic.

BIOLOGICAL RESOURCES

Impact 4.3: Project implementation may contribute to the cumulative loss of biological resources including habitats and special status species (Less than Cumulatively Considerable)

The cumulative setting for biological resources includes the Plan area and the greater Sonoma County region. Implementation of the Project, including the Zoning Map, would allow future development in the Plan area at densities and intensities greater than currently allowed, which could result in adverse impacts to special-status plant and wildlife species, as well as sensitive natural habitat or wildlife movement corridors. Implementation of regional, State and federal regulations, such as the Endangered Species Act would minimize risks to sensitive populations and reduce cumulative impacts throughout the region.

As described in Section 3.3, Biological Resources, future development within the Plan area has the potential to result in impacts to special-status species. Occurrences of special-status species have been documented in the Plan area. As described in Section 3.3, subsequent development projects will be required to comply with the County's General Plan and adopted Federal, State, and local regulations for the protection of special-status plants and animals, including habitat. The Sonoma County General Plan includes numerous objectives and policies intended to protect special-status plants and animals, including habitat, from adverse effects associated with future development and improvement projects. The Specific Plan Design Guidelines Chapter includes Measure Bio-A, which requires plant surveys prior to construction in areas along the Agua Caliente Creek corridor and the Pequeno Creek corridor. Measure Bio-B requires avoidance and minimization measures (such as preconstruction surveys, corrective measures, and construction personnel training) for amphibian and reptile species. Measure Bio-C requires avoidance and minimization measures (such as measures should instream construction be required) for steelhead – Central Valley DPS. Measure Bio-D requires preconstruction surveys and appropriate buffers for bird species. Measure Bio-E requires surveys and buffers for bat maternity roosts if removal of roosting areas would occur during the bat pupping season.

While future development of the Plan area has the potential to result in significant impacts related to biological resources, the implementation of the mitigation measures summarized above, as well as Federal and State regulations, would reduce impacts to these resources. This is considered a **less than cumulatively considerable** impact.

CULTURAL AND TRIBAL RESOURCES

Impact 4.4: Project implementation may contribute to cumulative impacts on known and undiscovered cultural resources (Less than Cumulatively Considerable)

The cumulative setting for cultural resources includes the Plan area and the surrounding areas of Sonoma County. Cumulative development anticipated in the Plan area and the greater Sonoma County area, including growth projected by adopted general plans, may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. As discussed in Section 3.4, Cultural Resources, and Section 3.15, Tribal Cultural Resources, the Plan area is located in an area known to have historical and tribal cultural resources. The results of Sacred Land files search were negative. Seventeen cultural resources have been identified within Plan area, according to files maintained by the Northwest Information Center (Information Center) of the California Historical Resources Information System (CHRIS). The CHRIS records search identifies buildings, structures, historic sites, prehistoric sites, and any other cultural resources that have been reported to

the Information Center, but does not indicate the potential significance of the resources. The Information Center did not indicate that any of the reported resources are included on the California Office of Historic Preservation's Archaeological Determination of Eligibility list. In addition, none are listed on the California Register of Historic Resources or the National Register of Historic Places.

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance of an archaeological, historic, or tribal cultural resource or the discovery of a previously unknown archaeological, historical, and/or tribal cultural resource.

The Sonoma County General Plan policies and objectives provide a robust framework for ensuring that effects on significant historic, archaeological and tribal cultural resources are reduced. Additionally, Section 11.14.050 of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

As discussed in Section 3.4, the Specific Plan includes Measure Cult-A, which requires additional site-specific measures and sensitivity training for future projects within the Plan area. This measure is consistent with CEQA Guidelines Section 15064.5. Measure Cult-B requires a site-specific cultural or archaeological survey to be performed for all project sites within the Plan area where a known cultural, archaeological, or cultural resource is located or where the site is sensitive for such resources. The Specific Plan includes measures TCR-A, B, and C which require resources consultation and coordination for all discretionary projects and avoidance of known resources. Measures TRC-C and TRC-D are protocol for if cultural resources are identified in the project area. These measures are consistent with CEQA Guidelines Section 15064.5 which requires a site-specific cultural or archaeological survey to be performed for all ground-disturbing projects located on sites within the Plan area where a known cultural, archaeological, or cultural resource is located or where the site is sensitive for such resources. Implementation of Specific Plan Measures Cult-A and Cult-B and TCR-A through TCR-E, in addition to General Plan policies and objectives, would ensure that this potential cumulative impact to cultural resources and tribal cultural resources is **less than cumulatively considerable**.

GEOLOGY AND SOILS

Impact 4.5: Project implementation may contribute to cumulative impacts on geologic and soils characteristics (Less than Cumulatively Considerable)

The cumulative setting area for geology and soils includes the Plan area. As discussed in Section 3.5, Geology and Soils, implementation of the Project would not result in any significant impacts related to this environmental topic. Geologic and soil impacts tend to be site-specific and project-specific. Implementation of the Project would not result in increased risks or hazards related to geologic conditions in the cumulative setting area, nor would it result in any off-site or indirect impacts. This is considered to be a **less than cumulatively considerable** impact, and no further mitigation is required.

GREENHOUSE GASES AND ENERGY

Impact 4.6: Project implementation may contribute to cumulative impacts on greenhouse gases and climate change (Cumulatively Considerable and Significant and Unavoidable)

The cumulative setting for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

The analysis of GHGs and climate change included in Section 3.6 was conducted at the cumulative level, since the potential impacts associated with GHGs (i.e. climate change) are global in nature. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. The proposed Specific Plan would establish land use designations to allow development in an area that currently contains residential, commercial, office, and public uses. Future development of the Specific Plan area would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to such future development would be primarily associated with increases of CO_2 and other GHG pollutants, such as CH_4 and N_2O, from mobile sources and utility usage.

As described in Section 3.6, the Project would comply with all relevant goals, policies, and actions as provided with the Sonoma County General Plan, the Sonoma County Climate Change Action Resolution, and Plan Bay Area 2050. Moreover, the Project would be consistent the applicable GHG emissions efficiency thresholds as promulgated by the BAAQMD. However, although the Project would achieve the year 2030 per service population efficiency target in year 2030, it would not achieve the year 2050 per service population efficiency target in year 2050, as provided in the CARB 2017 Climate Change Scoping Plan. Therefore, the Project would not be in full compliance with all relevant federal, state, and local strategies to help reduce GHG emissions. This is considered to be a ***significant and unavoidable*** and ***cumulatively considerable*** impact.

HAZARDS AND HAZARDOUS MATERIALS

Impact 4.7: Project implementation may contribute to cumulative impacts related to hazards and hazardous materials (Less than Cumulatively Considerable)

The cumulative setting area for hazards and hazardous materials is the Sonoma Valley Planning Area. As discussed in Section 3.7, Hazards and Hazardous Materials, implementation of the Project would not result in any significant impacts related to hazards, including wildfire risks, and hazardous materials. Impacts related to exposure to hazardous materials impacts tend to be site-specific and project-specific. As discussed in Sections 3.7 and 3.16, the Project is not located within or adjacent to a Very High Fire Hazards Severity Zone and does have areas identified as Moderate and High Fire Hazard Severity Zones. As discussed in Section 3.7-4, the Project would not impair implementation with or physically interfere with an adopted emergency response or emergency evacuation area. Implementation of the Project would not result in increased risks of hazards in the cumulative setting area, nor would it result in any

considerable off-site or indirect impacts. As discussed in Section 3.7, federal, state, and local regulations address potential impacts with exposure to hazardous materials. As discussed in Section 3.16, Specific Plan Policies Wildfire-1 and Wildfire-2 ensure that future projects comply with applicable State and local fire safety regulations associated with wildland-urban interface, fire-safe building standards, and defensible space requirements. Subsequent development projects proposed within the Plan area would be subject to all relevant federal, state, and local requirements, including General Plan, County Code, and Specific Plan policies and actions that reduce impacts associated with hazards, including wildland fire hazards, and hazardous materials. This is considered to be a **less than cumulatively considerable** impact, and no mitigation is required.

HYDROLOGY AND WATER QUALITY

Impact 4.8: Project implementation may contribute to cumulative increases in peak stormwater runoff flows from the Plan area (Less than Cumulatively Considerable)

Subsequent development projects proposed within the Plan area, such as residential, commercial, office, and recreational projects, would result in new impervious surfaces and could reduce stormwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potentials; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff. The amount of new pavement and the extent to which it affects infiltration depends on the site-specific soil type. Projects located in urban areas would have less of an impact than projects converting open lands and spaces. The County must evaluate individual projects as they are proposed to ensure that they would not result in a significant interference with recharge.

Construction of storm drainage improvements would occur as part of an overall development project and is considered in the environmental impacts associated with project construction and implementation as addressed throughout this EIR.

Based upon the plan level analysis for this Project, development of detailed, site-specific information related to changes in stormwater runoff at the parcel- or development project-level is not feasible. As previously discussed, a future project applicant would be required to obtain permits from the U.S. Army Corps of Engineers and the Department of Fish and Wildlife if any work is performed within a regulated waterway, such as Aqua Caliente Creek. Each future development projects or projects requiring grading permits must also include detailed project-specific grading and drainage analysis that assess the drainage characteristics so that appropriate storm drainage features are included to control storm water runoff, both during and after construction. These future projects will ultimately include project specific best management measures in their plans that are designed to allow for natural recharge and infiltration of stormwater. Construction of storm drainage improvements would occur as part of an overall development project and is considered in the environmental impacts associated with project construction and implementation as addressed throughout this EIR.

The County of Sonoma has developed the proposed Specific Plan to include goals and policies that, when implemented, will reduce flooding from new development, reduce storm water pollution from new development, and protect and enhance natural storm drainage and water quality features, which will in turn reduce water quality impacts. As discussed under Impacts 3.8-1 through 3.8-5, the Sonoma County General Plan also contains a number of policies that would reduce the potential for implementation of

the Project to result in increased flooding or result in water quality impacts associated with increased runoff, siltation, or erosion.

Overall, a **less than cumulatively considerable** impact would result from implementation of the Project, following the implementation of the General Plan objectives and policies and Specific Plan policies included in Section 3.8.

Impact 4.9: Project implementation may contribute to cumulative impacts related to degradation of water quality (Less than Cumulatively Considerable)

Future development projects within the Plan area could contribute to a cumulative increase in urban pollutant loading, which would adversely affect water quality. Cumulative development in the Plan area, including development accommodated by the Project, could also result in increased impervious surfaces that could increase the rate and amount of runoff, thereby potentially adversely affecting existing surface water quality through increased erosion and sedimentation. The primary sources of water pollution include: runoff from roadways and parking lots; runoff from landscaping areas; non-stormwater connections to the drainage system; accidental spills; and illegal dumping. Runoff from roadway and parking lots could contain oil, grease, and heavy metals; additionally, runoff from landscaped areas could contain elevated concentrations of nutrients, fertilizers, and pesticides.

The General Plan and Specific Plan policies for the project-specific impacts identified in Section 3.9 would reduce the pollutants in the stormwater from the Project to a level lower than in the runoff from most developed areas within the Plan area, because most of these areas were constructed before stormwater quality best management practices (BMPs) were required. Additionally, future development projects or projects requiring grading permits would be required to implement BMPs comparable to the BMPs identified in for the Project. Compliance with the applicable local, state, and federal regulations pertaining to water quality would ensure that the project results in a **less than cumulatively considerable** impact to surface water quality.

LAND USE

Impact 4.10: Project implementation may contribute to cumulative impacts on communities and local land uses (Less than Cumulatively Considerable)

The cumulative setting for land use and planning impacts includes the Sonoma Valley General Plan Planning Area. Cumulative land use and planning impacts, such as the potential for conflicts with adjacent land uses and consistency with adopted plans and regulations, are typically site- and project-specific. Subsequent projects allowed by the Project may result in site specific land use conflicts; however, these effects are not anticipated to be cumulatively considerable. As part of the Project, the County would rezone the Plan area to be consistent with the Specific Plan zoning map. The Project would require modifications to the County's Zoning Ordinance to provide consistency between the General Plan and zoning; however, these modifications will not remove or adversely modify portions of the Sonoma County Code that were adopted to mitigate an environmental effect. The Project would also require amendments to the adopted General Plan land use map for the Plan area. The environmental impacts associated with development allowed under the proposed zoning and land use designations are discussed in Sections 3.1 through 3.14 of this EIR and in the cumulative discussion provided in this chapter. Once the requested amendment is approved, the Project would be consistent with the County's General Plan.

Land use conflicts are site-specific and would not result in a cumulative impact. Incompatibility issues are generally addressed and mitigated on a project-by-project basis. The Project has been designed to be consistent with applicable aspects of the County's General Plan, and as described in this EIR, the Project would not be incompatible with any of the surrounding land uses. The Plan's contribution to cumulative land use impacts is **less than cumulatively considerable**, and no mitigation is required.

NOISE

Impact 4.11: Project implementation may contribute to the cumulative exposure of existing and future noise-sensitive land uses or to increased noise resulting from cumulative development (Cumulatively Considerable and Significant and Unavoidable)

The cumulative context for noise impacts associated with the Project consists of the existing and future noise sources that could affect the Project or surrounding uses. Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. The total construction noise impact of the Project would not be a substantial increase to the existing future noise environment.

As discussed in Impact 3.10-1 in Section 3.10, Noise, some of the existing noise sensitive receptors located along the Plan area roadways are currently exposed to exterior traffic noise levels exceeding the Sonoma County 60 decibel (dB) day/night average sound level (L_{DN}) exterior noise level standard for residential uses. These receptors will continue to experience elevated exterior noise levels upon future development of the Project. As discussed under Impact 3.10-1, the Project's contribution to an increase in ambient traffic levels was evaluated under two thresholds: 1) would the Project cause an increase in noise in excess of the 60 Ldn standard (Policy NE-1a), and 2) for those segments already in excess of the 60 Ldn standard, would the Project cause a considerable increase in ambient noise levels based on the thresholds presented in Table 3.10-7.

As shown in Table 3.10-9, the Project would cause one roadway segment to exceed the 60 Ldn threshold for roadway noise under cumulative plus Project conditions, with noise levels increasing on Donald Street east of Robinson Road from 59 to 61 dB Ldn. Further, as shown in Table 3.10-9, some of the existing noise sensitive receptors located along 13 of the Plan area roadway segments are currently exposed to exterior traffic noise levels exceeding the Sonoma County 60 dB L_{DN} exterior noise level standard for residential uses. The modeled noise levels represent the worst-case scenario anticipating full buildout of the Specific Plan and no intervening noise barriers or topography.

The contribution to traffic noise increases resulting from future development accommodated by the Project for most roadway segments that exceed 60 dB Ldn under existing conditions is predicted to be between 0 dBA and 2 dBA L_{DN}. However, Robinson Road from Donald Street to East Verano Street will experience a 6 dB L_{DN} increase under both the Existing Plus Project and the Cumulative Plus Project scenarios and Donald Street east of Robinson Road will exceed the County's 60 dB standard under cumulative conditions. These are the only roadway segments that would experience a significant increase in traffic noise.

It should be noted that the Cumulative Plus Project traffic noise level at the nearest residences along Robinson Road is predicted to be 54 dB L_{DN}, and would not exceed the County outdoor activity area standard of 60 dB L_{DN}.

The use of rubberized asphalt or open gap asphalt can provide a 5 dBA to 6 dBA decrease in traffic noise. If economically feasible, this roadway segment could be paved with these alternative pavements in order to reduce the resulting traffic noise levels. With implementation of Mitigation Measure Noise-C, the traffic noise resulting from the segment of Robinson Road from Donald Street to East Verano Street and the section of Donald Street east of Robinson Road would be reduced to an acceptable level.

Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan objectives and policies that alleviate noise impacts. Future development projects would address construction noise, traffic noise, stationary noise, and operational noise through implementation of Specific Plan Measures Noise-A through Noise-C. Measure Noise A requires projects to comply with the County's interior noise requirements, to ensure that outdoor activity areas along Highway 12, Donald Street east of Robinson, and along Verano Avenue from Arnold to Highway 12 are designed to meet the County's exterior noise standards, and to conduct a noise study for future residential and other noise-sensitive uses and to implement project-specific mitigation measures to meet County standards. Measure Boise-B ensures that construction activities associated with future development are analyzed pursuant to the County's Guidelines for Preparation of Noise Analysis and implement mitigation measures to ensure construction noise levels are reduced to less than significant, and to ensure that future projects adhere to the County's best management practices for construction noise to reduce noise impacts. Implementation of the objectives and policies of the General Plan would reduce noise and land use compatibility impacts from vehicular traffic noise sources and would ensure that new development is designed to include noise-attenuating features.

Implementation of Measure NOISE-C ensures that Project-related development will fund its fair-share of costs to implement and maintain the rubberized asphalt necessary to reduce noise. . As trucks and automobiles travel over these roadway segments, the rubberized asphalt would wear down. However, existing traffic and development from outside the Project area also contributes to the degradation of roadway surfaces and there is no existing funding mechanism to ensure that costs beyond the Project's fair-share are funded. Therefore, it may not be economically feasible to implement and maintain rubberized asphalt As such, the noise reduction properties of rubberized asphalt degrades over time. Because long-term sound reductions cannot be guaranteed, out of an abundance of caution, this impact would be **cumulatively considerable** and **significant and unavoidable**.

POPULATION AND HOUSING

Impact 4.12: Project implementation may contribute to cumulative impacts on population growth and displace substantial numbers of people or existing housing (Less than Cumulatively Considerable)

As described in Section 3.11, the Project accommodates future growth in the Plan area, including new businesses and new residential uses. Infrastructure and services would need to be extended to accommodate future growth. While no specific development projects are proposed as part of the Project, the Project will accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential development. As described in Chapter 2.0, Project Description, buildout of the Project could yield up to 685 dwelling units, up to 120 hotel rooms, and up to 275,903 square feet of non-residential uses.

Given the historical and current population, housing, and employment trends, growth in the County, as well as the entire state, is inevitable. The primary factors that account for population growth are natural

increase and net migration. According to the California Department of Finance, Demographic Research Unit, the average annual birth rate for California is expected to be 10 births per 1,000 population. Additionally, according to the Public Policy Institute of California, California is expected to attract more than one third of the country's immigrants. Other factors that affect growth include the cost of housing, the location of jobs, the economy, the climate, and transportation.

Plan Bay Area 2040 states that by 2040 the Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year. From 2010 through 2040, Plan Bay Area 2040 anticipates 33,200 new households in Sonoma County, including 3,000 households in the unincorporated area. During this same period, the California Department of Finance projected that Sonoma County's population would increase by 99,976 persons countywide. While the 2040 Plan Bay Area does not include community-specific growth projections, the 2013 Plan Bay Area projected that The Springs would grow by 1,150 households. Overall, the growth associated with the Project is within the level of growth planned for the County and Bay Area.

Additionally, as described in Section 3.11, implementation of the Project would not displace substantial numbers of people or existing housing. There are approximately 557 existing residences (approximately 347 single-family units and 210 multi-family units) located within the Plan area. As buildout of the Plan area progresses, it is likely that some of the existing housing units would be remodeled, renovated, expanded on, demolished, or otherwise removed or replaced with new development. However, the Project does not require the removal of any housing. New development allowed under the Project would significantly increase the available housing stock in the County. Therefore, Project implementation would not displace substantial numbers of people or housing units. The Project would have a **less than cumulatively considerable** impact to this topic.

PUBLIC SERVICES AND RECREATION

Impact 4.13: Project implementation may contribute to cumulative impacts on public services and recreation (Less than Cumulatively Considerable)

Implementation of the Project would contribute to an increased demand for public services and facilities within the County. As the demand for services increases, there will likely be a need to address acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and administrative buildings, schools, parks, fire facilities, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the city.

Development of the Plan area for urban uses (including residential, commercial, office, etc.) was analyzed in the County's General Plan EIR. The County's General Plan EIR analyzed impacts to public services which may occur as a result of buildout of the Plan area. The Project is consistent with the overriding considerations that were adopted for the General Plan. As such, implementation of the Project would not create new impacts over and above those identified in the General Plan Final EIR, nor significantly change previously identified impacts.

Overall, the Project's cumulative contribution to the City's public service and facility needs would be **less than cumulatively considerable**. Furthermore, other future development projects would be required by the County to pay their fair share fees toward the expansion and creation of public services and facilities. Therefore, cumulative impacts associated with public services and facilities would be considered less-than-significant.

TRANSPORTATION AND CIRCULATION

Impact 4.14: Under Future plus Project conditions, implementation of the Project would conflict with transportation and circulation thresholds (Cumulatively Considerable and Significant and Unavoidable)

As described in Section 3.14, Transportation and Circulation, the Project would not conflict with applicable plans, policies, and regulations related to bicycle, pedestrian, and transit circulation and would not result in increased hazards due to design features, incompatible uses, or inadequate emergency access.

However, VMT modeling results produced by the SCTM\15 travel demand model indicate that residential uses in the Springs area would on average generate 22.4 VMT per capita with implementation of the Plan, which is a decrease from the existing average of 24.2 VMT per capita. The VMT per capita associated solely with the incremental increase in residents would be 14.7. While these shifts reflect improvement in residential VMT per capita compared to existing development, they would still fall short of the applied 12.8 VMT per capita threshold corresponding to a level of 15 percent below the regional average. As discussed in Section 3.13, the Project includes measures to promote bicycle and pedestrian travel and to ensure future projects manage transportation demand, through implementation of a Transportation Demand Management plan or comparable measures. However, uncertainty remains, however, as to whether implementation of measures to manage transportation demand and vehicle use can achieve the 12.0 percent reduction in residential VMT per capita required to reduce impacts to a less than considerable contribution to cumulative increases in vehicle travel and VMT. Continuation of subsidized rides on Route 32 in perpetuity would require a substantial funding commitment from the County of Sonoma or private development that may not realistically be achievable all years. Beyond the subsidized transit, the ability for residential development to achieve an additional 8.0 percent reduction in VMT per capita may also be infeasible, as the effectiveness of TDM can be limited outside of major urbanized areas, and some projects (particularly smaller developments) may be unable to fund offsite improvements to non-auto networks. Further, while regional strategies such as VMT mitigation fees, exchanges, and banks hold much promise, they have yet to be implemented and their structures and resulting effectiveness remain uncertain. Therefore, the resulting impact would be **significant and unavoidable** and **cumulatively considerable**.

UTILITIES

Impact 4.15: Project implementation may contribute to cumulative impacts on utilities (Less than Cumulatively Considerable)

Wastewater: The Sonoma Valley County Sanitation District (SVCSD) is operated by the Sonoma County Water Agency (SCWA). The SVCSD's treatment plant provides tertiary treatment for a permitted average daily dry weather flow capacity of 3.0 million gallons per day (mgd). The SVCSD's treatment plant currently treats approximately 2.7 mgd during dry weather conditions and an average 11 mgd wintertime maximum treatment, with winter flows peaking at 22 mgd.

As the Plan area develops in the future, there will be an increased need for water and wastewater services, including a reliable source of recycled water. These needs have been addressed in the SCWA's and SVCSD's master plans and will require that the water agency and district continue to implement phased improvements to some pump stations, sewer mains, and the wastewater treatment plant when triggered by growth.

According to EBA Engineering (see Appendix G), the total wastewater flow increase generated by the Project would be up to 166,665 gpd, or 0.16 mgd. See Table 3.14-1 for a breakdown of the net new development and associated wastewater flow increase resulting from buildout of the Plan area. An increase of 0.17 mgd would not result in exceedance of the SVCSD's treatment plant capacity of 3.0 mgd.

According to the 2016 SVCSD Master Plan Final Report, no deficiencies were identified within the system under peak dry weather flow conditions, and several recommended Capital Improvement Projects were proposed to correct capacity deficiencies identified under peak wet weather flow conditions. Of the recommended Capital Improvement Projects identified, #'s 1, 3, 4, 5, and 14, are within the vicinity of the Plan area. See Table 3-3 of the Utility Infrastructure Needs Report (Appendix G of this Draft EIR) prepared for the Project for the detailed list of Capital Improvement Projects.

As development occurs throughout the Plan area, each project will need to be analyzed on a project-by-project basis to determine the extents of the localized sanitary sewer infrastructure upgrades needed, as discussed in Section 3.14. In general, sewer system conveyance shall be designed in accordance with accepted engineering principles and shall conform to the SVCSD's Standard Plans and specifications. Overall, this is a **less than cumulatively considerable** impact.

Water: Implementation of the Project would result in increased population and employment growth within the Plan area, and a corresponding increase in the demand for additional water supplies. The complete buildout of the Plan area is estimated to require approximately 206 AFY of additional water demand. Development is expected to occur gradually over the next 20 years. As shown in Table 3.14-8 in Section 3.14, there will continue to be sufficient supplies to meet all projected demand, including the additional demand generated from the Project, in all conditions until year 2040. This conclusion is dependent on the District implementing the mandatory demand reductions as outlined in the District's Water Shortage Contingency Plan.

The Valley of the Moon Water District has evaluated their water system, identified recommended capital improvement projects, and produced cost estimates on a project-by-project basis in their 2019 Water Master Plan for the district as a whole. The recommended project data for Capital Improvement Projects relevant to the Plan area are summarized in the Utility Infrastructure Needs Report prepared for the Project (Appendix G of this Draft EIR) based on the data in the 2019 Water Master Plan.

As development occurs throughout the Plan area, each future project will need to be analyzed on a project-by-project basis to determine the extents of water infrastructure upgrades needed, as discussed in Section 3.14.

Given that the Project would not lead to insufficient water supplies in existing entitlements and resources or require new or expanded entitlements, and future projects would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates, impacts associated with water supplies are **less than cumulatively considerable.**

Solid Waste: As described in Section 3.14, the Project would generate approximately 26,084.8 pounds per day of solid waste, or 1,760.5 tons per year. The additional solid waste generated under buildout of the Project would not exceed the capacity of the Central Disposal Site. The Central Disposal Site has a permitted capacity of 32.65 million cubic yards, and remaining capacity of the 7.53 million tons. While the estimated cease operation date is January 2034, the Amended Joint Technical Document for the Sonoma Central Disposal Site identifies that the landfill has a remaining site life of 24.5 years. The addition of the

solid waste generated by the Project to the Central Landfill would not exceed the landfill's remaining capacity, as discussed under Impact 3.14-3 in Section 3.14, Utilities.

The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. This is a **less than cumulatively considerable** impact.

4.2 GROWTH-INDUCING EFFECTS

INTRODUCTION

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action, directing:

> *Discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

The Project would result in the construction of additional housing and employment opportunities within the County of Sonoma. As discussed in Section 3.11, Population and Housing, at full buildout, the Project could yield up to 685 dwelling units, up to 120 hotel rooms, and up to 275,903 square feet of non-residential uses. Full buildout of the Project is expected to generate approximately 1,918 residents. The Project would foster economic and population growth through the construction of additional housing and employment opportunities for a variety of income levels.

Additionally, as discussed in Section 3.13, Public Services and Recreation, the Project would increase demand for other public facilities within the County. Development of the Plan area for urban uses (including residential, commercial, office, etc.) was analyzed in the County's General Plan EIR. The County's General Plan EIR analyzed impacts to public services which may occur as a result of buildout of the Plan area. While the Project would require minor off-site improvements to ensure adequate capacity in the wastewater pipes that convey sewer to the WWTP, as discussed in Section 3.14, the Project does not involve new construction or expansion of water treatment, storage, wastewater treatment, or solid waste disposal facilities. As such, implementation of the Project would not create new impacts over and above those identified in the General Plan Final EIR, nor significantly change previously identified impacts.

As future development with the Plan area proceeds, community facilities would be constructed. For example, the proposed land use designations would allow development of recreation and visitor serving commercial uses, public facility uses, retail restaurants, entertainment and hospitality-related uses, personal services, and other uses. With adherence to the existing General Plan objectives and policies intended to guide growth to appropriate areas and provide services necessary to accommodate growth,

development of the land uses allowed under the Project and the infrastructure anticipated to accommodate such development would not induce growth beyond that associated with the Project nor outside of the Plan area that would exceed adopted thresholds, or exceed the overall buildout projections analyzed in the General Plan EIR.

As demonstrated throughout this Draft EIR, the Project would not encourage or facilitate other activities that could significantly affect the majority of the environmental topics discussed in this Draft EIR, either individually or cumulatively. It is noted that significant and unavoidable impacts would occur related to aesthetics, noise, and transportation, and circulation, as discussed under Section 4.4 below.

4.3 SIGNIFICANT IRREVERSIBLE EFFECTS

Legal Considerations

CEQA Guidelines Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a), require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the Project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Analysis

Implementation of the Project would facilitate the future development of urban uses, including residential (single family and multifamily), mixed use or live work, commercial, hotel, office, and recreation, to an area that is currently designated for urban uses by the Sonoma County General Plan. Future development of the Plan area would implement the long-term commitment to residential, commercial, and other urban uses in the Plan area. It is unlikely that circumstances would arise that would justify the return of the land to its prior condition.

A variety of resources, including land, energy, water, construction materials, and human resources would be irretrievably committed for the initial construction of future projects, infrastructure installation, and its continued maintenance. Construction of future projects within the Plan area would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing operation and life of the Project. The introduction of new residential, commercial, light industrial, and other uses to the site will result in

an increase in area traffic over existing conditions. Fossil fuels are the principal source of energy and the Project will increase consumption of available supplies, including gasoline and diesel fuel, and natural gas. These energy resource demands relate to initial project construction, project operation and site maintenance and the transport of people and goods to and from the Plan area. Additional information the estimated energy usage of the Project can be found under Impact 3.6-3 of Section 3.6, Greenhouse Gases and Energy. The discussion and analysis in Section 3.6 shows that Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources.

4.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. The following significant and unavoidable impacts of the Project are discussed in Sections 3.1 through 3.14 (project-level) and previously in this chapter (cumulative-level).

- Impact 3.1-1: Project implementation would result in a substantial adverse effect on a scenic vista, or could substantially degrade the existing visual character of the site and its surroundings;
- Impact 3.6-1: Implementation of the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs;
- Impact 3.6-2: Implementation of the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;
- Impact 3.10-1: Implementation of the Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of applicable standards;
- Impact 3.13-1: Implementation of the Project would conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b) concerning significance of transportation impacts in terms of vehicle miles traveled (VMT);
- Impact 4.1: Project implementation may contribute to the cumulative degradation of the existing visual character of the region;
- Impact 4.6: Project implementation may contribute to cumulative impacts on greenhouse gases and climate change;
- Impact 4.11: Under Future Plus Project conditions, implementation of the Project would contribute to the cumulative exposure of existing and future noise-sensitive land uses or to increased noise resulting from cumulative development; and
- Impact 4.14: Under Future plus Project conditions, implementation of the Project would conflict with transportation and circulation thresholds.

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5.1 CEQA REQUIREMENTS

CEQA requires that an EIR analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6(f)). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

Alternatives that are evaluated in the EIR must be potentially feasible alternatives. However, not all possible alternatives need to be analyzed. An EIR must "set forth only those alternatives necessary to permit a reasoned choice" (CEQA Guidelines, Section 15126.6(f)). The CEQA Guidelines provide a definition for a "range of reasonable alternatives" and, thus limit the number and type of alternatives that need to be evaluated in an EIR.

First and foremost, alternatives in an EIR must be potentially feasible. In the context of CEQA, "feasible" is defined as:

> *… capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors* (CEQA Guidelines 15364).

The inclusion of an alternative in an EIR is not evidence that it is feasible as a matter of law, but rather reflects the judgment of lead agency staff that the alternative is potentially feasible. The final determination of feasibility will be made by the lead agency decision-making body through the adoption of CEQA Findings at the time of action on the Project. The following factors may be taken into consideration in the assessment of the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plan or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (Section 15126.6 (f) (1)).

Equally important to attaining the project objectives is the reduction of some or all significant impacts. The following significant and unavoidable impacts of the Project are discussed in Sections 3.6, 3.10, and 3.13 (project-level) and Chapter 4.0 (cumulative-level):

- Impact 3.1-1: Project implementation would result in a substantial adverse effect on a scenic vista, or could substantially degrade the existing visual character of the site and its surroundings;
- Impact 3.6-1: Implementation of the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs;
- Impact 3.6-2: Implementation of the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;
- Impact 3.10-1: Implementation of the Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of applicable standards;
- Impact 3.13-1: Implementation of the Project would conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b) concerning significance of transportation impacts in terms of vehicle miles traveled (VMT);
- Impact 4.1: Project implementation may contribute to the cumulative degradation of the existing visual character of the region;

- Impact 4.6: Project implementation may contribute to cumulative impacts on greenhouse gases and climate change;
- Impact 4.11: Under Future Plus Project conditions, implementation of the Project would contribute to the cumulative exposure of existing and future noise-sensitive land uses or to increased noise resulting from cumulative development; and
- Impact 4.14: Under Future plus Project conditions, implementation of the Project would conflict with transportation and circulation thresholds.

A Notice of Preparation was circulated to the public to solicit recommendations for a reasonable range of alternatives to the Project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the Project. No comments were received during the Notice of Preparation review period related to potential alternatives to the Project to be addressed in the EIR.

PROJECT OBJECTIVES

The alternatives to the Project selected for analysis in the EIR were developed to minimize significant environmental impacts while fulfilling the basic objectives of the project. As described in Chapter 2.0, Project Description, the overall purpose of the Project is to foster a vibrant, attractive, multimodal community with increased opportunities for housing and improved circulation for pedestrians, bicyclists, and transit, consistent with the community's vision for the Plan area. The Springs Specific Plan contains development standards, design guidelines, distribution of uses, infrastructure requirements, and goals and policies for the development of a specific geographic area. These land use distributions, development standards, policies, and regulations are critical components of a specific plan, since it is through these standards, policies, and guidelines that the goals of the Project are fulfilled.

The following objectives are identified for the Project:

1. ***Recognize and Promote the Springs Commercial Corridor as a Mixed-Use "Downtown" Serving the Larger Springs Community.*** *The Springs Specific Plan encompasses the primary commercial district that serves as the "downtown" area of the larger Springs community. New commercial development along the Highway 12 corridor will increase the variety of retail shops and neighborhood services. New mixed-use development will help meet the housing needs of the community while providing pedestrian-oriented retail and restaurants. Wider sidewalks enhanced with pedestrian- and bike-friendly features will make it easier and more pleasant for residents to access local stores and services.*

2. ***Develop a Centrally-Located Community Plaza.*** *Provide a central gathering place where farmers markets, concerts, and other community events can take place to enhance the vitality of the Springs area. The Community Plaza should be designed to reflect the multi-cultural character of the community.*

3. ***Celebrate the Unique, Multi-Cultural Identity of the Springs.*** *Recognize that the Springs is a diverse, multi-cultural community with significant historic resources and character. Ensure that new development respects the area's treasured past.*

4. ***Increase Affordable, Workforce, and Mixed Use Housing.*** *Create new infill opportunities for higher density housing, while also expanding the variety of housing choices on vacant parcels in the Plan area.*

5. ***Improve the Pedestrian, Bicycle, and Transit Network.*** *Provide bicycle, pedestrian, and transit facilities throughout the Springs that are safe, well-lit, shaded, comfortable, well-connected, and accessible. This improved multimodal network will provide greater incentive for people to choose non-vehicular travel for their daily trips to reduce Vehicle Miles Traveled and support local climate goals. The Springs mobility network should recognize that non-vehicular travel is the primary travel mode for some residents.*

6. ***Ensure an Adequate Parking Supply.*** *Provide parking garages and/or surface parking lots adjacent to Highway 12, particularly in areas where there are existing parking shortages and near the area planned for the community plaza.*

7. ***Address Community Safety.*** *Create a safe environment for residents and employees by providing attractive, well-lit, and well-maintained public and community facilities that encourage regular use.*

8. ***Create and Connect to More Parks and Open Space.*** *Create new public and semi-public spaces, such as plazas, pocket parks, parklets, and green space, to create a desirable system of parks and community gathering areas.*

9. ***Regional Planning.*** *Assist the County in meeting its Regional Housing Needs Allocation by designating and zoning sites for higher densities and maintain consistency with the Priority Development Area designation by the Association of Bay Area Governments.*

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

The alternatives analyzed in this EIR include the following three alternatives in addition to the Project:

- Alternative 1 – No Project
- Alternative 2 – Reduced Growth
- Alternative 3 – Low Growth

Following the description of each alternative, Table 5.0-4 summarizes the increase in housing units, square footage of non-residential uses, and number of hotel rooms that may occur under each of the alternatives, as well as the Project.

ALTERNATIVE 1 – NO PROJECT

The CEQA Guidelines (Section 15126.6(e)) require consideration of a No Project Alternative that represents the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved. For purposes of this analysis, Alternative 1, the No Project Alternative, assumes that the Plan area maintains the existing General Plan land use designations and the existing zoning. As shown in Figure 2.0-6, the Plan area is currently designated General Commercial/Limited Commercial, Public/Quasi-Public, Recreation/Visitor-Serving Commercial, and Urban Residential by the Sonoma County General Plan Land Use Map.

As shown in Figure 5.0-1, the Plan area is currently zoned Low Density Residential (R1), Medium Density Residential (R2), Retail Business and Services (C2), Limited Commercial – Traffic Sensitive Combining (LC-TS), Administrative and Professional Office (CO), Administrative and Professional Office – Traffic Sensitive Combining (CO-TS), Planned Community (PC), Public Facilities (PF), and Recreation and Visitor-Serving Commercial (K). Table 5.0-1 summarizes the zoning districts by acreage for the Plan area.

TABLE 5.0-1: EXISTING ZONING DESIGNATION ACREAGES

EXISTING ZONING DISTRICT	*ACRES*
Low Density Residential (R1)	82.88
Medium Density Residential (R2)	22.29
Retail Business and Services (C2)	8.43
Limited Commercial – Traffic Sensitive Combining (LC-TS)	24.73
Administrative and Professional Office (CO)	0.32
Administrative and Professional Office – Traffic Sensitive Combining (CO)	2.41
Planned Community (PC)	7.80
Public Facilities (PF)	1.28
Recreation and Visitor-Serving Commercial (K)	4.39

Under Alternative 1, new development under buildout of the Plan area would result in approximately:

- 147 dwelling units, including:
    - 94 single family dwelling units;
    - 13 multifamily dwelling units; and
    - 40 mixed use or work/live units; and
- 119,156 square feet of non-residential uses, including:
    - 108,796 square feet of commercial uses;
    - 2,712 square feet of office uses; and
    - 7,648 square feet of recreation uses, and
- 120 hotel rooms

Under this alternative, the Project, including the Springs Specific Plan, associated rezoning, and associated General Plan amendment, would not be adopted. Future development within the Plan area would be subject to the existing General Plan goals, policies, and actions, as well as the County's existing zoning.

ALTERNATIVE 2 – REDUCED GROWTH

Alternative 2 provides for reduced growth in comparison to the Project. This alternative was designed to reduce the project's contribution to significant impacts that would occur with project implementation, particularly impacts related to traffic noise levels at existing receptors and traffic performance measures (such as total VMT).

Figure 5.0-2 depicts the zoning map proposed for Alternative 2. Alternative 2 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, with the exception of the following modifications:

- Reduce densities in the Donald/Verano neighborhood to reflect predominantly Low Density Residential zoning (R1 2 through R1 6), with one area designated for Medium Density Residential (R2 12);
- Replace the Recreation district located north of Old Maple Avenue with High Density Residential zoning (R3 15), removing the potential for a hotel;
- Reduce the High Density Residential zoning north of Old Maple Avenue from R3 16 to R3 15;
- Reduce the High Density Residential zoning (R3 12) to Medium Density Residential zoning (R2 12) on the east side of Highway 12 from Agua Caliente Road to the parcels south of Sunnyside Avenue and on the parcel located south of Vailetti Drive at the western edge of the Plan area;

- Revise development standards to reduce allowed development densities and intensities for the Mixed Use district to 15 dwelling units per acre for the residential component and a maximum floor area ratio of 1.6 for the non-residential component; and
- Revise development standards to reduce the allowed floor area ratio for the Recreation district (located adjacent to the existing Larson Park) to 0.25.

Table 5.0-2 summarizes the acreage by zoning district for Alternative 2.

TABLE 5.0-2: ALTERNATIVE 2 ZONING DISTRICT ACREAGES

ZONING DISTRICT	*ACRES*
Low Density Residential – 2 units per acre (R1 2)	17.20
Low Density Residential – 5 units per acre (R1 5)	0.63
Low Density Residential – 6 units per acre (R1 6)	21.33
Low Density Residential – B7 Overlay (R1 B7)	2.56
Low Density Residential – B8 Overlay (R1 B8)	7.63
Medium Density Residential – 6 units per acre (R2 6)	6.31
Medium Density Residential – 8 units per acre (R2 8)	14.71
Medium Density Residential – 9 units per acre (R2 9)	4.67
Medium Density Residential – 10 units per acre (R2 10)	0.74
Medium Density Residential – 11 units per acre (R2 11)	5.31
Medium Density Residential – 12 units per acre (R2 12)	11.89
High Density Residential – 12 units per acre (R3 12)	1.28
High Density Residential – 15 units per acre (R3 15)	8.64
Mixed Use (CM)	21.04
Neighborhood Commercial (C1)	6.50
Retail Business and Services (C2)	10.49
Planned Community (PC)	6.21
Public Facilities (PF)	3.72
Recreation and Visitor-Serving Commercial (K)	3.18

Under Alternative 2, new development under buildout of the Plan area would result in approximately:

- 519 dwelling units, including:
  - 41 single family dwelling units;
  - 398 multifamily dwelling units; and
  - 80 mixed use or work/live units; and
- 218,489 square feet of non-residential uses, including:
  - 137,904 square feet of commercial uses;
  - 62,136 square feet of office uses; and
  - 18,450 square feet of recreation uses.

ALTERNATIVE 3- LOW GROWTH

Alternative 3 provides for reduced growth in comparison to the Project. This alternative would reduce the residential and non-residential development potential to a greater extent than Alternative 2. For example, Alternative 3 would result in 120 fewer dwelling units and a reduction of the non-residential development uses by 20,475 square feet. This alternative was designed to reduce the project's contribution to significant impacts that would occur with project implementation, particularly Impacts related to traffic noise levels at existing receptors and traffic performance measures (such as total VMT).

Figure 5.0-3 depicts the zoning map proposed for Alternative 3. Alternative 3 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, with the exception of the following modifications to the zoning map and development standards:

- Reduce densities in the Donald/Verano neighborhood to reflect predominantly Low Density Residential zoning (R1 2 through R1 6).
- Replace the Recreation district located north of Old Maple Avenue with High Density Residential zoning (R3 15), removing the potential for a hotel;
- Reduce the High Density Residential zoning north of Old Maple Avenue from R3 16 to R3 14;
- Reduce the High Density Residential zoning (R3 12) to Medium Density Residential zoning (R2 12) on the east side of Highway 12 from Agua Caliente Road to the parcels south of Sunnyside Avenue and on the parcel located south of Vailetti Drive at the western edge of the Plan area;
- Revise development standards to reduce allowed development densities and intensities for the Mixed Use district to 15 dwelling units per acre for the residential component and a maximum floor area ratio of 1.6 for the non-residential component; and
- Revise development standards to reduce the allowed floor area ratio for the Recreation district to 0.25.

Table 5.0-3 summarizes the acreage by zoning district for Alternative 3.

TABLE 5.0-3: ALTERNATIVE 3 ZONING DISTRICT ACREAGES

ZONING DISTRICT	*ACRES*
Low Density Residential – 2 units per acre (R1 2)	11.06
Low Density Residential – 5 units per acre (R1 5)	0.63
Low Density Residential – 6 units per acre (R1 6)	27.56
Low Density Residential – B7 Overlay (R1 B7)	2.56
Low Density Residential – B8 Overlay (R1 B8)	11.15
Medium Density Residential – 6 units per acre (R2 6)	6.31
Medium Density Residential – 8 units per acre (R2 8)	14.71
Medium Density Residential – 9 units per acre (R2 9)	4.67
Medium Density Residential – 10 units per acre (R2 10)	0.74
Medium Density Residential – 11 units per acre (R2 11)	5.31
Medium Density Residential – 12 units per acre (R2 12)	5.66
High Density Residential – 12 units per acre (R3 12)	1.28
High Density Residential – 14 units per acre (R3 14)	5.42
High Density Residential – 15 units per acre (R3 15)	3.22
Mixed Use (CM)	21.04
Neighborhood Commercial (C1)	6.50
Retail Business and Services (C2)	10.49
Planned Community (PC)	6.21
Public Facilities (PF)	3.72
Recreation and Visitor-Serving Commercial (K)	3.18

Under Alternative 3, new development under buildout of the Plan area would result in approximately:

- 413 dwelling units, including:
    - 63 single family dwelling units;
    - 270 multifamily dwelling units; and
    - 80 mixed use or work/live units; and

- 198,015 square feet of non-residential uses, including:
  - 125,617 square feet of commercial uses;
  - 53,948 square feet of office uses; and
  - 18,450 square feet of recreation uses.

COMPARATIVE GROWTH PROJECTIONS

The three alternatives would accommodate differing levels of residential and employment growth. Table 5.0-4 summarizes the increase in housing units, square footage of non-residential uses, and number of hotel rooms that may occur under each of the alternatives, as well as the Project.

TABLE 5.0-4: COMPARATIVE GROWTH PROJECTIONS

	SINGLE FAMILY DWELLING UNITS	*MULTIFAMILY DWELLING UNITS*	*MIXED USE DWELLING UNITS*	*COMMERCIAL (SQUARE FEET)*	*COMMERCIAL - HOTEL ROOMS*	*OFFICE (SQUARE FEET)*	*RECREATION (SQUARE FEET)*
Proposed Project	88	461	157	168,029	120	82,226	26,648
Alternative 1	94	13	40	108,796	120	2,712	7,648
Alternative 2	41	398	80	137,904	-	62,136	18,450
Alternative 3	63	270	80	125,617	-	53,948	18,450

SOURCE: DE NOVO PLANNING GROUP, 2021.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental impacts analyzed in this EIR. Following the analysis of each alternative, Table 5.0-15 summarizes the comparative effects of each alternative.

ALTERNATIVE 1

Aesthetics and Visual Resources

Impact 3.1-1: Project implementation could result in a substantial adverse effect on a scenic vista, or could substantially degrade the existing visual character of the site and its surroundings

As discussed in Section 3.1 under Impact 3.1-1, development allowed under the Project would result in increased development along the Highway 12 corridor which is identified as being a County designated Scenic Corridor. The hillside and open agricultural lands west and east of the Plan area are the most prominent visual feature visible from the Plan area and Highway 12. As described in Section 3.1, the Plan area is considered to be of High visual sensitivity and Project features would be Co-dominant with the existing visual environment While new development within the Plan area has the potential to interrupt views of the surrounding naturalized foothills and hillsides (from Highway 12, local roads, and other public viewpoints within and adjoining the Plan area), the Plan area is urbanized. The Design Guidelines chapter (Chapter 4) of the Specific Plan establishes the aesthetic vision for future developments' architecture, building character, land massing, site design, streetscape, lighting, signage, and landscape standards and would reduce the potential of the project to result in substantial adverse effects on a scenic vista or substantially degrade the visual character of the area. Impacts associated with the Project were determined to be significant and unavoidable and cumulatively considerable.

As discussed above, under Alternative 1, buildout of the Plan area would result in approximately 147 dwelling units and 119,156 square feet of non-residential uses. This is a reduction of 559 dwelling units and 157,747 square feet of non-residential uses. The reduced development potential under this alternative would likely result in decreased building heights, fewer structures, and decreased intensity of development. Because Alternative 1 would not result in adoption of the Specific Plan, the Design Guidelines chapter (Chapter 4) of the Specific Plan that establish the aesthetic vision for future developments' architecture, building character, land massing, site design, streetscape, lighting, signage, and landscape standards within the Plan area would not be adopted. While the 1994 Highway 12 Design Guidelines would apply to future development in the Plan area under this alternative, these existing guidelines provide recommendation and do not establish standards that are required of development projects. The County's design review requirements established under Chapter 26-82 of the County Code, including standards addressing orientation of building sites related to natural topography, the design of buildings in harmony with site characteristics, and the design of streets to preserve vistas, would apply to development under Alternative 1.

The Plan area is largely urbanized and developed. The Project and Alternative 1 would allow for an increase in intensity and density of the land uses than the current level. However, as noted above, this alternative would likely result in a decrease in development intensity compared to the Project, including a decrease in building heights, building mass, and structures in the Plan area. Alternative 1 would continue to allow future development that results in new urban uses along the Highway 12 corridor and low density residential uses in the Donald/Verano area. This impact is considered to be less than significant. Because the reduced development potential under this alternative would likely result in decreased building heights and decreased intensity in the Plan area, this impact would be reduced compared to the Project.

Impact 3.1-2: Project implementation could result in substantial damage to scenic resources within a state scenic highway

As discussed in Section 3.1 under Impact 3.1-2, because the Plan area is not located within a state scenic highway, implementation of the Project would not result in substantial damage to scenic resources within a state scenic highway. Impacts under Alternative 1 would also be less than significant, similar to the Project.

Impact 3.1-3: Project implementation could result in the creation of new sources of nighttime lighting and daytime glare

As discussed in Section 3.1 under Impact 3.1-2, implementation of the Project would have a less than significant impact associated with the potential to result in impacts related to nighttime lighting and daytime glare. Implementation of Alternative 1 would introduce new sources of daytime glare and nighttime lighting into previously undeveloped areas of the Plan area.

As noted above, because Alternative 1 would not result in adoption of the Specific Plan, the Design Guidelines chapter (Chapter 4) of the Specific Plan that establish the lighting standards within the Plan area would not be adopted. However, future development within the Plan area under Alternative 1 would be subject to the current design review and approval process, including review for conformance with County Code Section 26-82-030, which has established development standards to address lighting and glare.

Adherence to the current design requirements, and the subsequent design review of future projects within the Plan area, would ensure that excessively reflective building materials are not used, and that

this alternative would not result in significant impacts related to daytime glare. As such, through the design review process, the County can ensure that adverse impacts associated with daytime glare and nighttime lighting are reduced to a less than significant level under Alternative 1, similar to the Project.

Air Quality

Impact 3.2-1: Implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan, cause a violation of any air quality standard, or result in a cumulatively considerable net increase of criteria pollutants

As discussed under Impact 3.2-1 in Section 3.2, implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan, cause a violation of any air quality standard, or result in a cumulatively considerable net increase of criteria pollutants.

CONSISTENCY WITH THE 2017 CLEAN AIR PLAN

Similar to the Project, Alternative 1 would result in the future development of new residential and non-residential buildings that would comply with or exceed the latest version of the California Title 24 building energy efficiency standards, and would thereby be consistent with the key elements of the 2017 Clean Air Plan relating to buildings and energy. This alternative would also comply with the latest state legislation relating to water and waste management, which ensures that the alternative would not conflict with the key elements of the 2017 Clean Air Plan relating to the water and waste management sectors. Separately, Alternative 1 does not include new stationary sources (i.e. industrial facilities, landfills, wastewater treatments plants, etc.), and therefore would not conflict with the key elements of the 2017 Clean Air Plan relating to stationary sources. Moreover, Alternative 1 does not include agricultural land uses, or land uses that would use "super-GHGs', such as methane, black carbon, or fluorinated gases, which can have very large greenhouse gas effects.

Alternative 1 does not cause the disruption, delay, or otherwise hinder the implementation of any quality plan control measure; therefore, it is consistent with the 2017 Clean Air Plan. For the above-specified reasons, Alternative 1 would be consistent with the 2017 Clean Air Plan as promulgated by the BAAQMD, and implementation of this alternative would have a less than significant impact relative to this topic, similar to the Project.

CONSISTENCY WITH THE SONOMA COUNTY GENERAL PLAN

Similar to the Project, Alternative 1 is consistent with the objectives and policies contained in the Sonoma County General Plan, by promoting a compact urban development form, emphasizing infill development, and ensuring that land use patterns do not expose sensitive receptors to pollutant concentrations. Implementation Alternative 1, which is consistent with all applicable Sonoma County General Plan objectives and policies, would have a less than significant impact relative to this topic, similar to the Project.

THRESHOLDS OF SIGNIFICANCE

Because Alternative 1 would implement the existing General Plan land use designations, this alternative would be consistent with the current air quality plan control measures. Similarly, this alternative would result in a population increase that is consistent with the existing General Plan projections. Under Alternative 1, VMT would increase by 21,268 and population would increase by 412 persons (W-trans, 2021). This results in a population increase of 0.08% compared to the existing County population of 504,217 and a VMT increase of 0.07% compared to the baseline VMT of 28,570,046. As such, VMT would not increase more than its projected population increase.

CONSISTENCY WITH THE PLAN BAY AREA 2040

The Plan Bay Area 2040 is the most recently adopted Regional Transportation Plan prepared by the Metropolitan Transportation Commission (MTC) for the San Francisco Bay Area region. The MTC calculated employment and household projections for Plan Bay Area 2040.

The Plan Bay Area 2040 forecast is based on the County's existing General Plan employment and population projections calculated using the land use plan. Because Alternative 1 would implement the existing General Plan land use designations, this alternative would result in a population increase that is consistent with the existing General Plan projections. Therefore, this alternative would be consistent with the Plan Bay Area forecasts for the Plan area.

CONCLUSION

Alternative 1 would be consistent with the 2017 Clean Air Plan, the Sonoma County General Plan, the BAAQMD Thresholds of Significance, and the Plan Bay Area 2040. Therefore, this alternative would not conflict with or obstruct implementation of the applicable air quality, cause a violation of an air quality standard or contribute to an air quality violation, or result in a cumulatively considerable net increase in criteria pollutants. There would be a less than significant impact, similar to the Project.

Impact 3.2-2: Implementation of the Project would not cause health risks associated with toxic air contaminants

The BAAQMD has also promulgated a *Planning Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning* document in May 2016, to address the issue of healthy infill development. This document includes important information for local governments, developers, and the general public, including the location of communities and places throughout the region that are estimated to have elevated levels of fine particulates and/or toxic air contaminants, as well as best practices that may be implemented by local governments and developers to reduce health risks from air pollution in these locations that experience elevated air pollution levels. The purpose of this guidance document is to encourage local governments to address and minimize potential local air pollution issues early in the land-use planning process, and to provide technical tools to assist them in doing so.

Highway 12 in Sonoma County, which includes the segment of Highway 12 within the Plan Area, is identified in the Planning Healthy Places document as heaving relatively elevated levels of air pollution,[1] due to its traffic volume exceeding 10,000 vehicles per day. For such areas, the Air District recommends implementing all of their "best practices to reduce exposure" that are feasible and applicable to a project or plan in these locations. The proposed project would implement these best practices to reduce exposure, where determined to be appropriate by the developers of individual projects within the Plan Area.

Additionally, the BAAQMD has also identified a number of areas within the Bay Area where additional analysis (i.e. further study) is recommended to assess the local concentrations of TACs and fine PM, and therefore the health risks from air pollution. These areas are provided by the Air District's mapping tool.[2] The Air District recommends using caution when considering sensitive land uses in these areas. There are two such areas identified by the Air District within the Plan Area (i.e. two gasoline stations). Specifically,

[1] See Figure 2, on page 10 of the Planning Healthy Places document.

[2] https://www.baaqmd.gov/plans-and-climate/planning-healthy-places

the gasoline stations are a Valero Station, located at 18605 Sonoma Highway, and a Sonoma Beacon station, located at 18618 Sonoma Highway. To help clarify and standardize analysis and decision-making in the environmental review process for development that would occur in the vicinity of these gas stations, future projects would be required to implement Measure Air-B, which would minimize risks associated with any new sensitive receptors located within 1,000 feet of Highway 12 or within 300 feet of the gas stations.

Separately, the BAAQMD CEQA Guidelines provide recommendations for all communities to ensure reduced health risks associated with TACs. The existing Sonoma County General Plan includes policies that are intended to minimize exposure of TACs to sensitive receptors (listed in the Regulatory Setting). These policies help to protect sensitive receptors, and otherwise limit air pollution during construction and operation activities. These objectives and policies are consistent with the BAAQMD recommendations that are intended to reduce health risks associated with TACs. Specifically, General Plan Policy OSRC-16i requires that any proposed new sources of toxic air contaminants provide adequate buffers to protect sensitive receptors and comply with applicable health standards. In addition, there are several policies that relate to reducing diesel particulate matter (DPM), which is a common TAC emitted from heavy-duty long-haul vehicles, as well as wood-burning fireplaces (see Policy OSRC-16l and Policy OSRC-16g).

However, unliked the project, this alternative would not include specific plan components that would minimize the potential for impacts, including Measure Air-B and Measure Air-C. Nevertheless, this alternative's contribution to TACs along Highway 12 would be reduced compared to the Project, since there would be much less development under this alternative compared to the project.

Impact 3.2-3: Implementation of the proposed Specific Plan would not create objectionable odors or other emissions that would adversely impact a substantial number of people s

Alternative 1 does not include uses that are anticipated to result in significant levels of objectionable odors. Future development projects under this alternative would address waste and potential odors in the same manner as the Project. Implementation of this alternative would have a less than significant impact relative to this topic, similar to the Project, as discussed under Impact 3.2-3 in Section 3.2.

Biological Resources

Impact 3.3-1: Implementation of the Project could have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

As discussed under Impact 3.3-1 in Section 3.3, the Project would result in a less than significant impact associated with the potential to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. The area of disturbance, potential for tree removal, and loss of habitat associated with future development projects under Alternative 1 could result in the direct and indirect loss or indirect disturbance of special-status plant or wildlife, similar to the Project. However, Alternative 1 would allow less development and lower development intensities, which would result in less land disturbance than the Project.

The Project includes components that mitigate potential impacts to special-status species. Alternative 1 would not include these components since the Project would not be adopted under this alternative.

Future development within the Plan area under Alternative 1 would be subject to the existing State, federal, and local requirements, such as the existing County General Plan goals, policies, and actions, as well as the County's existing zoning. Because the overall area of disturbance (Plan area), potential for tree removal, and loss of habitat associated with future development projects under Alternative 1 would be comparable to the Project, this alternative would result in potentially significant impacts, similar to the Project. However, because this alternative does not include the policies in the Specific Plan related to biological resources, including Specific Plan Measures Bio-A through Bio-E, this impact would potentially be greater than the Project.

Impact 3.3-2: Implementation of the Project could result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

As noted in Section 3.3, the Plan area is located in an urban area and the majority of the project site is built out. The only aquatic resources in the Plan area are Agua Caliente Creek and Pequeno Creek. Scattered riparian habitat exists along both creeks. Other known wetlands or other waters are not found. Under Alternative 1, Medium Density Residential and High Density Residential uses are zoned within the Plan area adjacent to Aqua Caliente Creek, and Mixed Use and Recreation uses are proposed within the Plan area adjacent to Pequeno Creek. The future construction and operation of these uses will be required to comply with all applicable laws and regulations, so as not to disturb existing creek habitat.

Similar to the Project, as discussed under Impact 3.3-2 in Section 3.3, there is a chance that water features could be impacted throughout the buildout of the individual projects allowed under Alternative 1. Similar to the Project, the implementation of an individual project under Alternative 1 would require a detailed and site-specific review of the site to determine the presence or absence of water features. If water features are present and disturbance is required, Federal and State laws require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these Federal and State laws are implemented through the permit process.

Similar to the Project, subsequent development projects allowed under this alternative will be required to comply with the County General Plan and adopted Federal, State, and local regulations for the protection of sensitive natural communities, including protected wetlands. The Sonoma County General Plan includes numerous policies and actions intended to protect wetlands and waters of the U.S. from adverse effects associated with future development and improvement projects. While future development has the potential to result in significant impacts to protected water features, compliance with existing Federal and State regulations would reduce impacts to these resources. Therefore, similar to the Project, this impact is less than significant.

Impact 3.3-3: Implementation of the Project may result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

The segments of Agua Caliente and Pequeno Creek that traverse the Plan area are designated with the Riparian Corridor Combining Zone, which generally prohibits ground-disturbing activities, with certain exceptions. The Riparian Corridor Combining Zone designation, which generally prohibits ground-disturbing activities within the riparian corridor with certain exceptions where vegetation removal is minimized, minor activities associated with an existing structure are involved, where it is determined that

the area has no substantial value for riparian functions, or if a conservation plan is adopted that provides for protection of the riparian functions, would be maintained under Alternative 1, as it would be under the Project (see discussion of Impact 3.3-6 in Section 3.3).

Similar to the Project, subsequent development projects allowed under this alternative will be required to comply with the County's General Plan and adopted Federal, State, and local regulations for the protection of sensitive natural communities, including riparian habitat. While future development allowed under both the Project and Alternative 1 has the potential to affect protected habitats, this impact is less than significant with compliance with adopted regulations and requirements, similar to the Project.

Impact 3.3-4: Implementation of the Project may result in interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

The only movement corridors for wildlife through the Plan area are for aquatic species along creeks and drainages, as discussed under Impact 3.3-4 in Section 3.4. As noted previously, the Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Future development in these areas allowed under both the Project and Alternative 1 would include appropriate buffers/setbacks and preserve the habitat along the creeks as required by the Riparian Corridor Combining zone. The implementation of an individual project adjacent to the creeks would require a detailed and site-specific review of the site to determine any impact on the movement habitat along Agua Caliente Creek or Pequeno Creek and would be required to be consistent with the Riparian Corridor Combining Zone standards.

Subsequent development projects allowed under the Project and this alternative would be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of movement corridors. Future development projects have the potential to result in impacts to protected movement corridors and because no Specific Plan requirements or comparable mitigation measures would be adopted with Alternative 1, this impact would be greater than the Project.

Impact 3.3-5: Implementation of the Project may result in conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

As discussed in Section 3.3 under Impact 3.3-5, adoption of the Project would not conflict with local policies or ordinances protecting biological resources. The Specific Plan itself does not conflict with the policies contained in the County's General Plan. Alternative 1 would also not conflict with local policies or ordinances protecting biological resources. This alternative would not involve any modifications to adopted codes, ordinances, or the General Plan. Subsequent development projects allowed under both the Project and this alternative would be required to comply with the General Plan policies, as well as the County Code. Similar to the Project, this is a less than significant impact.

Impact 3.3-6: Implementation of the Project may result in conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

As discussed under Impact 3.3-6 in Section 3.6, the Plan area is not subject to an adopted habitat conservation plan or natural community conservation plan. Therefore, implementation of Alterative 1 would have no impact relative to this topic, similar to the Project.

Cultural Resources

Impact 3.4-1: Implementation of the Project has the potential to cause a substantial adverse change to a historical resource, as defined in CEQA Guidelines Section 15064.5

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance of an archaeological, historic, or tribal cultural resource or the discovery of a previously unknown archaeological, historical, or tribal cultural resource under both the Project, as discussed under Impact 3.4-1 in Section 3.4, and Alternative 1. The Sonoma County General Plan includes policies that would reduce impacts to cultural, historic, and archaeological resources, as well as policies for the conservation of cultural, historic, and archaeological resources. Although ministerial projects are exempt from CEQA and do not require an archaeological records search or survey, Section 11.14.050 (see above) of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

The Project includes components that mitigate potential impacts to cultural resources. Alternative 1 would not include these components since the Specific Plan would not be adopted under this alternative. Both the Project and this alternative would be subject to the aforementioned State and local requirements. While the area of disturbance associated with future development projects under Alternative 1 would be less than the Project, this alternative would result in potentially significant impacts associated with potential ground-disturbing activities, similar to the Project. Mitigation would be required to reduce this impact to a less than significant level. However, as no Specific Plan requirements or comparable mitigation measures would be adopted with Alternative 1, this impact would be greater than the Project.

Impact 3.4-2: Implementation of the Project has the potential to cause a significant impact on archaeological resources if development facilitated by the project would cause a substantial adverse change in the significance of an archaeological resources, including those that qualify as historical resources.

Ground-disturbing activities associated with development facilitated by the project have the potential to damage or destroy historic-age or prehistoric archaeological resources that may be present on or below the ground surface, though this potential is expected to be low based on evaluation the Cultural Resource Assessment for the Springs Specific Plan, Sonoma County, California (Peak & Associates, Inc., 2016).

The Project includes components that mitigate potential impacts to cultural resources. Alternative 1 would not include these components since the Specific Plan would not be adopted under this alternative. While the area of disturbance associated with future development projects under Alternative 1 would be less than the Project, this alternative would result in potentially significant impacts associated with potential ground-disturbing activities, similar to the Project. Mitigation would be required to reduce this impact to a less than significant level. However, as no Specific Plan requirements or comparable mitigation measures would be adopted with Alternative 1, this impact would be greater than the Project.

Impact 3.4-3: Implementation of the Project has the potential to disturb human remains, including those interred outside of dedicated cemeteries

The area of disturbance associated with future development projects under Alternative 1 could result in the direct and indirect disturbance to human remains, similar to the Project as discussed under Impact 3.4-3 in Section 3.4. The Project includes one component that mitigates potential impacts to human remains by ensuring that steps would be taken in the event that they are discovered during construction. Alternative 1 would not include this component since the Specific Plan would not be adopted under this alternative. The area of disturbance associated with future development projects under Alternative 1 could result in the disturbance of human remains, similar to the Project. As discussed under Section 3.4-3, State law establishes how to address the inadvertent discovery of human remains. Compliance with existing requirements would ensure that this impact would be similar to the Project.

Geology and Soils

Impact 3.5-1: Project implementation has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides

Alternative 1 would result in future development of the Plan area consistent with the existing General Plan land use designations and existing zoning. This alternative would not result in development of land outside the Plan area. As such, the geologic and seismic-related conditions and potential impacts are consistent with those identified for the Project under Impact 3.5-1 in Section 3.5. Under both Alternative 1 and the Project, all future projects within the Plan area will be required to comply with the provisions of the California Building Standards Code (CBSC), which requires development projects to: perform geotechnical investigations in accordance with State law, engineer improvements to address potential seismic and ground failure issues, and use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. As future development and infrastructure projects are considered by the County, each project would be evaluated for conformance with the CBSC, General Plan, Zoning Ordinance, and other regulations. With the implementation of the policies and actions required by the Sonoma County General Plan, as well as applicable State and County codes, potential impacts associated with a seismic event, including rupture of an earthquake fault, seismic ground shaking, and liquefaction would be less than significant, similar to the Project.

Impact 3.5-2: Project implementation has the potential to result in substantial soil erosion or the loss of topsoil

As discussed under Impact 3.5-2, the Project would have a less than significant impact related to the potential for substantial soil erosion or the loss of topsoil. Future development allowed under the Project and Alternative 1 would be evaluated for conformance with the state and local requirements. For example, future projects would be subject to the County's Construction Grading and Drainage Ordinance, which outlines the construction grading permit requirements, as well as the County's erosion prevention and sediment control best management practices guide. A construction drainage permit will be required prior to commencing any construction drainage involving construction or modification of drainage facilities or related work, including preparatory land clearing, vegetation removal, or other ground disturbance (except where exempted from permit requirements by Subsection C of Chapter 11 of the Code). Future projects allowed under the Project and Alternative 1 would also be required to implement Low Impact Development strategies, as well as best management practices. In addition to compliance with County standards and policies, the Regional Water Quality Control Board (RWQCB) will require a project-specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area of one acre or larger. The SWPPP will include project specific best management practices

that are designed to control drainage and erosion. With the implementation of the applicable State and County requirements, potential impacts associated with erosion and loss of topsoil would be less than significant, similar to the Project.

Impact 3.5-3: Project implementation has the potential to result in development located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site, lateral spreading, subsidence, liquefaction or collapse

As noted above, Alternative 1 would result in future development of the Plan area consistent with the existing General Plan land use designations and existing zoning. This alternative would not result in development of land outside the Plan area. As such, the geologic and seismic-related conditions are consistent with those associated with the Project, as discussed under Impact 3.5-3 in Section 3.5. Under both Alternative 1 and the Project, each future project in the Plan area would be evaluated for conformance with the CBSC, the General Plan, Zoning Ordinance, and other regulations. Future development and improvement projects would be required to have a geotechnical study prepared and incorporated into the improvement design, consistent with State and County requirements. With the implementation of applicable County requirements, including the policies and actions in the General Plan and County Code provisions, as well as applicable State requirements, potential impacts associated with ground instability or failure would be less than significant, similar to the Project.

Impact 3.5-4: Project implementation has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property

As discussed under Impact 3.5-4 in Section 3.5, the linear extensibility of the soils within the Plan area ranges from Low to Moderate. Figure 3.5-4 illustrates the shrink-swell potential of soils in the Plan area. Moderate expansive soils will require special design considerations due to shrink-swell potential. Design criteria and specifications set forth in the design-level geotechnical investigation (required by the County General Plan and CBSC) would ensure impacts from problematic soils are minimized. Therefore, this impact is considered less than significant, similar to the Project.

Impact 3.5-5: Project implementation has the potential to result in development on soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems

As discussed under Impact 3.5-5 in Section 3.5, the Plan area is located in an Urban Service Area and is served by municipal sewer and water. Alternative 1 would not require the use of septic tanks or alternative waste water disposal systems for the disposal of waste water. Implementation of the this alternative result in no impact relative to this topic, similar to the Project.

Impact 3.5-6: Implementation of the Project has the potential to directly or indirectly destroy a unique paleontological resource

As discussed under Impact 3.4-2 in Section 3.4, the Plan area is not expected to contain subsurface paleontological resources, although it is possible. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. The Project includes one component that mitigates potential impacts to paleontological resources by ensuring that steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. Alternative 1 would not include this component since the Specific Plan would not be

adopted under this alternative. The area of disturbance associated with future development projects under Alternative 1 could result in the direct and indirect loss or indirect destruction of a unique paleontological resources, similar to the Project. However, as no Specific Plan requirements or comparable mitigation measures would be adopted with Alternative 1, this impact would potentially be greater than the Project.

Greenhouse Gases and Energy

Alternative 1 could result in up to 94 single family dwelling units, 13 multifamily dwelling units, 40 mixed use dwelling units, 108,796 square feet of commercial uses, 2,712 square feet of office uses, and 7,648 square feet of recreation uses. This alternative would accommodate up to approximately 412 new residents (compared to 1,977 residents under the Project) and up to 271 new employees (compared to 632 employees under the Project). Impacts associated with air quality are discussed in the following section.

Impact 3.6-1: Implementation of the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

As discussed under Impact 3.6-1 in Section 3.6, implementation of the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

CONSISTENCY WITH THE CARB'S 2017 CLIMATE CHANGE SCOPING PLAN

The Specific Plan includes a number of goals and policies to decrease vehicle trips. Under Alternative 1, the Project, including the Springs Specific Plan, associated rezoning, and associated General Plan amendment, would not be adopted. Future development within the Plan area would be subject to the existing General Plan goals, policies, and actions, as well as the County's existing zoning.

The new buildings constructed and operated within the Plan area under the Project and this alternative would be subject to the current CalGreen energy efficiency standards, resulting in development that is significantly more energy efficient than the current buildings in the surrounding area, many of which were constructed under previous versions of the Title 24 energy code. The Project and this alternative would also need to operate in accordance with the goals of AB 341 that requires a 75 percent diversion rate of waste from landfills. Overall, emissions from this alternative would continue to decline beyond the buildout year due to regulations that would indirectly affect project emissions.

As discussed in Section 3.2, although buildout of the Project would be below the CARB's 2017 Climate Change Scoping Plan threshold for specific plans of 6 MT CO_2e per capita for year 2040, the project would not be below the 2 MT CO_2e per capita for year 2050, and therefore would not be considered to be fully consistent with the CARB's 2017 Climate Change Scoping Plan. Alternative 1 would have a much higher VMT per service population as compared to the Project (31.14 for this alternative compared to 19.72 for the Project). Moreover, this alternative does not provide a variety of housing types and pedestrian/bicycle/transit measures and facilities to promote non-automobile travel modes. Therefore, this No Project Alternative is also not considered to be consistent with the CARB's 2017 Climate Change Scoping Plan for year 2050.

CONSISTENCY WITH THE SONOMA COUNTY GENERAL PLAN

The General Plan provides goals, policies, and actions that reduce air pollutants and GHG emissions. This alternative would be consistent with and rely on these goals, objectives, and policies. Therefore, this alternative would help to reduce air pollutants and GHG emissions, consistent with the goals, objectives, and policies contained within the General Plan.

CONSISTENCY WITH THE SONOMA COUNTY CLIMATE CHANGE ACTION RESOLUTION

The Sonoma County Climate Change Action Resolution contains local goals to reduce GHG emissions. This alternative would be consistent with all applicable GHG reduction goals identified within the Sonoma County Climate Change Action Resolution. Similar to the Project, this alternative would not conflict with the local goals included in the Sonoma County Climate Change Action Resolution.

CONSISTENCY WITH BAAQMD GUIDANCE

As discussed in Section 3.2, buildout of the Project would be below the BAAQMD Plan-level threshold for specific plans (for operational emissions) of 4.6 MT CO_2e/service population/year for specific plans.

The above-referenced BAAQMD threshold was designed to meet the AB 32 goal of achieving 1990 emission levels by year 2020. However, given that year 2020 has passed, it is important to consider the SB 32 goal for year 2030 of achieving a 40% reduction in emissions levels from 1990 by year 2030. When taking into account a 40% reduction to the BAAQMD threshold contained in the BAAQMD CEQA Guidelines, the threshold would be 2.8 CO_2e/SP/year for a specific plan, for projects post-2020.

Because this alternative would substantially reduce the development potential of the Plan area, and would reduce the associated service population, this No Project Alternative would also be below the BAAQMD operational threshold. However, as previously described, this alternative would have a much higher VMT per service population as compared to the Project (31.14 for this alternative compared to 19.72 for the Project), which is an important metric when determining the impact of a project.

Separately, the BAAQMD recommends Basic Construction Mitigation Measures for all projects, whether or not construction-related emissions exceed the thresholds of significance. The BAAQMD also encourages lead agencies to incorporate best management practices to reduce GHG emissions during construction, as applicable. Compliance with the BAAQMD construction-related mitigation requirements are considered to reduce GHG impacts at both the local and basin-wide levels. Development within the Plan area under both the Project and this alternative would implement the BAAQMD Basic Mitigation Measures, as applicable, as required by the BAAQMD.

CONCLUSION

Impacts associated with GHG plans, policies, and regulations would be significant and unavoidable under Alternative 1 and would be worse than the Project.

Impact 3.6-2: Implementation of the Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

Under this alternative, future development within the Plan area would be subject to the existing General Plan goals, policies, and actions, as well as the County's existing zoning. Due to the reduction in development potential and associated energy use (including reduced fossil fuel use resulting from the

reduction in automobile trips, and reduced natural gas and electricity use resulting from the reduction in residential and non-residential development) that would occur under this alternative, the associated GHG emissions resulting from this alternative would be substantially reduced compared to the Project.

The Project would comply with all relevant goals, policies, and actions as provided with the Sonoma County General Plan, as well as all relevant GHG reduction goals contained within the Sonoma County Climate Change Action Resolution. However, the No Project Alternative is anticipated to have higher per capita GHG emissions than the Project, as the No Project Alternative would have 58% higher VMT per service population (31.14 VMT per service population for the No Project Alternative compared to 19.72 VMT per service population for the Project as shown in Table 5.0-5). Therefore, implementation of this alternative would generate GHGs that would have a significant and unavoidable impact on the environment and would have a worse impact than the Project.

Impact 3.6-3: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources

This alternative includes residential and non-residential land uses. The amount of energy used within the Plan area would directly correlate to the number and size of the residential units, the energy consumption of associated unit appliances, outdoor lighting, and the energy use associated with non-residential Plan area buildings and activities. Other major sources of energy consumption include fuel used by vehicle trips generated during construction and operation activities, and fuel used by off-road construction vehicles during construction.

As noted previously, this alternative would result in a large reduction in development potential for the Plan area. This would result in an associated reduction in energy use (including reduced fossil fuel use resulting from the reduction in automobile trips, and reduced natural gas and electricity use resulting from the reduction in residential and non-residential development). As such, the associated energy resources required for development and operation of this alternative would be substantially reduced compared to the Project. However, as previously noted, this alternative would have a much higher VMT per service population as compared to the Project (31.14 for this alternative compared to 19.72 for the Project), which would increase the per capita energy use associated with transportation for this alternative compared to the Project.

Overall, this alternative would not result in any significant adverse impacts related to energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of building of this alternative, including construction, operations, maintenance, and/or removal. The electricity and natural gas provider to the Plan area maintains sufficient capacity to serve the Plan area. This alternative would comply with all existing energy standards, including those established by Sonoma County, and would not result in significant adverse impacts on energy resources. This alternative would be linked closely with existing transportation networks that, in large part, are sufficient for most residents of the Plan area and the Plan area as a whole. Due to the reduced amount of energy resulting from this alternative compared to the Project, this impact would be reduced.

Hazards and Hazardous Materials

Impact 3.7-1: Implementation of the Project has the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

Future development, infrastructure, and other projects allowed under the Project and Alternative 1 may involve the transportation, use, and/or disposal of hazardous materials. Accidental release of hazardous materials that are used in the construction or operation of a project may occur. There is also the potential for accidental release of pre-existing hazardous materials, either associated with previous activities on a site or naturally occurring hazards such as asbestos.

The use, transportation, and disposal of hazardous materials is regulated and monitored by local fire departments, Certified Unified Program Agencies (CUPAs), the State Division of Occupational Safety and Health, and the Department of Toxic Substances Control consistent with the requirements of Federal, State, and local regulations and policies. Facilities that store hazardous materials on-site are required to maintain a Hazardous Materials Business Plan in accordance with State regulations. In the event of an accidental release of hazardous materials, the local CUPA and emergency management agencies (e.g., Police Department and Fire District) would respond. All future projects allowed under the Project and Alternative 1 would be required to comply with the provisions of Federal, State, and local requirements related to hazardous materials. Compliance with federal, state and local regulations in addition to General Plan Policies PA-4a through PS-4o would ensure that this potential impact is less than significant, similar to the Project.

Impact 3.7-2: Implementation of the Project has the potential to have projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5

As noted in Section 3.7, there are three sites in Sonoma County on the Cortese database, located in Windsor, Santa Rosa, and Bodega Bay. None of these sites are located in the Plan area. Therefore, this is considered a less than significant impact, similar to the Project.

Impact 3.7-3: Implementation of the Project has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

Alternative 1, similar to the Project, has limited potential for the routine transport, use, or disposal of hazardous materials as discussed above (Impact 3.7-1). One school, Sonoma Charter School, is located within the Plan area. Flowery Elementary school is located immediately west of the Plan area. Additionally, one other school is located within one-quarter mile of the Plan Area: El Verano Elementary School. The area within ¼-mile of these three schools is mostly developed, but some potential for additional development exists in the area.

Similar to the Project, Alternative 1 does not propose actual businesses, industries, or development projects. As such, it is currently not possible to determine if a specific use will result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste. The land use designations with the highest possibility of having businesses that result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste are the Retail Business and Service and Neighborhood Commercial designations.

The Sonoma Charter School, which is located within the Plan area, is surrounded by existing residential development, and the school site is designated Public Facility by the existing zoning map. The zoning map for Alternative 1 identifies areas of Low Density Residential to the west and east of the Sonoma Charter School site, Medium Density Residential to the north of the school site, and Planned Community to the

south of the school site. These designations are not anticipated to have uses that would emit hazardous emissions or handle significant amounts of hazardous materials, substances, or waste.

All hazardous materials would be handled in accordance with Federal, State, and County requirements, which would limit the potential for a project to expose nearby uses, including schools, to hazardous emissions or an accidental release. Hazardous emissions are monitored by the BAAQMD, RWQCB, Department of Toxic Substances Control, and the local CUPA. In the event of a hazardous materials spill or release, notification and cleanup operations would be performed in compliance with applicable Federal, State, and local regulations and policies, including hazard mitigation plans. Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan policies that reduce impacts associated with hazardous materials.

Implementation of General Plan policies would ensure that this potential impact is less than significant, similar to the Project.

Impact 3.7-4: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Similar to the Project, future development under Alternative 1 (i.e., existing land use and zoning) would allow a variety of new development, including residential, commercial, mixed use, recreation, and public facility projects, which would result in increased jobs and population in the Plan area. Road and infrastructure improvements would occur to accommodate the new growth. Future projects are not anticipated to remove or impede evacuation routes. Subsequent development projects in the Plan area allowed under Alternative 1 would be subject to the County's General Plan policies which were designed to ensure that an emergency response plan is prepared and maintained. Similar to the Project, this impact would be less than significant.

Impact 3.7-5: Implementation of the Project has the potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

Similar to the Project, development allowed under Alternative 1 would place people and structures in areas located within the Wildland-Urban Interface. The northeastern portion of the Plan area is in a High fire hazard zone, and the southeastern portion of the Plan area is in a Moderate fire hazard zone. The remainder of the Plan area is designated as a Local Responsibility Zone. No portion of the Plan area is in a Very High fire hazard zone.

Because the entire Plan area is located within the Wildland-Urban Interface, all existing and future properties in the area are required to be built in accordance to specific codes. Future development of the Plan area under Alternative 1 and the Project would be subject to all relevant General Plan objectives and policies that provide protections from wildland fires. Compliance with the County's General Plan objectives and policies and building codes would ensure that potential wildland fire hazards are mitigated through requirements for automatic fire sprinkler systems or other on-site fire detection and suppression systems in new residential and commercial structures, ensuring adequate fire protection services, and ensuring public awareness regarding fire safety. Implementation of Alternative 1 would have a less than significant impact with regard to this issue, similar to the Project.

Impact 3.7-6: Implementation of the Project has the potential to result in a safety hazard or excessive noise for people residing or working in the project are due to proximity to a private airstrip or public airport

As discussed in Section 3.7, the Sonoma Valley Airport is located approximately 5.7 miles south of the Plan area and there are no private airstrips in the vicinity of the Plan area. The Plan area is not located within the airport's referral area or safety zones. Implementation of Alternative 1 would have a less than significant impact with regards to this environmental issue, similar to the Project.

Hydrology and Water Quality

Impact 3.8-1: Implementation of the Project could result in a violation of water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality

As discussed under Impact 3.8-1 in Section 3.8, while the Plan area does not include any water bodies listed on the Section 303(d) list of impaired water bodies, Sonoma Creek, which is located west of the Plan area, is listed on the Section 303(d) list of impaired water bodies for sediment, pathogens, and nutrients. The Total Maximum Daily Load (TMDL) for each of these categories provides actions to reduce sediment, pathogens, and nutrients to the Sonoma Creek watershed. The potential construction and operational water quality impacts associated with Alternative 1 are discussed below.

CONSTRUCTION-RELATED WATER QUALITY IMPACTS

As required under the Project, future development projects under this alternative are required to comply with construction grading requirements, consistent with County Code Section 11.04.010 and projects that disturb one acre or more require project-specific. Based upon the wide scope of this alternative, development of detailed, site-specific information on this impact is not feasible. However, each future project must include detailed project specific drainage plans that control storm water runoff and erosion, both during and after construction consistent with County and State requirements.

NEW DEVELOPMENT-RELATED WATER QUALITY IMPACTS

New development under this alternative would introduce constituents into the storm water that are typically associated with urban runoff. The amount and type of runoff generated by the various future projects would be greater than under existing conditions, due to increases in impervious surfaces. There would be a corresponding increase in urban runoff pollutants and first flush roadway contaminants, as well as an increase in nutrients and other chemicals from landscaped areas. While these constituents would potentially result in water quality impacts to onsite and offsite drainage flows to area waterways, projects are required to comply with State and County requirements to address water quality, as discussed under Impact 3.8-1 in Section 3.8.

CONCLUSION

Under this alternative, the development potential of the Plan area would be decreased over the project and the anticipated amount of future ground disturbance would be less than the Project. Future projects under both the Project and this alternative would be subject to applicable water quality and runoff related regulations and policies. As previously described, future development projects within the Plan area are required to comply with General Plan objectives and policies that aim to reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality

features. The General Plan policies include numerous requirements that would reduce the potential for implementation of the Project to result in increased water quality impacts, as well as comply with the CWA and regulations enforced by the RWQCB that address water quality. The implementation of these General Plan policies, combined with compliance with Federal and State regulations, would ensure that Implementation of the alternative would have a less than significant impact from these issues, similar to the Project.

Impact 3.8-2: Implementation of the Project could result in decreased groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

Subsequent development projects proposed within the Plan area, such as residential, commercial, office, and recreational projects, under both the Project and this alternative would result in new impervious surfaces and could reduce stormwater infiltration and groundwater recharge.

Projects located in urban areas, such as the uses along the developed Highway 12 corridor, would have less of an impact than projects located on undeveloped or underutilized parcels. Development would be required to be consistent with all applicable County and service provider in infrastructure master plans and regulations pertaining to storm water quality and groundwater recharge. Additionally, future projects within the Plan area under both the Project and this alternative would be required to develop and incorporate sustainability measures, such as creek and sensitive habitat setbacks (which would allow for groundwater infiltration) and use of drought tolerant plants per the County Water Efficiency Landscape Ordinance (which would minimize groundwater demand for landscaping). Further, the County's General Plan includes objectives and policies which address groundwater quality and groundwater recharge. For example, General Plan Policy WR-2f requires that discretionary projects maintain the site's pre-development recharge of groundwater to the maximum extent practicable. Implementation of the relevant General Plan objectives and policies would ensure that this alternative would have a less than significant impact relative to this topic, similar to the Project.

Impact 3.8-3: Implementation of the Project could alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation, increase the rate or amount of runoff which would result in flooding, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows

Individual future projects developed within the Plan area under both the Project and this alternative would create new impervious surfaces. This would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, potentially generating additional runoff during storm events. The amount of impervious surfaces under this alternative would be comparable to the Project.

Alternative 1 would be subject to all existing County General Plan policies and other applicable County development regulations. The Sonoma County General Plan contains numerous policies that would reduce the potential for Implementation of the Project to result in increased flooding or result in water quality impacts associated with increased runoff, siltation, or erosion. Further, the County Flood Damage Prevention Ordinance outlines the flood prevention standards. Such measures apply to all structures or land constructed, located, extended, converted, or altered within special flood hazard areas in the county, as identified on the FEMA floodplain maps. Chapter 11A of the County Code outlines the County's stormwater regulations. The purpose of the chapter is to protect and enhance the water quality of the

County's watercourses pursuant to and consistent with the Federal CWA and amendments thereto and to assure compliance with the conditions set forth by the NPDES as requirements of stormwater discharge permits. Projects involving grading activities may also require submittal of a drainage plan, especially where alterations to natural drainage ways are proposed or where the project is in a flood prone area. Drainage plans include supporting hydrologic and hydraulic calculations. Implementation of the General Plan policies and County Code requirements would ensure that this alternative would have a less than significant impact relative to this topic, similar to the Project.

Impact 3.8-4: Implementation of the Project could result in flood hazards due to 100-year flood hazard, tsunami, or seiche zones

The majority of the Plan area and surrounding area is designated by FEMA as Zone X which is an area determined to be outside the 500-year floodplain. However, small portions of the Plan area are subject to flooding along the natural creeks and drainages that traverse the southern portion of the Plan area. The 100-year flood plain extends across Highway 12 between Encinas Lane and Meadowbrook Avenue along Agua Caliente Creek.

Subsequent development, infrastructure, and planning projects would be subject to the General Plan and County Code requirements. The policies contained in the General Plan combined with the County Code standards for floodplain development represent a comprehensive approach by Sonoma County to reduce the risks of flooding to city residents and properties. Furthermore, as described in the regulatory setting section of Section 3.8, numerous Federal, State, and local agencies are responsible for maintaining flood protection features in the County, including the U.S. Army Corps of Engineers, DWR, and Department of Fish and Wildlife at the Federal and State level. The implementation of these policies and regulations would ensure that implementation of this alternative would have a less than significant impact related to these issues, similar to the Project.

Impact 3.8-5: Implementation of the Project may conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

The San Francisco Basin Water Quality Control Plan and the Sonoma Valley Groundwater Management Plan are the two guiding documents for water quality and sustainable groundwater management in the Plan area. Consistency with the two plans are discussed below.

SAN FRANCISCO BASIN WATER QUALITY CONTROL PLAN

As discussed in Impact 3.8-1, impacts related to water quality during construction and operation would be less-than-significant with implementation of a project-specific drainage study and, when applicable, a SWPPP and compliance with relevant General Plan objectives and policies that aim to reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality features. The County General Plan policies include numerous requirements that would reduce the potential for implementation of the Project to result in increased water quality impacts. For example, General Plan Policy WR-1h requires grading plans to include measures to avoid soil erosion and requires the consideration of upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable. In addition, compliance with the CWA and regulations enforced by the RWQCB would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations.

Further, Chapter 11A of the County Code outlines the County's stormwater regulations. The purpose of the chapter is to protect and enhance the water quality of the County's watercourses pursuant to and

consistent with the Federal CWA and amendments thereto and to assure compliance with the conditions set forth by the NPDES as requirements of stormwater discharge permits. This Chapter of the Code applies to projects regardless of the site size. Future projects in the Plan area under both the Project and Alternative 1 would be subject to the requirements included in Chapter 11A.

SONOMA VALLEY GROUNDWATER MANAGEMENT PLAN

Similar to the Project as discussed in Impact 3.8-2, this alternative would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the alternative may impede sustainable groundwater management of the basin. Projects located in urban areas, such as the uses along the developed Highway 12 corridor, would have less of an impact than projects located on undeveloped or underutilized parcels. The Plan area is largely built out and developed. Development of vacant parcels would result in an increase in impervious surfaces within the Plan area under both the Project and this alternative. However, development would be required to be consistent with all applicable County and service provider in infrastructure master plans and regulations pertaining to storm water quality and groundwater recharge. Additionally, future projects within the Plan area under this alternative would be required to develop and incorporate sustainability measures, such as creek and sensitive habitat setbacks (which would allow for groundwater infiltration), use of drought tolerant plants (which would minimize groundwater demand for landscaping), or permeable concrete of pavers (which would provide opportunities for groundwater infiltration in areas which would typically be paved with impermeable surfaces).

CONCLUSION

Overall, implementation of this alternative would have a less than significant impact related to conflicts with the San Francisco Basin Water Quality Control Plan and Sonoma Valley Groundwater Management Plan, similar to the Project.

Land Use

Impact 3.9-1: Implementation of the Project would not physically divide an established community

The land uses allowed under Alternative 1 (i.e., the existing land use and zoning designations) provide opportunities for cohesive new growth within existing urbanized areas of the County, as well as new infill growth adjacent to existing urbanized areas, but would not create physical division within the community. This alternative does not include any new areas designated for urbanization or new roadways, infrastructure, or other features that would divide existing communities. Alternative 1 would have a less than significant impact associated with the physical division of an established community, similar to the Project.

Impact 3.9-2: Implementation of the Project may conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect

The State would continue to have authority over any State-owned lands in the vicinity of the Plan area, such as Highway 12, and Alternative 1 would not conflict with continued application of State land use plans, policies, and regulations adopted to avoid or mitigate environmental effects.

The Sonoma County General Plan 2020 is the overarching policy document that guides land use, housing, transportation, infrastructure, community services, and other policy decisions. The Land Use Element of the General Plan establishes land uses for the Plan area. The land uses allowed under Alternative 1 are consistent with the General Plan, since Alternative 1 would not change the land uses in the Plan area. Alternative 1 would not remove or conflict with County plans, policies, or regulations adopted for environmental protection. Therefore, Alternative 1 would be consistent with the County's General Plan.

This alternative would not modify or change any land use plans, policies, or regulations and does not involve any entitlements. This alternative would continue to implement the Sonoma County General Plan land use requirements, County Zoning Code requirements, and other applicable land use requirements in the Plan area and would, therefore, have a less than significant impact relative to land use and planning, similar to the Project.

Impact 3.9-3: Implementation of the Project may conflict with an applicable habitat conservation plan or natural community conservation plan

As discussed under Impact 3.9-3 in Chapter 3.9, no natural community conservation plans or habitat conservation plans have been adopted in Sonoma County. Alternative 1 would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Implementation of this alternative would have no impact relative to this topic, similar to the Project.

Noise

Alternative 1 could result in up to 94 single family dwelling units, 13 multifamily dwelling units, 40 mixed use dwelling units, 108,796 square feet of commercial uses, 2,712 square feet of office uses, and 7,648 square feet of recreation uses. This alternative would accommodate up to approximately 412 new residents (compared to 1,977 residents under the Project) and up to 271 new employees (compared to 632 employees under the Project). Impacts associated with noise are discussed in the following section.

Impact 3.10-1: Implementation of the Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of applicable standards

TRAFFIC NOISE – EXISTING RECEPTORS

Table 3.10-9 in Section 3.10 shows the predicted traffic noise level increases on the local roadway network for Existing No Project, Existing + Project, Cumulative, and Cumulative + Project conditions as a result of the Project. As shown in Table 5.0-5 (see Transportation and Circulation discussion below), Alternative 1 would result in a substantial reduction of automobile trips compared to the Project. This reduction in trips would correspond to a reduction in predicted traffic noise levels compared to the Project.

Some of the existing noise sensitive receptors located along the Plan area roadways are currently exposed to exterior traffic noise levels exceeding the Sonoma County 60 decibels (dB) day/night average sound level (LDN) exterior noise level standard in outdoor activity areas set in the General Plan Noise Element. These areas would continue to experience elevated exterior noise levels upon future development of the Project and this alternative. Under the Project, Robinson Road from Donald Street to East Verano Street will experience a 6 dB LDN increase under both the Existing Plus Project and the Cumulative Plus Project scenarios and Donald Street east of Robinson Road will exceed the County's 60 dB standard under Cumulative plus Project conditions. These are the only roadway segments which experience a significant

increase in traffic noise. Additionally, although there would be an significant increase in the ambient noise levels, the Cumulative Plus Project traffic noise level at the nearest residences along Robinson Road is predicted to be 54 dB LDN, and would not exceed the County standard of 60 dB LDN.

Under Alternative 1, the increased traffic noise at the study roadway segments, including the Robinson Road from Donald Street to East Verano Street and Donald Street east of Robinson Road roadway segments, would be reduced compared to the Project and would have less of an impact.

TRAFFIC NOISE – NEW SENSITIVE RECEPTORS

As described in Section 3.10, subsequent development projects proposed within the Plan area would be subject to all relevant General Plan and Specific Plan policies that alleviate noise impacts. Implementation of General Plan Policies NE-1a, NE-1b, NE-1c, and NE-1g, and the Specific Plan Environmental Measures related to noise, would ensure that this potential impact is less than significant for the Project. Since Alternative 1 would generate less traffic than the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

STATIONARY AND OPERATIONAL NOISE

As described in Section 3.10, the County's General Plan and the proposed Specific Plan include policies that are intended to reduce operational noise associated with point sources. Specifically, General Plan Policies NE-1a, NE-1c, NE-1d, NE-1e, NE-1f, and NE-1h, and Specific Plan Environmental Measures related to noise, would reduce noise associated with point or operational sources. Implementation of proposed Specific Plan policies, would ensure that this impact is less than significant for the proposed Project. Since Alternative 1 would generate less stationary and operational noise due to the reduction in potential development in comparison to the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

CONSTRUCTION NOISE

During construction of subsequent development projects proposed within the Plan area, including roads, water and sewer lines, and related infrastructure, construction noise would add to the noise environment in the vicinity of the Plan area. Construction-related noise would also be generated by increased truck traffic on area roadways. A significant noise source resulting from construction of subsequent development projects in the Plan area would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. These future noise increases would be of short duration, and would likely occur primarily during daytime hours. As provided in Section 3.10, implementation of Specific Plan Noise Measure B would ensure that this impact for the proposed Project is less than significant. Since Alternative 1 would generate less construction than the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

Impact 3.10-2: Implementation of the Project has the potential to generate excessive groundborne vibrations or groundborne noise

The primary vibration- and groundborne noise- generating activities associated with implementation of the Project would occur during construction when activities such as grading, utilities placement, and road construction occur. Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage. Construction vibration levels anticipated for future development projects within the Plan area are less than the 0.1 in/sec criteria

(for human annoyance) at distances of 50 feet. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors. Implementation of this alternative would have a less than significant impact, similar to the Project.

Population and Housing

Impact 3.11-1: Implementation of the Project would not induce substantial population growth

Alternative 1 accommodates future growth in the Plan area allowed under the existing County land use designations. While no specific development projects are proposed as part of the Project or Alternative 1, Alternative 1 would accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential development as envisioned by the General Plan. As shown in Table 5.0-4, Alternative 1 could result in up to 94 single family dwelling units, 13 multifamily dwelling units, 40 mixed use dwelling units, 108,796 square feet of commercial uses, 2,712 square feet of office uses, and 7,648 square feet of recreation uses. This alternative would accommodate up to approximately 412 new residents (compared to 1,977 residents under the Project) and up to 272 new employees (compared to 632 employees under the Project).

With adherence to the existing General Plan goals, objectives, and policies intended to guide growth to appropriate areas and provide services necessary to accommodate growth, development of the land uses allowed under Alternative 1 and the infrastructure anticipated to accommodate such development would be consistent with the long-range growth planned for the County and Bay Area and would not induce growth that would be considered substantial. Because Alternative 1 would increase population substantially less than the Project at full buildout, this alternative would have reduced impacts associated with population growth.

Impact 3.11-2: Implementation of the Project would not displace substantial numbers of people or existing housing

There are approximately 557 existing residences (approximately 347 single-family units and 210 multi-family units) located within the Plan area. As buildout of the Plan area progresses under both the Project and Alternative 1, it is likely that some of the existing housing units would be remodeled, renovated, expanded on, demolished, or otherwise removed or replaced with new development. However, Alternative 1 does not require the removal of any housing. Alternative 1 would accommodate up to 147 new housing units. New development allowed under Alternative 1 would significantly increase the available housing stock in the County, but the number of units would be significantly reduced from 706 to 147 units. Therefore, Alternative 1 would not displace substantial numbers of people or housing units. Therefore, impacts associated with displacement would be less than significant, similar to the Project.

Public Services and Recreation

Impact 3.12-1: Implementation of the Project could result in adverse physical impacts on the environment associated with governmental facilities and the provision of public services

As shown in Table 5.0-4, Alternative 1 could result in up to 94 single family dwelling units, 13 multifamily dwelling units, 40 mixed use dwelling units, 119,156 square feet of commercial uses, 2,712 square feet of office uses, and 7,648 square feet of recreation uses. Development and growth facilitated by the County General Plan (i.e., Alternative 1) would result in increased demand for public services, including fire

protection, law enforcement, schools, parks, libraries, and other public and governmental services. As the demand for services increases, there will likely be a need to address acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and administrative buildings, schools, parks, fire facilities, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the County.

As future development and infrastructure projects (including potential new public facilities) within the Plan area are considered by the County, each project will be evaluated for conformance with the Specific Plan, Sonoma County General Plan, Sonoma County Municipal Code, and other applicable regulations. The Sonoma County General Plan includes a range of objectives and policies to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the County and appropriate service agency, and that new development funds its fair share of services. Therefore, this impact is considered less than significant and no additional mitigation is necessary. Alternative 1 would significantly reduce the development potential in the Plan area, which would decrease demand on governmental facilities compared to the Project. Therefore, impacts related to governmental facilities and the provision of public services would be reduced compared to the Project.

Impact 3.12-2: Implementation of the Project may result in adverse physical impacts associated with the deterioration of existing parks and recreation facilities or the construction of new parks and recreation facilities

Growth accommodated under Alternative 1 would include a range of uses that would increase the population of the county and also attract additional workers and tourists to the county. This growth would result in increased demand for parks and recreation facilities. The provision of new park and recreational facilities is required by Sonoma County General Plan Policy PS-2g. The additional demand on existing parks and recreational facilities, particularly regional facilities, would increase the need for maintenance and improvements. These improvements could have environmental impacts, although the exact impacts cannot be determined since the potential improvements are unknown. This alternative would significantly reduce the development potential in the Plan area. Therefore, impacts related to demand for and use of parks and recreation facilities would be reduced compared to the Project.

Overall, this impact is considered less than significant and no mitigation is necessary, similar to the Project. As noted previously, Alternative 1 would significantly reduce the development potential in the Plan area, which would decrease demand on park and recreation facilities compared to the Project. Therefore, impacts related to existing park and recreation facilities would be reduced compared to the Project.

Impact 3.12-3: Implementation of the Project may increase demand for schools and result in the need to construct new schools

Implementation of Alternative 1 would indirectly lead to new population growth within the county, which would increase the demand for schools and school facilities. Subsequent development projects within the Plan Area would be subject to the applicable school facility impact fees. Additionally, subsequent development projects proposed within the Plan area would be subject to all relevant General Plan objectives and policies that provide provisions related to schools. For these reasons, implementation of Alternative 1 would have a less than significant impact related to school facilities. Because the residential development would be significantly reduced from 706 units under the Project to 147 units under Alternative 1, the resulting student generation would be significantly reduced compared to the Project. Therefore, impacts related to school facilities would be reduced compared to the Project.

Transportation and Circulation

An evaluation of the potential transportation and circulation impacts associated with buildout of Alternative 1 is presented below, including a quantitative analysis of potential traffic impacts. A comparison is also provided of impacts and mitigation measures identified for Alternative 1 versus the Project.

Table 5.0-5 summarizes total VMT, daily VMT, population, and daily trips associated with the Project and Alternative 1, based on information provided by W-trans in 2019 and 2021. It is noted that the trip generation analysis was prepared based on an estimated 685 units, 275,903 non-residential square feet, and 120 hotel rooms for the Project and 87 units, 123,970 non-residential square feet, and 120 hotel rooms for Alternative 1. While the projected units and non-residential development have changed for the Project and Alternative 1, the daily trip analysis remains useful for comparative purposes.

TABLE 5.0-5: VEHICLE MILES TRAVELED, DAILY VMT, POPULATION, AND DAILY TRIPS – PROJECT AND ALTERNATIVE 1

	BASELINE	*PROJECT*	*ALTERNATIVE 1*
VEHICLE MILES TRAVELED			
Daily VMT (Baseline + Project)[1]	28,570,046	28,621,505	28,591,314
Scenario Daily VMT less Baseline[2]	-	51,459	21,268
Increase over Baseline	-	0.18%	0.07%
Scenario Annual VMT[1]	-	18,319,304	7,571,383
HOME-BASED AND EMPLOYEE BASED DAILY VMT			
Home-based Daily VMT[2]	-	29,062	3,168
Employee-based Daily VMT[2]	-	9,988	5,700
Home-based Daily VMT (per capita)[2]	12.8 Regional Threshold	14.7	7.7
Employee-based Daily VMT (per capita)[2]	18.5 Regional Threshold	15.8	21.0
POPULATION			
Residential Population[1,2]	504,217	1,977	412
Residential Population Increase	-	0.39%	0.08%
Employees[2]	-	632	271
Service Population	-	2,609	683
VMT per Service Population	-	19.72	31.14
DAILY VEHICLE TRIPS			
Northern Plan Area[3]	-	6,524	3,364
Southern Plan Area[3]	-	3,934	1,496
Total[3]	-	10,458	4,860

SOURCE: 1 W-TRANS, 2021B

2 W-TRANS, 2021A

3 W-TRANS, 2019

Each impact is discussed qualitatively in the following section.

Impact 3.13-1: Implementation of the Project would conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b) concerning significance of transportation impacts in terms of vehicle miles traveled (VMT)

As shown in Table 5.0-5, the VMT modeling results produced by the SCTM\15 travel demand model indicate that the increase in residential uses under Alternative 1 would result in 7.7 home-based VMT per capita, which is less than the home-based daily VMT threshold of 12.8 and less than the Project's residential VMT of 14.7. Under Alternative 1, employee-based VMT associated with the increase in non-residential uses would be 21.0 VMT, which exceeds the threshold of 18.5 VMT and exceeds the Project's employee-based VMT of 15.8. While Alternative 1 would not result in a significant impact associated with the home-based VMT, Alternative 1 would result in a significant impact associated with employee-based VMT. Further, overall VMT per service population would be 31.14 under Alternative 1, which is worse than the Project's VMT per service population of 19.72.

As discussed in Section 3.13 under Impact 3.13-1, while regional strategies such as VMT mitigation fees, exchanges, and banks hold much promise, they have yet to be implemented and their structures and resulting effectiveness remain uncertain. Further, under Alternative 1, the Specific Plan policies and programs that would improve bicycle and pedestrian facilities and use in the Plan area and promote transit service to the Plan area would not be implemented. Therefore, the impact would be significant and unavoidable under Alternative 1 and the impact would be worse than the Project.

Impact 3.13-2: Implementation of the Project would not substantially increase hazards due to a geometric design feature or incompatible uses

As discussed under Impact 3.13-2 of Section 3.13, the Project would have a less than significant impact associated with the potential to substantially increase hazards due to a design feature. While Alternative 1 would reduce land use densities and intensities, it would not result in any significant changes to design features associated with the Specific Plan or subsequent development in comparison to the Project. Therefore, the same evaluation of design hazards completed under Impact 3.13-2 in Section 3.13 for the Project also applies to Alternative 1. Impacts associated with Alternative 1 would remain less than significant, similar to the Project.

Impact 3.13-3: Implementation of the Project would not result in impacts related to emergency access

As discussed under Impact 3.13-3 of Section 3.13, the Project would have a less than significant impact associated with impacts related to emergency access. Alternative 1 would not change any features of the circulation plan or result in any changes that would affect emergency access. Therefore, the assessment of the Plan's potential impacts to emergency access is the same for both the Project and Alternative 1, as is the list of Specific Plan policies anticipated to mitigate potential impacts. Emergency access impacts associated with Alternative 1 would be less than significant, similar to the Project.

Impact 3.13-4: Implementation of the Project would not conflict with a program, plans, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, or pedestrian facilities

As discussed under Impact 3.13-4 of Section 3.13, the Project would have a less than significant impact associated with impacts related to potential conflicts with multi-modal circulation policies, plans, or programs or the potential to decrease performance or safety of public transit, bicycle, or pedestrian facilities. As with the Project, Alternative 1 is consistent with and expands upon the pedestrian and bicycle

network identified in the Sonoma County Bicycle and Pedestrian Plan. The Project and Alternative 1 also support existing policies regarding non-motorized transportation, including SCTA's Moving Forward 2040 and Sonoma County's General Plan 2020.

Alternative 1 does not include the same set of recommended pedestrian improvements as the Project including sidewalk gap filling, establishing new path segments, and identification of locations on the Highway 12 corridor where new crosswalks and pedestrian enhancements would be installed. Alternative 1 also does not include the same bicycle network as depicted on the Bicycle Circulation Plan (Figure 6 in the Springs Specific Plan) including modification of existing bicycle lanes on Highway 12 to include a striped buffer between the bike lane and vehicle lanes. Future development under this alternative would be required to develop pedestrian, bike, and transit facilities consistent with the Sonoma County Bicycle and Pedestrian Plan, SCTA's Moving Forward 2040, and Sonoma County's General Plan 2020.

Alternative 1 would generate slightly less vehicular and bicycle traffic to side streets in the Plan area, and the potential for any individual side street to be so impacted by traffic as to create a hazard to bicyclists is limited. Alternative 1 is expected to increase population and employment within the Plan area, adding to the demand for transit service provided by Sonoma County Transit, albeit at lower levels than the Project since the intensity of new development would be lower.

In summary, while buildout of Alternative 1 would be expected to generate slightly lower levels of pedestrians, bicyclists, and transit riders than the Project, the assessment of the Plan's potential impacts to multi-modal circulation would essentially be the same. As a result, the potential impacts to multi-modal circulation associated with Alternative 1 would remain less than significant, similar to the Project.

Utilities

Impact 3.14-1: Implementation of the Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments, or require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects

WASTEWATER GENERATION AND CAPACITY

As discussed under Impact 3.14-1 in Section 3.14, the Project would have a less than significant impact related to the potential to exceed wastewater treatment capacity or the requirements of the RWQCB. While the Project would generate 166,654.8 gallons per day (gpd), or 0.17 mgd of wastewater, Alternative 1 would generate 48,157 gpd, or 0.05 mgd as shown in Table 5.0-6. Alternative 1 would generate 29 percent of the wastewater generated by the Project.

TABLE 5.0-6: ALTERNATIVE 1 WASTEWATER GENERATION

LAND USE CATEGORY	*WASTEWATER FLOW RATE*	*WASTEWATER FLOW INCREASE (GPD)*
Single Family Units	200 per unit	18,800.0
Multifamily Units	160 per unit	2,080.0
Work/Live and Mixed Use Units	160 per unit	6,400.0
Commercial Square Feet	0.19 per square foot	20,671.3
Office Square Feet	0.076 per square foot	206.1
Hotel Rooms	100 per room	-
Recreation Square Feet	0	-
TOTAL	--	48,157.4

SOURCE: EBA, 2019; DE NOVO PLANNING GROUP, 2021.

The Sonoma County General Plan includes objectives and policies that would reduce impacts related to wastewater treatment.

It is noted that the Specific Plan includes infrastructure policies aimed to support the private development and public improvements which would result from Implementation of the Project. Because this alternative would not include adoption of the Specific Plan and associated policies, subsequent development projects under this alternative would not be subject to these policies and would not include a comprehensive approach to funding wastewater improvements.

Buildout of the Plan area under this alternative would increase wastewater treatment demand; however, due to the substantial decrease in development potential under this alternative, the associated demand on utilities, including wastewater treatment, would also decrease. While full buildout of the Project and Alternative 1 would slightly increase the existing treatment demands of the treatment plant when combined with future growth throughout other areas of the County, the County's General Plan includes provisions to ensure that new development cannot be approved until it can be demonstrated that adequate capacity is available to serve it. As described above, the Wastewater District must also periodically review and update their master plan, and as growth continues to occur within the Plan area, the district will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development.

Given that the General Plan includes a comprehensive set of objectives and policies to ensure an adequate and reliable wastewater collection and treatment system, impacts associated with wastewater treatment and compliance with waste discharge requirements are less than significant. Because the amount of wastewater generated by this alternative would be substantially reduced, this impact would also be reduced when compared to the Project.

WASTEWATER FACILITIES AND INFRASTRUCTURE

Similar to the Project, the majority of the required wastewater conveyance infrastructure would be primarily be constructed on-site in conjunction with development and redevelopment of individual parcels within the Plan area. Wastewater conveyance infrastructure would be located underground, within the right-of-way footprint of future roadways in the Plan area, and must be constructed to meet the requirements contained in the Sonoma Valley County Sanitation District Sanitation Codes and Standards. Wastewater treatment and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. As future development and infrastructure projects are considered by the County, each project would be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations.

The County's General Plan includes objectives and policies designed to ensure adequate wastewater treatment capacity is available to serve development, to minimize the potential adverse effects of wastewater treatment, and to ensure that development does not move forward until adequate wastewater capacity exists. Policy PF-1d requires all development projects to obtain written certification that either existing services are available or needed improvements will be made prior to occupancy. Subsequent development projects proposed within the Plan area would be subject to these policies. This is a less than significant impact, similar to the Project.

Impact 3.14-2: Implementation of the Project would not require or result in the relocation of new or expanded water facilities, and would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years

Implementation of this alternative would result in increased population and employment growth within the Plan area, and a corresponding increase in the demand for additional water supplies. As discussed in Section 3.14, the Project would have a less than significant impact related to the demand for water supply. The Project's water demand would be 206 acre-feet per year (AFY) while the water demand for this alternative would be approximately 79 AFY, as shown in Table 5.0-7. This is 38 percent of the wastewater generated by the Project.

TABLE 5.0-7: ALTERNATIVE 1 WATER DEMAND

LAND USE CATEGORY	*CONNECTION FACTOR*	*WATER DEMAND PER CONNECTION (AFY)*	*WATER DEMAND (AFY)*
Single Family Units	1 connection per unit	0.26681	25.1
Multifamily Units	1 connection per 10 units	1.13296	1.5
Work/Live and Mixed Use Units	1 connection per 12 units	1.13296	3.8
Commercial Square Feet	1 connection per 4,000 SF	1.14525	31.1
Office Square Feet	1 connection per 3,500 SF	1.14525	0.9
Hotel Rooms	0.525 rooms per connection	0.26681	0.0
Recreation Square Feet	1 connection per 4,450 SF	1.6258	2.8
Mixed Use Irrigation	3 new connection equivalent total assumed for irrigation for mixed use projects	1.6258	4.9
Commercial Irrigation	6 new connection equivalent total assumed for irrigation for commercial projects	1.4898	8.9
TOTAL	--	--	78.9

NOTE: SF = SQUARE FEET
SOURCE: DE NOVO PLANNING GROUP, 2021

The County's General Plan includes a range of objectives and policies designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. Subsequent development projects under this alternative would be subject to all relevant General Plan objectives and policies that reduce impacts related to water supply.

Given that the General Plan includes a comprehensive set of goals, objectives, and policies to ensure an adequate and reliable source of clean potable water, impacts associated with water supplies are less than significant. Because this alternative would substantially reduce the water demand compared to the Project, this impact would be reduced under this alternative.

WATER FACILITIES AND INFRASTRUCTURE

Development and growth in the Plan area under this alternative would result in increased demand for water supplies, including water conveyance and treatment infrastructure. As described under Impact 3.14-2 in Section 3.14, the projected 2040 water supplies are adequate to meet demand that would be generated by buildout of the Project. As noted previously, due to the substantial decrease in development potential under this alternative, the associated demand on utilities, including water demand, would also decrease. As such, implementation and buildout of this alternative would not result in the need to construct or expand water supply and treatment facilities that have not already been described and accounted for in the SCWA's 2015 UWMP.

Future development in the Plan area under both the Project and this alternative would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates. Future projects may be required to implement site specific and limited off-site improvements to the water distribution system in order to connect new project sites to the County's existing water infrastructure network. Any future improvements to the existing water distribution infrastructure would be primarily provided on sites with land use designations that allow for urbanized land uses, and the environmental impacts of constructing and operating the new water distribution infrastructure would likely be similar to those associated with new development, redevelopment, and infrastructure projects under this alternative.

This impact is considered less than significant. Because the water demand generated by this alternative would be substantially reduced, this impact would also be reduced when compared to the Project.

Impact 3.14-3: The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

As shown in Table 5.0-4, Alternative 1 could result in up to 94 single family dwelling units, 13 multifamily dwelling units, 40 mixed use dwelling units, 108,796 square feet of commercial uses, 2,712 square feet of office uses, and 7,648 square feet of recreation uses. This alternative would accommodate up to approximately 412 new residents (compared to 1,977 residents under the Project) and up to 271 new employees (compared to 632 employees under the Project). Implementation of this alternative would result in an increase in solid waste generation. Compared to the Project, the amount of solid waste would be substantially reduced due to the reduction in development potential and associated population.

While there is adequate permitted landfill capacity to accommodate future growth, the County's General Plan includes policies to further reduce the project's impact on solid waste services. Implementation of this alternative would not exceed the permitted capacity of the landfill serving the County. Therefore, through compliance with the General Plan policies, impacts to solid waste are less than significant. Because the amount of solid waste generated by this alternative would be substantially reduced, this impact would also be reduced when compared to the Project.

Tribal Cultural Resources

Impact 3.15-1: Implementation of the Project has the potential to cause a substantial adverse change to a tribal cultural resource as defined in CEQA Guidelines Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or to a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Seventeen cultural resources have been identified within the Plan area, according to files maintained by the Northwest Information Center (Information Center) of the CHRIS. The CHRIS records search identifies buildings, structures, historic sites, prehistoric sites, and any other cultural resources that have been reported to the Information Center. The Information Center did not indicate that any of the reported resources are included on the California Office of Historic Preservation's Archaeological Determination of Eligibility list. In addition, none are listed on the CRHR or the NRHP. The results of Sacred Land files search were negative.

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance or discovery of an archaeological, historic, or tribal cultural resource.

The General Plan policies and objectives, listed in the Regulatory Setting subsection provided in Section 3.15: Tribal Cultural Resources, provide a robust framework for ensuring that effects on significant historic, archaeological and tribal cultural resources are reduced. Although ministerial projects are exempt from CEQA and do not require an archaeological records search or survey, Section 11.14.050 of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

The Project includes components that mitigate potential impacts to cultural and tribal resources. Alternative 1 would not include these components since the Specific Plan would not be adopted under this alternative. Both the Project and this alternative would be subject to the aforementioned State and local requirements. While the area of disturbance associated with future development projects under Alternative 1 would be less than the Project, this alternative would result in potentially significant impacts associated with potential ground-disturbing activities, similar to the Project. Mitigation would be required to reduce this impact to a less than significant level. However, as no Specific Plan requirements or comparable mitigation measures would be adopted with Alternative 1, this impact would be greater than the Project.

Wildfire

Impact 3.16-1: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The County has an Emergency Operations Plan, Hazard Mitigation Plan, and Community Wildfire Protection Plan. The EOP and its Annexes are not a formally "adopted" plan. However, the EOP functions as the emergency response plan and emergency evacuation plan for the unincorporated County, including for the Plan area. For the reasons discussed below, the Project would not impair implementation of or physically interfere with the EOP.

According to the EOP Evacuation Annex, the County has primary responsibility for emergency evacuation in unincorporated areas, such as the Springs. Any new development in the Plan area, facilitated by this plan, would be accessed by preexisting roadways. No new roads are provided for or contemplated in the Plan. The Specific Plan would not create physical impediments or interfere with the use of the roadways for evacuation or response during an emergency. All future development in the Plan area would be required to meet the most current applicable fire safety and emergency access and egress standards, including those regarding roadway width, turnarounds, and other necessary capacities.

As described in Section 3.12, Public Services, all new construction within the Plan Area would be subject to a Fire Impact Fee, adopted on March 23, 2021. The purpose of the fire impact fee is to fund the cost of fire protection and emergency response facilities, apparatus, and equipment attirubtable to new residential and nonresidential development in the District. The fire impact fee will ensure that new development will not burden existing development with the cost of expanded facilities, apparatus, and equipment required to accommodate growth as it occurs within the District. (Sonoma Valley, 2022).

The EOP's Evacuation Annex discusses evacuation methods, routes, and assets. The primary mode of evacuation is assumed to be various forms of ground transport (personal vehicle, bicycle, rail, bus, etc.)

for most persons in an evacuation area. Because evacuation routes are situation-specific, the Evacuation Annex does not identify specific routes but states that routes may include interstate, state and surface roads, and will be chosen based on the relative safety of roadway infrastructure and current traffic conditions. Evacuation routes will be selected by law enforcement officials, approved by the Incident Commander at the time of the evacuation decision, then communicated to the EOC.

The Evacuation Annex assumes that the majority of residents can self-evacuate using personal vehicles, and acknowledges that transit-dependent populations (such as those with disabilities and with access and/or functional needs and households without a vehicle) may require public transportation to evacuate. In those cases, Transportation Assembly Points (TAPs) would be used to transport persons who require evacuation assistance to temporary evacuation points and/or shelters in safe areas. The Annex acknowledges that evacuees may arrive at TAPs by foot, bicycle, public transit, paratransit, or private vehicles, and identifies public and private transportation assets (public and private buses) that would be used for evacuation from TAPs. As with evacuation routes, the location of TAPs in a particular emergency will be selected and activated depending on the immediate circumstances.

The Project is proposed in an existing urbanized area. Implementation of the Project would support improvements to transportation systems throughout the Plan area. The Plan identifies future improvements including addition of new crosswalks, bulb-outs and flashing beacons to improve pedestrian visibility at crossings. Sidewalks would be added along portions of Donald Street, Harley Street and smaller segments throughout the Plan area. Furthermore, the plan's emphasis on improved pedestrian and bicycle infrastructure is intended to support reduced congestion and improved circulation, and may facilitate evacuation, especially for those without access to vehicles who will need to make their way to the designated TAP for their area in the event of an evacuation. Development facilitated by the Project will use existing roadways. Accordingly, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, nor would it reduce existing levels of emergency response service as discussed above. While the area of disturbance associated with future development projects under Alternative 1 would be less than the Project, the impacts to this topic would be similar to the Project with regard to this issue.

Impact 3.16-2: Implementation of the Project has the potential to:

> ***a) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;***
>
> ***b) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or***
>
> ***c) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes***

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), weather (winds, temperatures, humidity levels and fuel moisture content) and topography (degree of slope). The California Department of Forestry and Fire Protection (CalFIRE) uses these factors to quantify fire hazards

and categorizes them as Fire Hazard Severity Zones (FHSZ). Areas are designated as Moderate, High or Very High FHSZ, with areas of significant risk being Very High FHSZ. These areas are fully mapped in State Responsibility Areas, and areas within local jurisdiction (LRAs) are also mapped if they are Very High FHSZ.

All of the Plan area is near an SRA, and small portions of the Plan area are located within an SRA. A majority of the Plan area is urbanized and located in a Local Responsibility Area (LRA) that is not mapped by CalFIRE as a Very High FHSZ. Small portions of the plan area are in a Moderate or High FHSV, but none of the Plan area is within or adjacent to a Very High FHSZ. (See Figure 3.7-1) The Project does not propose development in or adjacent to Very High FHSZ, which is approximately 0.6 miles from the northern end of the Plan area at its closest point. Limiting development in Very High FHSZ limits exposure of people or structures to the areas of greatest fire hazard. A majority of the Plan area is in areas of existing urban development with minimal slope, where wildland fuels are low and wildfire hazards are limited. As shown in Figure 3.7-1, a portion of the southeast Plan area is in a Moderate Fire Hazard Zone (15 parcels or approximately 17 acres) and a portion of the northeast plan area is in a High Fire Hazard Zone (47 parcels or approximately 11 acres).

All future projects allowed under the Project would be required to comply with all applicable provisions of Federal, State, and local requirements related to wildland fire hazards, including State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. As future development and infrastructure projects are considered by the County, each project would be evaluated for consistency with all applicable building and safety code sections that reduce fire risk. Compliance with these State and Local regulations would ensure that potential wildland fire hazards are mitigated through requirements for home hardening, automatic fire sprinkler systems or other on-site fire detection and suppression systems in new residential and commercial structures, and ensuring adequate fire protection services.

As discussed in Section 3.7-5 and as required by Specific Plan Policies Wildfire-1 and Wildfire-2, future projects would be subject to the applicable State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. These policies would ensure that future development does not exacerbate fire risk, and that risks to structures in the case of a wildland fire are reduced compared to those subject to less stringent requirements. In addition, because the Plan area encompasses properties with minimal vegetation, in an urbanized setting, projects built within the Plan area do not represent a new encroachment into wildland areas. As a result, the Plan would not introduce new sources of ignition to areas of very high wildfire hazard.

The Project does not propose to install any major new infrastructure that may exacerbate fire risk. Future infrastructure improvements in the Plan area would include the maintenance of existing water, sewer and roadways associated with new development which are typically underground and not located in wildland areas. Specifically, Policy CF-1f of the Specific Plan requires new utilities in the Plan area to be installed underground. As discussed in Section 3.16-1 above, the circulation and road improvements would increase connectivity and may have a beneficial impact on emergency response, and it is expected that improvements to water infrastructure supported by future development would support firefighting capacity as well. The construction of these improvements would comply with State and local fire standards. Thus, the installation and maintenance of the proposed infrastructure would not exacerbate fire risk or result in temporary or ongoing impacts to the environment.

As discussed in the Geology and Soils Section (3.5), hillsides in the County have a medium to high susceptibility for landslides, while the valleys have a low susceptibility. Given the planning area's relatively

level slopes, landslide potential is very low for all but a small portion of land located between Fetters and Central Avenue. Landslide potential increases in the foothills and mountains to the east of the Planning Area where wildland fire hazard potential also increases. In addition, development in the Plan area would be set back from watercourses that could channel post-wildfire debris flow.

Severe wildfires can damage the forest or shrub canopy, the plants below, as well as the soil. In general, this can result in increased runoff after intense rainfall, which can put homes and other structures below a burned area at risk of localized floods and landslides. Some of the Plan Area is located downslope from hillside areas, or contains some landslide-susceptible areas, and vegetative wildfire fuels, as described above. If a severe wildfire were to occur adjacent to the Plan Area, structures within the area may be at risk of landslides and could expose project residents to wildfire pollutants. If a fire were to occur in more flat and urbanized areas, the risk of flooding or landslides afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to developed conditions.

Though the Plan area is downslope from areas with elevated landslide or fire hazards, the Plan area is consistent with the pattern of development countywide and due to its predominantly level topography and surrounding pattern of urbanization and soil cover would not expose people or structures to elevated post-fire risks such as downslope or downstream flooding or landslides.

Future development projects in the Plan area would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the site and does not result in downstream flooding or major drainage changes. Future development projects located within the area covered by the storm water permit boundary would be subject to the Guidelines for the Standard Urban Storm Water Mitigation Plan. Some of the treatment controls in the Guidelines can be used to provide flood control by including additional flood detention storage.

Because existing codes and regulations cannot fully prevent wildfires from damaging structures or occupants, the Project could increase the exposure of new residential development to risk of loss or damage from wildfire. The Specific Plan includes Policy Wildfire-1 to reduce the risk of wildfire for future development associated with the Project. Specific Plan Policies Wildfire-1 and Wildfire-2 would reduce construction wildfire risk and include project siting considerations for future development.

Overall, while the area of disturbance associated with future development projects under Alternative 1 would be less than the Project, this alternative would result in potentially significant impacts associated with potential ground-disturbing activities, similar to the Project. Mitigation would be required to reduce this impact to a less than significant level. However, as no Specific Plan requirements or comparable mitigation measures would be adopted with Alternative 1, this impact would be greater than the Project.

ALTERNATIVE 2 – REDUCED GROWTH

Alternative 2 provides for reduced growth in comparison to the Project. This alternative was designed to reduce the project's contribution to significant impacts that would occur with project implementation, particularly impacts related to traffic noise levels at existing receptors and traffic performance measures (such as total VMT).

Under Alternative 2, buildout of the Plan area would result in approximately:

- 519 dwelling units, including:
    - 41 single family dwelling units;

  - 398 multifamily dwelling units; and
  - 80 mixed use or work/live units; and
- 218,490 square feet of non-residential uses, including:
  - 137,904 square feet of commercial uses;
  - 62,136 square feet of office uses; and
  - 18,450 square feet of recreation uses.

Aesthetics and Visual Resources

Impact 3.1-1: Project implementation could result in a substantial adverse effect on a scenic vista, or could substantially degrade the existing visual character of the site and its surroundings

As discussed in Section 3.1 under Impact 3.1-1, development allowed under the Project would result in increased development along the Highway 12 corridor which is identified as being a County designated Scenic Corridor. The hillside and open agricultural lands west and east of the Plan area are the most prominent visual feature visible from the Plan area and Highway 12. As described in Section 3.1, the Plan area is considered to be of High visual sensitivity. Project features would be Co-dominant with the existing visual environment. While new development within the Plan area has the potential to interrupt views of the surrounding naturalized foothills and hillsides from Highway 12, local roads, and other public viewpoints within and adjoining the Plan area, the Plan area is mostly urbanized. The Design Guidelines chapter (Chapter 4) of the Specific Plan establishes the aesthetic vision for future developments' architecture, building character, land massing, site design, streetscape, lighting, signage, and landscape standards and would reduce the potential of the project to result in substantial adverse effects on a scenic vista or substantially degrade the visual character of the area. Impacts associated with the Project were determined to be less than significant.

Alternative 2 would result in adoption of the Specific Plan, including the goals, policies, and Design Guidelines. Future development allowed under Alternative 2 would be subject to these Guidelines. As discussed above, under Alternative 2, buildout of the Plan area would result in approximately 519 dwelling units and 218,490 square feet of non-residential uses. This is a reduction of 187 dwelling units and 58,413 square feet of non-residential uses. The Project and Alternative 2 would allow for an increase in intensity and density of the existing land uses than currently allowed. However, as noted above, this alternative would likely result in a decrease in development intensity, including decreased building mass, reduced building heights, and decreased densities in the Plan area in comparison to the Project. Development would occur on either vacant, infill parcels, or on parcels where redevelopment potential exists. Future development would result in densification of urban uses along the Highway 12 corridor and would result in increased residential intensities in the Donald/Verano neighborhood. Future development and design review processes would ensure that future uses are pedestrian scale, blend with the existing built environment, and connect to existing and future open space and public space. This impact is considered to be less than significant. Because the reduced development potential under this alternative could result in decreased building heights and/or decreased densities in the Plan area, this impact would be slightly reduced compared to the Project.

Impact 3.1-2: Project implementation could result in substantial damage to scenic resources within a state scenic highway

As discussed in Section 3.1 under Impact 3.1-2, because the Plan area is not located within a state scenic highway, implementation of this alternative would not result in substantial damage to scenic resources within a state scenic highway. Therefore, this impact is less than significant, similar to the Project.

Impact 3.1-3: Project implementation could result in the creation of new sources of nighttime lighting and daytime glare

As discussed in Section 3.1 under Impact 3.1-2, implementation of the Project would have a less than significant impact associated with the potential to result in impacts related to nighttime lighting and daytime glare. Implementation of this alternative would introduce new sources of daytime glare and nighttime lighting into previously undeveloped areas of the Plan area.

The Specific Plan, which would be adopted as part of this alternative, includes Design Guidelines for exterior lighting that would reduce potential adverse impacts associated with light and glare. The exterior lighting guidelines require the use of light shielding fixtures. The building character guidelines prohibit the use of reflective or mirrored glass in order to reduce glare. Future development within the Plan area under this alternative would also be subject to design review and approval.

Implementation of the Design Guidelines in the Specific Plan would ensure that project lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the design requirements, and the subsequent design review of future projects within the Plan area, would ensure that excessively reflective building materials are not used, and that the Project would not result in significant impacts related to daytime glare. As such, through implementation of the Specific Plan's Design Guidelines, and the design review process, the County can ensure that adverse impacts associated with daytime glare and nighttime lighting are reduced to a less than significant level, similar to the Project.

Air Quality

Impact 3.2-1: Implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan, cause a violation of any air quality standard, or result in a cumulatively considerable net increase of criteria pollutants

As discussed under Impact 3.2-1 in Section 3.2, implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan, cause a violation of any air quality standard, or result in a cumulatively considerable net increase of criteria pollutants.

CONSISTENCY WITH THE 2017 CLEAN AIR PLAN

The 2017 Clean Air Plan defines an integrated, multi-pollutant control strategy to reduce emissions of particulate matter, TACs, ozone precursors, and greenhouse gases. One of the key elements in the control strategy is to reduce motor vehicle travel by promoting transit, bicycling, walking, and ridesharing, and to direct new development to areas that are well-served by transit, and conducive to bicycling and walking. This is consistent with the Specific Plan, which aims to improve the pedestrian, bicycle, and transit network within the Plan area and provides policies in support of these travel modes. This alternative would include the goals and policies of the Specific Plan discussed under Impact 3.2-1 in Section 3.2 that support the pedestrian, bicycle, and transit modes of travel.

Another key element of the 2017 Clean Air Plan is to accelerate the widespread adoption of electric vehicles. Policy SC-4j of the Specific Plan, which would be adopted by this alternative, encourages the installation of electric charging stations on both public property and in private development. This

alternative would be consistent with all of the key elements of the 2017 Clean Air Plan relating to transportation.

Alternative 2 would develop new residential and non-residential buildings that would comply with or exceed the latest version of the California Title 24 building energy efficiency standards, and would thereby be consistent with the key elements of the 2017 Clean Air Plan relating to buildings and energy. This alternative would also comply with the latest state legislation relating to water and waste management, which ensures that this alternative would not conflict with the key elements of the 2017 Clean Air Plan relating to the water and waste management sectors. Separately, similar to the Project, this alternative would not include new stationary sources (i.e. industrial facilities, landfills, wastewater treatments plants, etc.), and therefore would not conflict with the key elements of the 2017 Clean Air Plan relating to stationary sources. Moreover, similar to the Project, this alternative does not propose agricultural land uses, or land uses that would use "super-GHGs', such as methane, black carbon, or fluorinated gases, which can have very large greenhouse gas effects.

Alternative 2 does not cause the disruption, delay, or otherwise hinder the implementation of any quality plan control measure; therefore, it is consistent with the 2017 Clean Air Plan. For the above-specified reasons, Alternative 2 would be consistent with the 2017 Clean Air Plan as promulgated by the BAAQMD, and implementation of this alternative would have a less than significant impact relative to this topic, similar to the Project.

CONSISTENCY WITH THE SONOMA COUNTY GENERAL PLAN

The existing Sonoma County General Plan Open Space and Resource Conservation Element includes an extensive list of objectives and policies that are specifically aimed at improving air quality. This alternative is consistent with these objectives and policies by promoting a compact urban development form, emphasizing infill development, and ensuring that land use patterns do not expose sensitive receptors to pollutant concentrations.

Additionally, the Circulation and Transit Element of the Sonoma County General Plan includes a wide range of objectives and policies that would effectively reduce vehicle miles travelled throughout the Plan area, through the use of improved circulation for pedestrians, bicyclists, and transit systems. Alternative 2 is consistent with these objectives and policies and includes the Specific Plan goals and policies discussed under Impact 3.2-1 in Section 3.2. Because this alternative includes adoption of these policies, this alternative would be consistent with the County General Plan. All future development and infrastructure projects within the Plan area would be subject to all relevant General Plan emissions and air quality goals, objectives, and policies, which were adopted in order to reduce emissions and air quality impacts.

Implementation of this alternative and the Project which are both consistent with all applicable Sonoma County General Plan objectives and policies, would have a less than significant impact relative to this topic, similar to the Project.

THRESHOLDS OF SIGNIFICANCE

The analysis provided above demonstrates that this alternative would be consistent with the current air quality plan control measures.

The following describes VMT and population increases associated with implementation of Alternative 2.

The Springs Specific Plan is intended to foster a vibrant, attractive, multimodal community with increased opportunities for housing and improved circulation for pedestrians, bicyclists, and transit. Alternative 2

would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The alternative will accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential development. In order to analyze this alternative's consistency with the BAAQMD thresholds listed above, this analysis looks at population growth when analyzing relative increases in local VMT.

According to the Sonoma County Transportation Authority travel model, future daily VMT in Sonoma County (under regional buildout) would be 28,570,046 miles (W-Trans, 2021). The "Alternative-only" daily VMT under regional buildout would be 37,640 miles, as shown in Table 5.0-8. Sonoma County has an existing population of 504,217 (U.S. Census, 2017). Full buildout of Alternative 2 is expected to generate approximately 1,453 residents, which results in a population increase of 0.29% compared to the existing County population of 504,217. The VMT increase represents a 0.13% increase compared to the baseline VMT of 28,570,046.

Based on the data shown in Table 5.0-8 (see Transportation and Circulation discussion below), implementation of Alternative 2 would result in an approximately 0.13% increase in County-wide VMT (0.18% under the Project), compared to a 0.29% increase in County-wide population. Therefore, the VMT increase associated with the Alternative 2 is lower than the population growth associated with Alternative 2. This alternative would not result in a VMT increase that would exceed the projected population increase, and would also be consistent with all BAAQMD current air quality plan control measures. Therefore, this alternative is consistent with the adopted BAAQMD thresholds.

Alternative 2 would further the fundamental goals of the BAAQMD in reducing emissions of criteria pollutants associated with vehicle miles traveled, and would increase opportunities for transit ridership, and improved circulation for pedestrians and bicyclists in the Springs and the surrounding areas. For these reasons, this impact is considered less than significant. Because VMT would reduce under this alternative compared to the project, this impact would also be reduced.

CONSISTENCY WITH THE PLAN BAY AREA 2040

The Plan Bay Area 2040 is the most recently adopted Regional Transportation Plan prepared by the MTC for the San Francisco Bay Area region. The MTC calculated employment and household projections for Plan Bay Area 2040.

The adopted Plan Bay Area does not include population projections at the local level, but rather presents regional projections. Plan Bay Area 2040 states that by 2040 the San Francisco Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year.

While no specific development projects are proposed as part of this alternative, this alternative would accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential uses. As shown in Table 5.0-4, full buildout of this alternative area would result in a maximum of 519 residential units. This would represent a maximum residential population of up to approximately 1,453 persons, which is well within the projections of Plan Bay Area 2040. In addition, the projected employment increase associated with the non-residential development within the Plan area would be relatively modest and would be consistent with the Bay Area's overall employment and housing growth projections. Development of this alternative would also assist Sonoma County in providing additional housing opportunities and accommodating the County's Regional Housing Needs Allocation.

This alternative, including its anticipated population growth, does not conflict with the latest adopted and conforming Regional Transportation Plan. This is a less than significant impact, similar to the Project.

CONCLUSION

Alternative 2 would be consistent with the 2017 Clean Air Plan, the Sonoma County General Plan, the BAAQMD Thresholds of Significance, and the Plan Bay Area 2040. Therefore, this alternative would not conflict with or obstruct implementation of the applicable air quality, cause a violation of an air quality standard or contribute to an air quality violation, or result in a cumulatively considerable net increase in criteria pollutants. There would be a less than significant impact, similar to the Project.

Impact 3.2-2: Implementation of the Project would not cause health risks associated with toxic air contaminants

The BAAQMD has also promulgated a *Planning Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning* document in May 2016, to address the issue of healthy infill development. This document includes important information for local governments, developers, and the general public, including the location of communities and places throughout the region that are estimated to have elevated levels of fine particulates and/or toxic air contaminants, as well as best practices that may be implemented by local governments and developers to reduce health risks from air pollution in these locations that experience elevated air pollution levels. The purpose of this guidance document is to encourage local governments to address and minimize potential local air pollution issues early in the land-use planning process, and to provide technical tools to assist them in doing so.

Highway 12 in Sonoma County, which includes the segment of Highway 12 within the Plan Area, is identified in the Planning Healthy Places document as heaving relatively elevated levels of air pollution,[3] due to its traffic volume exceeding 10,000 vehicles per day. For such areas, the Air District recommends implementing all of their "best practices to reduce exposure" that are feasible and applicable to a project or plan in these locations. The proposed project would implement these best practices to reduce exposure, where determined to be appropriate by the developers of individual projects within the Plan Area.

Additionally, the BAAQMD has also identified a number of areas within the Bay Area where additional analysis (i.e. further study) is recommended to assess the local concentrations of TACs and fine PM, and therefore the health risks from air pollution. These areas are provided by the Air District's mapping tool.[4] The Air District recommends using caution when considering sensitive land uses in these areas. There are two such areas identified by the Air District within the Plan Area (i.e. two gasoline stations). Specifically, the gasoline stations are a Valero Station, located at 18605 Sonoma Highway, and a Sonoma Beacon station, located at 18618 Sonoma Highway. To help clarify and standardize analysis and decision-making in the environmental review process for development that would occur in the vicinity of these gas stations, future projects would be required to implement Measure Air-B, which would minimize risks associated with any new sensitive receptors located within 1,000 feet of Highway 12 or within 300 feet of the gas stations.

[3] See Figure 2, on page 10 of the Planning Healthy Places document.

[4] https://www.baaqmd.gov/plans-and-climate/planning-healthy-places

Separately, the BAAQMD CEQA Guidelines provide recommendations for all communities to ensure reduced health risks associated with TACs. The existing Sonoma County General Plan includes policies that are intended to minimize exposure of TACs to sensitive receptors (listed in the Regulatory Setting). These policies help to protect sensitive receptors, and otherwise limit air pollution during construction and operation activities. These objectives and policies are consistent with the BAAQMD recommendations that are intended to reduce health risks associated with TACs. Specifically, General Plan Policy OSRC-16i requires that any proposed new sources of toxic air contaminants provide adequate buffers to protect sensitive receptors and comply with applicable health standards. In addition, there are several policies that relate to reducing diesel particulate matter (DPM), which is a common TAC emitted from heavy-duty long-haul vehicles, as well as wood-burning fireplaces (see Policy OSRC-16l and Policy OSRC-16g). The implementation of these Sonoma County General Plan objectives and policies that are intended to mitigate TACs impacts would ensure that impacts associated with this alternative are reduced to a less than significant level, similar to the Project.

Impact 3.2-3: Implementation of the proposed Specific Plan would not create objectionable odors or other emissions that would adversely impact a substantial number of people

Future development projects under this alternative which would result in biological materials or other odorous waste would provide waste receptacles and would utilize outdoor trash dumpsters with lids, which would be picked up regularly during normal solid waste collection operating hours within the area. The dumpster lids are intended to contain odors emanating from the dumpsters. The dumpsters would be stored in screened areas for further protection from potential objectionable odors. The garbage collected on-site and stored in the outdoor dumpsters would not be on-site long enough to cause substantial odors. Thus, the outdoor, enclosed, and covered trash dumpsters that would be picked up regularly would provide proper containment and handling of the trash generated on-site.

Alternative 2 does not include uses that are anticipated to result in significant levels of objectionable odors or other emissions that would adversely impact a substantial number of people. Implementation of this alternative would have a less than significant impact relative to this topic, similar to the Project.

Biological Resources

Impact 3.3-1: Implementation of the Project could have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

Alternative 2 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The area of disturbance under this alternative would be similar to the Project. The area of disturbance, potential for tree removal, and loss of habitat associated with future development projects under Alternative 2 could result in the direct and indirect loss or indirect disturbance of special-status plant or wildlife, similar to the Project.

The Project includes components that mitigate potential impacts to special-status species, specifically Measures Bio-A through Bio-E as discussed under Impact 3.3-1 in Section 3.1. Alternative 2 would also include these components since the Specific Plan would be adopted under this alternative. The implementation of Specific Plan Measures Bio-A through Bio-E, as well as Federal and State regulations, would reduce impacts to these resources to a less than significant level, similar to the Project.

Impact 3.3-2: Implementation of the Project could result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

As noted in Section 3.3, the Plan area is located in an urban area and the majority of the project site is built out. The only aquatic resources in the Plan area are Agua Caliente Creek and Pequeno Creek. Other known wetlands or other waters are not found in the Plan area. The Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Agua Caliente Creek crosses the southern portion of the Plan area north of Maxwell Farms. Pequeno Creek crosses the northern portion of the Plan area near Larson Park. Scattered riparian habitat exists along both creeks. Under Alternative 2, Medium Density Residential and High Density Residential uses are zoned within the Plan area adjacent to Aqua Caliente Creek, and Mixed Use and Recreation uses are proposed within the Plan area adjacent to Pequeno Creek. The future construction and operation of these uses will be required to comply with all applicable laws and regulations, so as not to disturb existing creek habitat.

Similar to the Project, there is a chance that water features could be impacted throughout the buildout of the individual projects allowed under Alternative 2. The implementation of an individual project would require a detailed and site-specific review of the site to determine the presence or absence of water features. If water features are present and disturbance is required, Federal and State laws require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these Federal and State laws are implemented through the permit process.

Similar to the Project, subsequent development projects allowed under this alternative will be required to comply with the County General Plan and adopted Federal, State, and local regulations for the protection of sensitive natural communities, including protected wetlands. The Sonoma County General Plan includes numerous policies and actions intended to protect wetlands and waters of the U.S. from adverse effects associated with future development and improvement projects. While future development has the potential to result in significant impacts to protected water features, compliance with existing Federal and State regulations would reduce impacts to these resources. Therefore, similar to the Project, this impact is less than significant.

Impact 3.3-3: Implementation of the Project may result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

The segments of Agua Caliente and Pequeno Creek that traverse the Plan area are designated with the Riparian Corridor Combining Zone, which generally prohibits ground-disturbing activities, with certain exceptions. Under Alternative 2, the Riparian Corridor Combining Zone designation would be maintained, which generally prohibits ground-disturbing activities within the riparian corridor, with certain exceptions where vegetation removal is minimized, minor activities associated with an existing structure are involved, where it is determined that the area has no substantial value for riparian functions, or if a conservation plan is adopted that provides for protection of the riparian functions. Additionally, the Specific Plan Design Guidelines and policies require development to incorporate, preserve, and enhance natural creek habitats within the Plan area. This alternative would be subject to the Specific Plan Design Guidelines and policies.

Similar to the Project, subsequent development projects allowed under this alternative will be required to comply with the County's General Plan and adopted Federal, State, and local regulations for the

protection of sensitive natural communities, including riparian habitat. While future development allowed under both the Project and Alternative 2 has the potential to result in significant impacts to protected habitats, this impact is less than significant, similar to the Project.

Impact 3.3-4: Implementation of the Project may result in interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

The only movement corridors for wildlife through the Plan area are for aquatic species along creeks and drainages. As noted previously, the Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Future development in these areas allowed under both the Project and Alternative 2 would include appropriate buffers/setbacks and preserve the habitat along the creeks. The implementation of an individual project adjacent to the creeks would require a detailed and site-specific review of the site to determine any impact on the movement habitat along Agua Caliente Creek or Pequeno Creek and would be required to be consistent with the Riparian Corridor Combining Zone standards.

Subsequent development projects allowed under the Project and this alternative would be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of movement corridors. While future development projects have the potential to result in significant impacts to protected movement corridors, the implementation of the Specific Plan Design Guidelines, as well as Federal, State, and local regulations, would ensure impacts to these resources to a less than significant level, similar to the Project.

Impact 3.3-5: Implementation of the Project may result in conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

As discussed in Section 3.3, adoption of the Project would not conflict with local policies or ordinances protecting biological resources. The Specific Plan itself does not conflict with the policies contained in the County's General Plan. Alternative 2 would also not conflict with local policies or ordinances protecting biological resources. Subsequent development projects allowed under both the Project and this alternative would be required to comply with the General Plan policies, as well as the Municipal Code. Similar to the Project, this is a less than significant impact.

Impact 3.3-6: Implementation of the Project may result in conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

The Plan area is not subject to an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, implementation of the Project and Alterative 2 would have no impact relative to this topic.

Cultural Resources

Impact 3.4-1: Implementation of the Project has the potential to cause a substantial adverse change to a significant archaeological or historical resource, as defined in CEQA Guidelines Section 15064.5, or a significant tribal cultural resource, as defined in Public Resources Code Section 21074

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance of an archaeological, historic, or tribal cultural resource or the discovery of a previously

unknown archaeological, historical, or tribal cultural resource under both the Project and Alternative 2. The Sonoma County General Plan includes policies that would reduce impacts to cultural, historic, and archaeological resources, as well as policies for the conservation of cultural, historic, and archaeological resources. Although ministerial projects are exempt from CEQA and do not require an archaeological records search or survey, Section 11.14.050 (see above) of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

Alternative 2 would result in a similar development pattern and impact areas as the Project. The Specific Plan includes Measure Cult-A through Cult-D as discussed under Impact 3.4-1 in Section 3.4. This alternative would be subject to the same measures. With implementation of Measures Cult-A, Cult-B, Cult-C, and Cult-D, this potential impact would be less than significant, similar to the Project.

Impact 3.4-2: Implementation of the Project has the potential to cause a significant impact on archaeological resources if development facilitated by the project would cause a substantial adverse change in the significance of an archaeological resources, including those that qualify as historical resources.

Ground-disturbing activities associated with development facilitated by the project have the potential to damage or destroy historic-age or prehistoric archaeological resources that may be present on or below the ground surface, though this potential is expected to be low based on evaluation the Cultural Resource Assessment for the Springs Specific Plan, Sonoma County, California (Peak & Associates, Inc., 2016). Alternative 2 would result in a similar development pattern and impact areas as the Project. The Specific Plan includes Measure Cult-A through Cult-D as discussed under Impact 3.4-1 in Section 3.4. This alternative would be subject to the same measures. With implementation of Measures Cult-A, Cult-B, Cult-C, and Cult-D, this potential impact would be less than significant, similar to the Project.

Impact 3.4-3: Implementation of the Project has the potential to disturb human remains, including those interred outside of dedicated cemeteries

The area of disturbance associated with future development projects under Alternative 2 could result in the direct and indirect loss or indirect destruction of a human remains, similar to the Project. Implementation of Mitigation Measure Cult-F would ensure that all construction activities that inadvertently discover human remains implement state required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure Cult-F, in conjunction with County regulations and General Plan policies and objectives, would reduce this impact to a less than significant level, similar to the Project.

Geology and Soils

Impact 3.5-1: Project implementation has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides

Alternative 2 would result in future development of the Plan area consistent with the existing General Plan land use designations and existing zoning. This alternative would not result in development of land outside the Plan area. As such, the geologic and seismic-related conditions are identical to the Project.

Under both Alternative 2 and the Project, all future projects within the Plan area will be required to comply with the provisions of the CBSC, which requires development projects to: perform geotechnical investigations in accordance with State law, engineer improvements to address potential seismic and ground failure issues, and use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. As future development and infrastructure projects are considered by the County, each project would be evaluated for conformance with the CBSC, General Plan, Zoning Ordinance, and other regulations. Additionally, the Sonoma County General Plan goals, objectives, and policies require new land development proposals to avoid unreasonable exposure to geologic hazards, including earthquake damage, subsidence, liquefaction, and expansive soils. All development and construction proposals must be reviewed by the County to ensure conformance with applicable General Plan requirements and CBSC building standards.

All future projects within the Plan area would be required to prepare geotechnical soils investigations to address seismic safety issues and provide adequate mitigation for potential hazards identified, as required by Policy PS-1f and the CBSC. With the implementation of the policies and actions required by the Sonoma County General Plan, as well as applicable State and County codes, potential impacts associated with a seismic event, including rupture of an earthquake fault, seismic ground shaking, and liquefaction would be less than significant, similar to the Project.

Impact 3.5-2: Project implementation has the potential to result in substantial soil erosion or the loss of topsoil

Future development allowed under the Project and Alternative 2 would be evaluated for conformance with state and local requirements. For example, future projects would be subject to the County's Construction Grading and Drainage Ordinance, which outlines the construction grading permit requirements, as well as the County's erosion prevention and sediment control best management practices guide. A construction drainage permit will be required prior to commencing any construction drainage involving construction or modification of drainage facilities or related work, including preparatory land clearing, vegetation removal, or other ground disturbance (except where exempted from permit requirements by Subsection C of Chapter 11 of the Code). Future discretionary projects involving ground-disturbance allowed under the Project and Alternative 2 would also be required to implement Low Impact Development strategies, as well as best management practices, as required under Chapter 11 of the County Code. In addition to compliance with County standards and policies, the RWQCB will require a project specific SWPPP to be prepared for each project that disturbs an area of one acre or larger. The SWPPP will include project specific best management practices that are designed to control drainage and erosion.

With the implementation of the applicable State and County requirements, potential impacts associated with erosion and loss of topsoil would be less than significant, similar to the Project.

Impact 3.5-3: Project implementation has the potential to result in development located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site, lateral spreading, subsidence, liquefaction or collapse

As discussed in Section 3.5, the potential for lateral spreading is generally low. The greatest potential for lateral spreading in the Plan area is in sloped areas. The Plan area is not within an area where subsidence is likely occur. Liquefaction potential in the Plan area is categorized as "Very Low" to "Very High." The area designated as having a "Very High" potential for liquefaction is located along the southern portion of the

Plan area, and is generally associated with the channelized Agua Caliente Creek running along Meadowbrook Avenue. The area between Depot and Northside Avenue is designated as having a "Moderate" potential for liquefaction, as is the area surrounding Agua Caliente Creek. However, the remainder of the Planning Area is designated as having a "Very Low" susceptibility for liquefaction. Liquefaction poses a hazard to structures and infrastructure. Additionally, according to the Sonoma County General Plan Draft EIR, weak or collapsing soils that compress under a load or when wet can be found in the County.

As noted above, Alternative 2 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. This alternative would not result in development of land outside the Plan area. As such, the geologic and seismic-related conditions are identical to the Project. Under both Alternative 2 and the Project, each future project in the Plan area would be evaluated for conformance with the CBSC, the General Plan, Zoning Ordinance, and other regulations. Future development and improvement projects would be required to have a geotechnical study prepared and incorporated into the improvement design, consistent with State and County requirements.

With the implementation of applicable State and County requirements, including the policies and actions in the General Plan and County Code provisions, potential impacts associated with ground instability or failure would be less than significant, similar to the Project.

Impact 3.5-4: Project implementation has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property

The linear extensibility of the soils within the Plan area ranges from Low to Moderate. Figure 3.5-4 illustrates the shrink-swell potential of soils in the Plan area. Moderate expansive soils will require special design considerations due to shrink-swell potential. Design criteria and specifications set forth in the design-level geotechnical investigation (required by the County General Plan and CBSC) would ensure impacts from problematic soils are minimized. Therefore, this impact is considered less than significant, similar to the Project.

Impact 3.5-5: Project implementation has the potential to result in development on soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems

The Plan area is located in an Urban Service Area and is served by municipal sewer and water. Alternative 2 would not require the use of septic tanks or alternative waste water disposal systems for the disposal of waste water. Implementation of the this alternative result in no impact relative to this topic, similar to the Project.

Impact 3.5-6: Implementation of the Project has the potential to directly or indirectly destroy a unique paleontological resource

The Plan area is not expected to contain subsurface paleontological resources, although it is possible. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. The Project includes one component that mitigates potential impacts to paleontological resources by ensuring that steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. Alternative 2 would not include this component since the Specific Plan would not be adopted under this alternative. Under

Alternative 2, including the Springs Specific Plan, associated rezoning, and associated General Plan amendment, would be adopted. The area of disturbance associated with future development projects under Alternative 2 could result in the direct and indirect loss or indirect destruction of a unique paleontological resources, similar to the Project. Implementation of Specific Plan Measure Paleo-A would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. With this measure, this impact would be reduced to a less than significant level, similar to the Project.

Greenhouse Gases and Energy

Alternative 2 could result in up to 41 single family dwelling units, 398 multifamily dwelling units, 80 mixed use dwelling units, 137,904 square feet of commercial uses, 62,136 square feet of office uses, and 18,450 square feet of recreation uses. This alternative would accommodate up to approximately 1,453 new residents (compared to 1,977 residents under the Project) and up to 429 new employees (compared to 632 employees under the Project). Impacts associated with air quality are discussed in the following section.

Impact 3.6-1: Implementation of the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

As discussed under Impact 3.6-1 in Section 3.6, implementation of the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

CONSISTENCY WITH THE CARB'S 2017 CLIMATE CHANGE SCOPING PLAN

The Specific Plan includes a number of goals and policies to decrease vehicle trips. These goals and policies would apply to this alternative. Alternative 2 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The revised densities and standards would result in a reduction of 187 dwelling units and 58,413 square feet of non-residential uses. The reduced development potential under this alternative could reduce vehicle trips slightly compared to the Project.

The new buildings constructed and operated within the Plan area under the Project and this alternative would be subject to the current CalGreen energy efficiency standards, resulting in development that is significantly more energy efficient than the current buildings in the surrounding area, many of which were constructed under previous versions of the Title 24 energy code. The Project and this alternative would also need to operate in accordance with the goals of AB 341 that requires a 75 percent diversion rate of waste from landfills. Overall, emissions from this alternative would continue to decline beyond the buildout year due to regulations that would indirectly affect project emissions.

Additionally, as discussed in Section 3.2, although buildout of the Project would be below the CARB's 2017 Climate Change Scoping Plan threshold for specific plans of 6 MT CO_2e per capita for year 2040, the project would not be below the 2 MT CO_2e per capita for year 2050 and therefore would not be considered to be fully consistent with the CARB's 2017 Climate Change Scoping Plan. This alternative would have a slightly higher VMT per service population as compared to the Project (20.00 for this alternative compared to 19.72 for the Project as shown in Table 5.0-8). Therefore, this No Project Alternative is also not considered to be consistent with the CARB's 2017 Climate Change Scoping Plan for year 2050.

CONSISTENCY WITH THE SONOMA COUNTY GENERAL PLAN

The existing Sonoma County General Plan provides goals, policies, and actions that reduce air pollutants and GHG emissions. This alternative would be consistent with and rely on these goals, objectives, and policies. Therefore, this alternative would help to reduce air pollutants and GHG emissions, consistent with the goals, objectives, and policies contained within the Sonoma County General Plan.

CONSISTENCY WITH THE SONOMA COUNTY CLIMATE CHANGE ACTION RESOLUTION

The Sonoma County Climate Change Action Resolution contains local goals to reduce GHG emissions. This alternative would be consistent with all applicable GHG reduction goals identified within the Sonoma County Climate Change Action Resolution. Similar to the Project, this alternative would not conflict with the local goals included in the Sonoma County Climate Change Action Resolution.

CONSISTENCY WITH BAAQMD GUIDANCE

As discussed in Section 3.2, buildout of the Project would be below the BAAQMD Plan-level threshold for specific plans (for operational emissions) of 4.6 MT CO_2e/service population/year for specific plans.

The above-referenced BAAQMD threshold was designed to meet the AB 32 goal of achieving 1990 emission levels by year 2020. However, given that year 2020 has passed, it is important to consider the SB 32 goal for year 2030 of achieving a 40% reduction in emissions levels from 1990 by year 2030. When taking into account a 40% reduction to the BAAQMD threshold contained in the BAAQMD CEQA Guidelines, the threshold would be 2.8 CO_2e/SP/year for a specific plan, for projects post-2020.

Because this alternative would reduce the development potential of the Plan area, and would reduce the associated service population, this alternative would also be below the BAAQMD operational threshold. However, as previously described, this alternative would have a higher VMT per service population as compared to the Project (20.00 for this alternative compared to 19.72 for the Project).

Separately, the BAAQMD recommends Basic Construction Mitigation Measures for all projects, whether or not construction-related emissions exceed the thresholds of significance. The BAAQMD also encourages lead agencies to incorporate best management practices to reduce GHG emissions during construction, as applicable. Compliance with the BAAQMD construction-related mitigation requirements are considered to reduce GHG impacts at both the local and basin-wide levels. Development within the Plan area under both the Project and this alternative would implement the BAAQMD Basic Mitigation Measures, as applicable, as required by the BAAQMD.

CONCLUSION

Impacts associated with GHG plans, policies, and regulations would be significant and unavoidable under Alternative 2, similar to the Project.

Impact 3.6-2: Implementation of the Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

Under this alternative, future development within the Plan area would be subject to the existing General Plan goals, policies, and actions, as well as the County's existing zoning. Due to the reduction in development potential and associated energy use (including reduced fossil fuel use resulting from the reduction in automobile trips, and reduced natural gas and electricity use resulting from the reduction in

residential and non-residential development) that would occur under this alternative, the associated GHG emissions resulting from this alternative would be substantially reduced compared to the Project. However, as previously noted, this alternative would have a similar VMT per service population as compared to the Project (20.00 for this alternative compared to 19.72 for the Project), which would slightly increase the per capita energy use associated with transportation for this alternative compared to the Project.

Overall, the Project would comply with all relevant goals, policies, and actions as provided with the Sonoma County General Plan, as well as all relevant GHG reduction goals contained within the Sonoma County Climate Change Action Resolution. The Project would comply with BAAQMD thresholds for GHG emissions. However, while the Project would meet the State's GHG reduction goals for 2040, the Project would exceed the State's per capita GHG goals for 2050. Alternative 2 is anticipated to have similar per capita GHG emissions as the Project, as development under Alternative 2 would be subject to the same building code and design requirements as the Project. This alternative would have similar (1% higher) VMT per service population, with 20.00 VMT per service population for Alternative 2 compared to 19.72 VMT per service population for the Project). Therefore, implementation of this alternative would generate GHGs that would have a significant and unavoidable impact on the environment and would have similar impact to the Project.

Impact 3.6-3: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources

This alternative includes residential and non-residential land uses. The amount of energy used within the Plan area would directly correlate to the number and size of the residential units, the energy consumption of associated unit appliances, outdoor lighting, and the energy use associated with non-residential Plan area buildings and activities. Other major sources of energy consumption include fuel used by vehicle trips generated during construction and operation activities, and fuel used by off-road construction vehicles during construction.

As noted previously, this alternative would result in a large reduction in development potential for the Plan area. This would result in an associated reduction in energy use (including reduced fossil fuel use resulting from the reduction in automobile trips, and reduced natural gas and electricity use resulting from the reduction in residential and non-residential development). As such, the associated energy resources required for development and operation of this alternative would be substantially reduced compared to the Project.

As a result, this alternative would not result in any significant adverse impacts related to energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of building of this alternative, including construction, operations, maintenance, and/or removal. The electricity and natural gas provider to the Plan area maintains sufficient capacity to serve the Plan area. This alternative would comply with all existing energy standards, including those established by Sonoma County, and would not result in significant adverse impacts on energy resources. This alternative would be linked closely with existing transportation networks that, in large part, are sufficient for most residents of the Plan area and the Plan area as a whole. Due to the reduced amount of energy resulting from this alternative compared to the Project, this impact would be reduced.

Hazards and Hazardous Materials

Impact 3.7-1: Implementation of the Project has the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

Future development, infrastructure, and other projects allowed under the Project and Alternative 2 may involve the transportation, use, and/or disposal of hazardous materials. Accidental release of hazardous materials that are used in the construction or operation of a project may occur. There is also the potential for accidental release of pre-existing hazardous materials, either associated with previous activities on a site or naturally occurring hazards such as asbestos.

No future activities or uses within the Plan area would be at risk due to the former Heon's Dry Cleaner site.

The use, transportation, and disposal of hazardous materials is regulated and monitored by local fire departments, CUPAs, the State Division of Occupational Safety and Health, and the Department of Toxic Substances Control consistent with the requirements of Federal, State, and local regulations and policies. Facilities that store hazardous materials on-site are required to maintain a Hazardous Materials Business Plan in accordance with State regulations. In the event of an accidental release of hazardous materials, the local CUPA and emergency management agencies (e.g., Police Department and Fire District) would respond. All future projects allowed under the Project and Alternative 2 would be required to comply with the provisions of Federal, State, and local requirements related to hazardous materials. Compliance with federal, state and local regulations in addition to General Plan Policies PA-4a through PS-4o would ensure that this potential impact is less than significant, similar to the Project.

Impact 3.7-2: Implementation of the Project has the potential to have projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5

As noted in Section 3.7, there are three sites in Sonoma County on the Cortese database, located in Windsor, Santa Rosa, and Bodega Bay. None of these sites are located in the Plan area. Therefore, this is considered a less than significant impact, similar to the Project.

Impact 3.7-3: Implementation of the Project has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

Alternative 2, similar to the Project, has limited potential for the routine transport, use, or disposal of hazardous materials as discussed above (Impact 3.7-1). One school, Sonoma Charter School, is located within the Plan area. Flowery Elementary school is located immediately west of the Plan area. Additionally, one other school is located within one-quarter mile of the Plan Area: El Verano Elementary School. The area within ¼-mile of these three schools is mostly developed, but some development potential exists in the area.

Similar to the Project, Alternative 2 does not propose actual businesses. As such, it is currently not possible to determine if a specific use will result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste. The land use designations with the highest possibility of having businesses that result in hazardous emissions or require handling of hazardous or acutely hazardous

materials, substances, or waste are the Retail Business and Service and Neighborhood Commercial designations.

The Sonoma Charter School, which is located within the Plan area, is surrounded by existing residential development, and the school site is designated Public Facility by the existing zoning map. The zoning map for this alternative identifies areas of Medium Density Residential to the north, west and east of the Sonoma Charter School site and Planned Community to the south of the school site. These designations are not anticipated to have uses that would emit hazardous emissions or handle significant amounts of hazardous materials, substances, or waste.

Additionally, there are no known existing commercial, industrial, or agricultural businesses that are known to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school.

All hazardous materials would be handled in accordance with Federal, State, and County requirements, which would limit the potential for a project to expose nearby uses, including schools, to hazardous emissions or an accidental release. Hazardous emissions are monitored by the BAAQMD, RWQCB, Department of Toxic Substances Control, and the local CUPA. In the event of a hazardous materials spill or release, notification and cleanup operations would be performed in compliance with applicable Federal, State, and local regulations and policies, including hazard mitigation plans. Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan policies that reduce impacts associated with hazardous materials.

Implementation of General Plan policies would ensure that this potential impact is less than significant, similar to the Project.

Impact 3.7-4: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Future development under Alternative 2 would allow a variety of new development, including residential, commercial, mixed use, recreation, and public facility projects, which would result in increased jobs and population in the Plan area. Road and infrastructure improvements would occur to accommodate the new growth. Future projects are not anticipated to remove or impede evacuation routes. Subsequent development projects in the Plan area allowed under Alternative 2 would be subject to the County's General Plan policies which were designed to ensure that an emergency response plan is prepared and maintained. Similar to the Project, this impact would be less than significant.

Impact 3.7-5: Implementation of the Project has the potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

Development allowed under Alternative 2 and the Project would place people and structures in areas located within the Wildland-Urban Interface. The northeastern portion of the Plan area is in a High fire hazard zone, and the southeastern portion of the Plan area is in a Moderate fire hazard zone. The remainder of the Plan area is designated as a Local Responsibility Zone. No portion of the Plan area is in a Very High fire hazard zone.

Because the entire Plan area is located within the Wildland-Urban Interface, all existing and future properties in the area are required to be built in accordance to specific codes. Future development of the Plan area under Alternative 2 and the Project would be subject to all relevant General Plan objectives and policies that provide protections from wildland fires. Compliance with the County's General Plan objectives and policies would ensure that potential wildland fire hazards are mitigated through requirements for automatic fire sprinkler systems or other on-site fire detection and suppression systems in new residential and commercial structures, ensuring adequate fire protection services, and ensuring public awareness regarding fire safety. Implementation of Alternative 2 would have a less than significant impact with regard to this issue, similar to the Project.

Impact 3.7-6: Implementation of the Project has the potential to result in a safety hazard for people residing or working in the project are due to proximity to a private airstrip or public airport

The Federal Aviation Administration (FAA) establishes distances of ground clearance for take-off and landing safety based on such items as the type of aircraft using the airport. The nearest airport to the Plan area is the Sonoma Valley Airport. The Sonoma Valley Airport is located approximately 5.7 miles south of the project site. There are no private airstrips in the Vicinity of the Plan area. The Plan area is not located within the airport's referral area or safety zones. Additionally, the Plan area is located adjacent to urban uses on all sides. Implementation of Alternative 2 would have a less than significant impact with regards to this environmental issue, similar to the Project.

Hydrology and Water Quality

Impact 3.8-1: Implementation of the Project could result in a violation of water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality

As discussed under Impact 3.8-1 in Section 3.8, while the Plan area does not include any water bodies listed on the Section 303(d) list of impaired water bodies, Sonoma Creek, which is located west of the Plan area, is listed on the Section 303(d) list of impaired water bodies for sediment, pathogens, and nutrients. The Total Maximum Daily Load (TMDL) for each of these categories provides actions to reduce sediment, pathogens, and nutrients to the Sonoma Creek watershed. The potential construction and operational water quality impacts of Alternative 2 are discussed below.

CONCLUSION

Under this alternative, the amount of future ground disturbance would be comparable to the Project. Although the development potential would be decreased, future projects under both the Project and this alternative would be subject to applicable water quality and runoff related regulations and policies. As previously described, subsequent development projects proposed within the Plan area would be subject to all relevant General Plan objectives and policies that aim to reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality features. The General Plan policies include numerous requirements that would reduce the potential for implementation of the Project to result in increased water quality impacts. For example, General Plan Policy WR-1h requires grading plans to include measures to avoid soil erosion and requires the consideration of upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable. In addition, compliance with the CWA and regulations enforced by the RWQCB would ensure that construction-related impacts to water quality are minimized and future projects comply with all

applicable laws and regulations. The implementation of these General Plan policies, combined with compliance with Federal and State regulations, would ensure that Implementation of the Alternative would have a less than significant impact from these issues, similar to the Project.

Impact 3.8-2: Implementation of the Project could result in decreased groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

Subsequent development projects proposed within the Plan area, such as residential, commercial, office, and recreational projects, under both the Project and this alternative would result in new impervious surfaces and could reduce stormwater infiltration and groundwater recharge.

Projects located in urban areas, such as the uses along the developed Highway 12 corridor, would have less of an impact than projects located on undeveloped or underutilized parcels. Development would be required to be consistent with all applicable County and service provider in infrastructure master plans and regulations pertaining to storm water quality and groundwater recharge. For example, the Groundwater Sustainability Plan, which was adopted in 2021, establishes a standard for "sustainability" of groundwater management and use, and determines how the basin will achieve this standard. The Plan includes sustainable management criteria, establishes a groundwater monitoring network, and includes management actions and plan implementation measures to address groundwater recharge. While this plan initially emphasizes voluntary actions, future implementation may include new development requirements for future projects in the plan area in order to maintain sustainable groundwater levels. Irrespective of those potential measures, under adoption of the Project future projects within the Plan area would be required to develop and incorporate sustainability measures, such as creek and sensitive habitat setbacks (which would allow for groundwater infiltration), use of drought tolerant plants (which would minimize groundwater demand for landscaping), or permeable concrete of pavers (compared to impermeable concrete, permeable pavers would provide opportunities for groundwater infiltration in areas used which would typically be paved with impermeable surfaces). The sustainability measures incorporated would vary based on the project size, project location, and project type.

Additionally, the County's General Plan includes objectives and policies which address groundwater quality and groundwater recharge. For example, General Plan Policy WR-2f requires that discretionary projects maintain the site's pre-development recharge of groundwater to the maximum extent practicable. For ministerial projects, applicants will typically submit a grading or building permit application consisting of a Water Quality Management Plan and construction plans that incorporate BMPs. These BMPs and Water Quality Management Plan details would control storm water runoff while also maintaining opportunities for recharge, as applicable. Implementation of the relevant General Plan objectives and policies would ensure that this alternative would have a less than significant impact relative to this topic, similar to the Project.

Impact 3.8-3: Implementation of the Project could alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation, increase the rate or amount of runoff which would result in flooding, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows

Individual future projects developed within the Plan area under both the Project and this alternative would create new impervious surfaces. This would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, potentially generating additional runoff

during storm events. The amount of impervious surfaces under this alternative would be comparable to the Project.

The County of Sonoma has developed the Specific Plan to include goals and policies that, when implemented, will reduce storm water pollution from new development, and protect and enhance natural storm drainage and water quality features, which will in turn reduce water quality impacts. This alternative would include adoption of the Specific Plan goals and policies. The Sonoma County General Plan also contains numerous policies that would reduce the potential for implementation of this alternative to result in increased flooding or result in water quality impacts associated with increased runoff, siltation, or erosion. Further, Chapter 7B, Flood Damage Prevention, of the County Code outlines the flood prevention standards. Such measures apply to all structures or land constructed, located, extended, converted, or altered within special flood hazard areas in the county, as identified on the FEMA floodplain maps. Chapter 11A of the County Code outlines the County's stormwater regulations. The purpose of the chapter is to protect and enhance the water quality of the County's watercourses pursuant to and consistent with the Federal CWA and amendments thereto and to assure compliance with the conditions set forth by the NPDES as requirements of stormwater discharge permits. Implementation of the General Plan policies, Specific Plan policies, and County Code requirements would ensure that the alternative would have a less than significant impact relative to this topic, similar to the Project.

Impact 3.8-4: Implementation of the Project could result in flood hazards due to 100-year flood hazard, tsunami, or seiche zones

The majority of the Plan area and surrounding area is designated by FEMA as Zone X (unshaded) which is an area determined to be outside the 500-year floodplain. However, small portions of the Plan area are subject to flooding along the natural creeks and drainages that traverse the southern portion of the Plan area. The 100-year flood plain extends across Highway 12 between Encinas Lane and Meadowbrook Avenue along Agua Caliente Creek.

Subsequent development, infrastructure, and planning projects would be subject to the General Plan and County Code requirements. The policies contained in the General Plan combined with the County Code standards for floodplain development represent a comprehensive and holistic approach by Sonoma County to reduce the risks of flooding to city residents and properties. Furthermore, as described in the regulatory setting section, numerous Federal, State, and local agencies are responsible for maintaining flood protection features in the County, including the U.S. Army Corps of Engineers, DWR, and Department of Fish and Wildlife at the Federal and State level.

The implementation of these policies and regulations would ensure that implementation of this alternative would have a less than significant impact related to these issues, similar to the Project.

Impact 3.8-5: Implementation of the Project may conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

The Water Quality Control Plan for the San Francisco Bay Region and the Sonoma Valley Groundwater Management Plan are the two guiding documents for water quality and sustainable groundwater management in the Plan area. Consistency with the two plans are discussed below.

SAN FRANCISCO BAY BASIN WATER QUALITY CONTROL PLAN

As discussed in Impact 3.8-1, impacts related to water quality during construction and operation would be less-than-significant with implementation of a project-specific drainage study and, when applicable, a

SWPPP and compliance with relevant General Plan objectives and policies that aim to reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality features. The County General Plan policies include numerous requirements that would reduce the potential for implementation of the Project to result in increased water quality impacts. For example, General Plan Policy WR-1h requires grading plans to include measures to avoid soil erosion and requires the consideration of upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable. In addition, compliance with the CWA and regulations enforced by the RWQCB would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations.

SONOMA VALLEY GROUNDWATER MANAGEMENT PLAN

As discussed in Impact 3.8-2, this alternative would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the alternative may impede sustainable groundwater management of the basin. Projects located in urban areas, such as the uses along the developed Highway 12 corridor, would have less of an impact than projects located on undeveloped or underutilized parcels. The Plan area is largely built out and developed. Development of the 15.6 acres of vacant parcels would result in an increase in impervious surfaces within the Plan area under both the Project and this alternative. However, development would be required to be consistent with all applicable County and service provider in infrastructure master plans and regulations pertaining to storm water quality and groundwater recharge. Additionally, future projects within the Plan area under this alternative would be required to develop and incorporate sustainability measures, such as creek and sensitive habitat setbacks (which would allow for groundwater infiltration), use of drought tolerant plants (which would minimize groundwater demand for landscaping), or permeable concrete of pavers (which would provide opportunities for groundwater infiltration in areas which would typically be paved with impermeable surfaces). The sustainability measures incorporated would vary based on the project size, project location, and project type. For ministerial projects, applicants will typically submit a grading or building permit application consisting of a Water Quality Management Plan and construction plans that incorporate BMPs. These BMPs and Water Quality Management Plan details would control storm water runoff while also maintaining opportunities for recharge, as applicable.

CONCLUSION

Overall, implementation of this alternative would have a less than significant impact related to conflicts with the Basin Plan and Sonoma Valley Groundwater Management Plan, similar to the Project.

Land Use

Impact 3.9-1: Implementation of the Project would not physically divide an established community

The land uses allowed under Alternative 2 provide opportunities for cohesive new growth within existing urbanized areas of the County, as well as new infill growth adjacent to existing urbanized areas, but would not create physical division within the community. This alternative does not include any new areas designated for urbanization or new roadways, infrastructure, or other features that would divide existing communities. Alternative 2 would have a less than significant impact associated with the physical division of an established community, similar to the Project.

Impact 3.9-2: Implementation of the Project may conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect

STATE PLANS

As noted above, Alternative 2 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The Specific Plan was prepared in conformance with State laws and regulations associated with the preparation of specific plans. Discussion of the Specific Plan's consistency with State regulations, plans, and policies associated with specific environmental issues (e.g., air quality, traffic, water quality, etc.) is provided in the relevant chapters of this Draft EIR. Highway 12, which traverses the Plan area, is a State-owned highway facility. The State would continue to have authority over any State-owned lands in the vicinity of the Plan area, such as Highway 12, and the Project would not conflict with continued application of State land use plans, policies, and regulations adopted to avoid or mitigate environmental effects.

COUNTY PLANS

In September 2008, Sonoma County completed and adopted a comprehensive update to the General Plan. The Sonoma County General Plan 2020 is the overarching policy document that guides land use, housing, transportation, infrastructure, community services, and other policy decisions. The Land Use Element of the General Plan establishes land uses for the Plan area. As shown in Figure 2.0-6 in Chapter 2.0, the Plan area is currently designated General Commercial/Limited Commercial, Public/Quasi-Public, Recreation/Visitor-Serving Commercial, and Urban Residential by the Sonoma County General Plan Land Use Map.

The land uses as proposed by Alternative 2 are not consistent with the General Plan. When land uses are not consistent with a General Plan there are two courses of action: 1) the uses are not allowed due to the inconsistency, or 2) the land uses are changed through an amendment to the General Plan to create consistency. Similar to the Project, this alternative would require amendments to the General Plan land use map and to land use policies to create consistency with the document. Similar to the Project, the land uses for the Plan area under Alternative 2 would include Urban Residential, General Commercial, Public/Quasi-Public, and Recreation & Visitor-Serving Commercial. Although an amendment would be required to change the General Plan land uses in the area, the location and type of uses are similar to the existing uses. For example, the core of the Highway 12 corridor is currently designated for General Commercial/Limited Commercial, Public/Quasi-Public, and Urban Residential land uses, while the proposed Highway 12 core would be designated for General Commercial, Public/Quasi-Public, and Urban Residential land uses. Additionally, the southeastern portion of the Plan area (off Donald Street) is currently designated for Urban Residential land uses, and the proposed land use designation for this area is also Urban Residential. The change in land use designations would allow for increased land use intensities and increased residential densities over the existing condition; however, the development potential would be reduced compared to the Project due to revised densities and development standards. The zoning districts under this alternative would establish permitted uses and standards for each zone. Upon approval of the requested General Plan amendment, the Plan would be consistent with the County General Plan.

The Specific Plan contains detailed development standards, design guidelines, distribution of uses, infrastructure requirements, and goals and policies for the development of a specific geographic area.

The Specific Plan carries forward and enhances policies and measures from the County's existing General Plan that were intended for environmental protection and would not remove or conflict with County plans, policies, or regulations adopted for environmental protection.

Similar to the Project, Alternative 2 would require modifications to the County's Zoning Ordinance to provide consistency between the General Plan and zoning; however, these modifications will not remove or adversely modify portions of the Sonoma County Code that were adopted to mitigate an environmental effect. This alternative would also require amendments to the adopted General Plan land use map. Once the requested amendment is approved, this alternative would be consistent with the County's General Plan.

CONCLUSION

Subsequent development projects within the Plan area would be required to be consistent with all applicable policies, standards, and regulations, including those land use plans, policies, and regulations adopted to mitigate environmental effects by the County as well as those adopted by agencies with jurisdiction over components of future development projects. Approval of the General Plan amendment would ensure that this alternative would be substantially consistent with the Sonoma County General Plan land use requirements and would have a less than significant impact relative to land use and planning, similar to the Project.

Impact 3.9-3: Implementation of the Project may conflict with an applicable habitat conservation plan or natural community conservation plan

No natural community conservation plans or habitat conservation plans have been adopted in Sonoma County. Alternative 2 would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Implementation of this alternative would have no impact relative to this topic, similar to the Project.

Noise

Alternative 2 could result in up to 41 single family dwelling units, 398 multifamily dwelling units, 80 mixed use dwelling units, 137,904 square feet of commercial uses, 62,136 square feet of office uses, and 18,450 square feet of recreation uses. This alternative would accommodate up to approximately 1,453 new residents (compared to 1,977 residents under the Project) and up to 429 new employees (compared to 632 employees under the Project). Impacts associated with noise are discussed in the following section.

Impact 3.10-1: Implementation of the Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of applicable standards

TRAFFIC NOISE – EXISTING RECEPTORS

Table 3.10-9 in Section 3.10 shows the predicted traffic noise level increases on the local roadway network for Existing No Project, Existing + Project, Cumulative, and Cumulative + Project conditions as a result of the Project. As shown in Table 5.0-15, Alternative 2 would result in a substantial reduction of automobile trips compared to the Project. This reduction in trips would correspond to a reduction in predicted traffic noise levels compared to the Project.

Some of the existing noise sensitive receptors located along the Plan area roadways are currently exposed to exterior traffic noise levels exceeding the Sonoma County 60 decibels (dB) day/night average sound

level (LDN) exterior noise level standard in outdoor activity areas set in the General Plan Noise Element. These areas would continue to experience elevated exterior noise levels upon future development of the Project and this alternative. Under the Project, Robinson Road from Donald Street to East Verano Street will experience a 6 dB LDN increase under both the Existing Plus Project and the Cumulative Plus Project scenarios and Donald Street east of Robinson Road will exceed the County's 60 dB standard under Cumulative plus Project conditions. These are the only roadway segments which experience a significant increase in traffic noise (although the resulting noise level would not exceed the 60 dB threshold). Additionally, the Cumulative Plus Project traffic noise level at the nearest residences along Robinson Road is predicted to be 54 dB LDN, and, although there would be an significant increase in the ambient noise levels, would not exceed the County standard of 60 dB LDN.

Under Alternative 2, the increased traffic noise at the study roadway segments, including the Robinson Road from Donald Street to East Verano Street and Donald Street east of Robinson Road roadway segments, would be reduced compared to the Project and would have less of an impact.

TRAFFIC NOISE – NEW SENSITIVE RECEPTORS

As described in Section 3.10, subsequent development projects proposed within the Plan area would be subject to all relevant General Plan and Specific Plan policies that alleviate noise impacts. Implementation of General Plan Policies NE-1a, NE-1b, NE-1c, and NE-1g, and the Specific Plan Environmental Measures related to noise, would ensure that this potential impact is less than significant for the Project. Since Alternative 1 would generate less traffic than the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

STATIONARY AND OPERATIONAL NOISE

As described in Section 3.10, the County's General Plan and the proposed Specific Plan include policies that are intended to reduce operational noise associated with point sources. Specifically, General Plan Policies NE-1a, NE-1c, NE-1d, NE-1e, NE-1f, and NE-1h, and Specific Plan Environmental Measures related to noise, would reduce noise associated with point or operational sources. Implementation of proposed Specific Plan policies, would ensure that this impact is less than significant for the proposed Project. Since Alternative 2 would generate less stationary and operational noise than the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

CONSTRUCTION NOISE

During construction of subsequent development projects proposed within the Plan area, including roads, water and sewer lines, and related infrastructure, construction noise would add to the noise environment in the vicinity of the Plan area. Construction-related noise would also be generated by increased truck traffic on area roadways. A significant noise source resulting from construction of subsequent development projects in the Plan area would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. These future noise increases would be of short duration, and would likely occur primarily during daytime hours. As provided in Section 3.10, implementation of Specific Plan Noise Measure B would ensure that this impact for the proposed Project is less than significant. Since Alternative 1 would generate less construction than the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

Impact 3.10-2: Implementation of the Project has the potential to expose persons to or generate excessive groundborne vibrations or groundborne noise

The primary vibration- and groundborne noise- generating activities associated with implementation of the Project would occur during construction when activities such as grading, utilities placement, and road construction occur. Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage. Construction vibration levels anticipated for future development projects within the Plan area are less than the 0.1 in/sec criteria at distances of 50 feet. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors. Implementation of this alternative would have a less than significant impact, similar to the Project.

Population and Housing

Impact 3.11-1: Implementation of the Project would not induce substantial population growth

Alternative 2 accommodates future growth in the Plan area, including new businesses and new residential uses. Infrastructure and services would need to be extended to accommodate future growth. While no specific development projects are proposed as part of the Project or this alternative, both would accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential development. Under Alternative 2, buildout of the Plan area would result in approximately 519 dwelling units and 218,489 square feet of non-residential uses.

Given the historical and current population, housing, and employment trends, growth in the County, as well as the entire state, is inevitable. Plan Bay Area 2040 states that by 2040 the Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year. From 2010 through 2040, Plan Bay Area 2040 anticipates 33,200 new households in Sonoma County, including 3,000 households in the unincorporated area, and 40,900 new employees, including 10,100 employees in the unincorporated area. During this same period, the California Department of Finance projected that Sonoma County's population would increase by 99,976 persons countywide. While the 2040 Plan Bay Area does not include community-specific growth projections, the 2013 Plan Bay Area projected that The Springs would grow by 1,150 households and 480 jobs. This alternative would accommodate up to 519 new households (up to approximately 1,453 new residents) and up to 429 new employees. Overall, the growth associated with this alternative is within the level of growth planned for the County and Bay Area.

Future development under this alternative is anticipated to be primarily infill development as well as redevelopment and intensification of existing uses, since the Plan area is substantially built-out. In order to accommodate the planned growth, surrounding infrastructure (i.e., water, sewer, and storm drainage facilities) would be extended to vacant infill sites from nearby and/or adjacent roadways or developments. Additionally, some internal access roadways may be required for future infill development. This alternative would not extend infrastructure to areas outside of the Plan area that are not currently served by infrastructure and does not increase capacity of infrastructure beyond that necessary to accommodate the growth anticipated for this alternative. Growth under this alternative is anticipated to remain within the general growth levels projected statewide, as well as locally, and would not be anticipated to exceed any applicable growth projections or limitations that have been adopted to avoid an environmental effect. This alternative is intended to assist in accommodating the County's fair share of statewide housing needs, which are allocated by the Association of Bay Area Governments, based on regional numbers provided by the California Department of Housing and Community Development on a regular basis (every five to eight years).

With adherence to the existing General Plan goals, objectives, and policies intended to guide growth to appropriate areas and provide services necessary to accommodate growth, development of the land uses allowed under Alternative 2 and the infrastructure anticipated to accommodate such development would be consistent with the long-range growth planned for the County and Bay Area and would not induce growth that would exceed adopted thresholds. Therefore, population and housing growth associated with Alternative 2 would result a less than significant impact. Because Alternative 2 would reduce the population of the Plan area at full buildout compared to the Project, this alternative would have reduced impacts associated with population growth.

Impact 3.11-2: Implementation of the Project would not displace substantial numbers of people or existing housing

There are approximately 557 existing residences (approximately 347 single-family units and 210 multi-family units) located within the Plan area. As buildout of the Plan area progresses under both the Project and Alternative 2, it is likely that some of the existing housing units would be remodeled, renovated, expanded on, demolished, or otherwise removed or replaced with new development. However, Alternative 2 does not require the removal of any housing. Alternative 2 would accommodate up to 519 new housing units. New development allowed under Alternative 2 would significantly increase the available housing stock in the County, but the number of units would be reduced from 706 to 519 units. Therefore, Alternative 2 would not displace substantial numbers of people or housing units. Therefore, impacts associated with displacement would be less than significant, similar to the Project.

Public Services and Recreation

Impact 3.12-1: Implementation of the Project could result in adverse physical impacts on the environment associated with governmental facilities and the provision of public services

As shown in Table 5.0-4, Alternative 2 could result in up to 41 single family dwelling units, 398 multifamily dwelling units, 80 mixed use dwelling units, 137,904 square feet of commercial uses, 62,136 square feet of office uses, and 18,450 square feet of recreation uses. Development and growth facilitated by Alternative 2 would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. As the demand for services increases, there will likely be a need to address acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and administrative buildings, schools, parks, fire facilities, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the County.

As future development and infrastructure projects (including potential new public facilities) within the Plan area are considered by the County, each project will be evaluated for conformance with the Specific Plan, Sonoma County General Plan, Sonoma County Municipal Code, and other applicable regulations. The Sonoma County General Plan includes a range of objectives and policies to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the County and appropriate service agency, and that new development funds its fair share of services. Therefore, this impact is considered less than significant and no additional mitigation is necessary. Alternative 2 would reduce the development potential in the Plan area, which would slightly decrease demand on governmental facilities compared to the Project. Therefore, impacts related to governmental facilities and the provision of public services would be slightly reduced compared to the Project.

Impact 3.12-2: Implementation of the Project may result in adverse physical impacts associated with the deterioration of existing parks and recreation facilities or the construction of new parks and recreation facilities

Growth accommodated under Alternative 2 would include a range of uses that would increase the population of the county and also attract additional workers and tourists to the county. This growth would result in increased demand for parks and recreation facilities. The provision of new park and recreational facilities is required by Sonoma County General Plan Policy PS-2g. The additional demand on existing parks and recreational facilities, particularly regional facilities, would increase the need for maintenance and improvements. These improvements could have environmental impacts, although the exact impacts cannot be determined since the potential improvements are unknown. This alternative would significantly reduce the development potential in the Plan area. Therefore, impacts related to parks and recreation facilities would be reduced compared to the Project.

Overall, this impact is considered less than significant and no mitigation is necessary, similar to the Project.

Impact 3.12-3: Implementation of the Project may increase demand for schools and result in the need to construct new schools

Implementation of Alternative 2 would indirectly lead to new population growth within the county, which would increase the demand for schools and school facilities. Subsequent development projects within the Plan Area would be subject to the applicable school facility impact fees. Additionally, subsequent development projects proposed within the Plan area would be subject to all relevant General Plan objectives and policies that provide provisions related to schools. For these reasons, implementation of Alternative 2 would have a less than significant impact related to school facilities. Because the number of units would be reduced from 705 under the Project to 519 units under Alternative 2, the resulting student generation would be slightly reduced compared to the Project. Therefore, impacts related to school facilities would be slightly reduced compared to the Project.

Transportation and Circulation

An evaluation of the potential transportation and circulation impacts associated with buildout of Alternative 2 is presented below, including a quantitative analysis of potential traffic impacts. A comparison is also provided of impacts and mitigation measures identified for Alternative 2 versus the Project.

Table 5.0-8 summarizes total VMT, daily VMT, population, and daily trips associated with the Project and Alternative 2, based on information provided by W-trans in 2019 and 2021. The trip generation was estimated using rates from the 2017 publication *Trip Generation Manual*, 10th Edition, Institute of Transportation Engineers (ITE)It is noted that the trip generation analysis was prepared based on an estimated 685 units, 275,903 non-residential square feet, and 120 hotel rooms for the Project and 476 units, 218,489 non-residential square feet, and 120 hotel rooms for Alternative 2. While the projected units and non-residential development have slightly changed for the Project and Alternative 2, the daily trip analysis remains useful for comparative purposes.

TABLE 5.0-8: VEHICLE MILES TRAVELED, DAILY VMT, POPULATION, AND DAILY TRIPS – PROJECT AND ALTERNATIVE 2

	BASELINE	*PROJECT*	*ALTERNATIVE 2*
VEHICLE MILES TRAVELED			
Daily VMT (Baseline + Project)[1]	28,570,046	28,621,505	28,607,686

Scenario Daily VMT less Baseline[2]	-	51,459	37,640
Increase over Baseline	-	0.18%	0.13%
Scenario Annual VMT[1]	-	18,319,304	13,399,925
HOME-BASED AND EMPLOYEE BASED DAILY VMT			
Home-based Daily VMT[2]	-	29,062	20,735
Employee-based Daily VMT[2]	-	9,988	7,396
Home-based Daily VMT (per capita)[2]	12.8 Regional Threshold	14.7	14.3
Employee-based Daily VMT (per capita)[2]	18.5 Regional Threshold	15.8	17.2
POPULATION			
Residential Population[1,2]	504,217	1,977	1,453
Residential Population Increase	-	0.39%	0.29%
Employees[2]	-	632	429
Service Population	-	2,609	1,882
VMT per Service Population	-	19.72	20.00
DAILY VEHICLE TRIPS			
Northern Plan Area[3]	-	6,524	
Southern Plan Area[3]	-	3,934	
Total[3]	-	10,458	0

SOURCE: 1 W-TRANS, 2021B
2 W-TRANS, 2021A
3 W-TRANS, 2019

IMPACTS AND COMPARISON TO THE PROJECT

Impact 3.13-1: Implementation of the Project would conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b) concerning significance of transportation impacts in terms of vehicle miles traveled (VMT)

As shown in Table 5.0-8, the VMT modeling results produced by the SCTM\15 travel demand model indicate that the increase in residential uses under Alternative 2 would result in 14.3 home-based VMT per capita, which exceeds the home-based daily VMT threshold of 12.8 but is slightly less than the Project's residential VMT of 14.7. Under Alternative 2, employee-based VMT associated with the increase in non-residential uses would be 17.2 VMT, which is less than the threshold of 18.5 VMT and exceeds the Project's employee-based VMT of 15.8. Alternative 2 would result in a significant impact associated with the home-based VMT. Alternative 2 would not result in a significant impact associated with employee-based VMT. Overall, Alternative 2 would have a slightly higher VMT per service population (20.0) than the Project (19.72) .

As discussed in Section 3.13 under Impact 3.13-1, while regional strategies such as VMT mitigation fees, exchanges, and banks hold much promise, they have yet to be implemented and their s effectiveness in reducing impacts below the threshold remain uncertain. Therefore, the impact would be significant and unavoidable under Alternative 2 and the impact would be better than Alternatives 1 and 3 and slightly worse than the Project.

Impact 3.13-2: Implementation of the Project would not substantially increase hazards due to a geometric design feature or incompatible uses

As discussed under Impact 3.13-2 of Section 3.13, the Project would have a less than significant impact associated with the potential to substantially increase hazards due to a design feature. While Alternative 2 would reduce land use densities and intensities, it would not result in any significant changes to design features associated with the Project or subsequent development in comparison to the Project. Therefore, the same evaluation of design hazards completed under Impact 3.13-2 in Section 3.13 for the Project also applies to Alternative 2. Impacts associated with Alternative 2 would remain less than significant, similar to the Project.

Impact 3.13-3: Implementation of the Project would not result in impacts related to emergency access

As discussed under Impact 3.13-3 of Section 3.13, the Project would have a less than significant impact associated with impacts related to emergency access. Alternative 2 would not change any features of the circulation plan or result in any changes that would affect emergency access. Therefore, the assessment of the Plan's potential impacts to emergency access is the same for both the Project and Alternative 2, as is the list of Specific Plan policies anticipated to mitigate potential impacts. Emergency access impacts associated with Alternative 2 would remain less than significant, similar to the Project.

Impact 3.13-4: Implementation of the Project would not conflict with a program, plans, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, or pedestrian facilities

As discussed under Impact 3.13-4 of Section 3.13, the Project would have a less than significant impact associated with impacts related to potential conflicts with multi-modal circulation policies, plans, or programs or the potential to decrease performance or safety of public transit, bicycle, or pedestrian facilities. As with the Project, Alternative 2 is consistent with and expands upon the pedestrian and bicycle network identified in the Sonoma County Bicycle and Pedestrian Plan. The Project and Alternative 2 also support existing policies regarding non-motorized transportation, including SCTA's Moving Forward 2040 and Sonoma County's General Plan 2020.

Alternative 2 includes the same set of recommended pedestrian improvements as the Project including sidewalk gap filling, establishing new path segments, and identification of locations on the Highway 12 corridor where new crosswalks and pedestrian enhancements would be installed. It is noted that in areas where Alternative 2 has lower densities than the Project and therefore lower levels of pedestrian activity would occur, some of the Highway 12 crosswalks identified in the Specific Plan would not be needed until a later timeframe, or potentially not at all. Ultimately, the determination of when a particular crosswalk is needed to support pedestrian connectivity would be dependent on the actual types, locations, and timing of individual projects constructed in the future within the Plan area.

Alternative 2 also includes the same proposed bicycle network as depicted on the Bicycle Circulation Plan (Figure 6 in the Springs Specific Plan) including modification of existing bicycle lanes on Highway 12 to include a striped buffer between the bike lane and vehicle lanes. Alternative 2 would generate slightly less vehicular and bicyclist traffic to side streets in the Plan area, and the potential for any individual side street to be so impacted by traffic as to create a hazard to bicyclists is limited. The Specific Plan identifies new bicycle facilities to increase bicyclist comfort and safety.

Alternative 2 is expected to increase population and employment within the Plan area, adding to the demand for transit service provided by Sonoma County Transit, albeit at slightly lower levels than the

Project since the intensity of new development would be lower. Alternative 2 would retain a transit orientation, reducing reliance on travel by single-occupant vehicles and helping to further a travel mode shift from autos to transit.

In summary, while buildout of Alternative 2 would be expected to generate slightly lower levels of pedestrians, bicyclists, and transit riders than the Project, the assessment of the Plan's potential impacts to multi-modal circulation would essentially be the same. The list of Specific Plan policies anticipated to mitigate potential impacts would also remain unchanged. As a result, the potential impacts to multi-modal circulation associated with Alternative 2 would remain less than significant, similar to the Project.

Utilities

Alternative 2 could result in up to 41 single family dwelling units, 398 multifamily dwelling units, 80 mixed use dwelling units, 137,904 square feet of commercial uses, 62,136 square feet of office uses, and 18,450 square feet of recreation uses. This alternative would accommodate up to approximately 1,453 new residents (compared to 1,977 residents under the Project) and up to 429 new employees (compared to 632 employees under the Project). Impacts associated with air quality are discussed in the following section.

Impact 3.14-1: Implementation of the Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments, or require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects

WASTEWATER GENERATION AND CAPACITY

The Project would generate 166,654.8 gallons per day (gpd), or 0.17 mgd. The amount of wastewater generated by this alternative is shown in Table 5.0-9. As shown, Alternative 2 would generate 115,414 gpd, or 0.12 mgd. This is 69 percent of the wastewater generated by the Project.

TABLE 5.0-9: ALTERNATIVE 2 WASTEWATER GENERATION

LAND USE CATEGORY	*WASTEWATER FLOW RATE*	*WASTEWATER FLOW INCREASE (GPD)*
Single Family Units	200 per unit	8,200.0
Multifamily Units	160 per unit	63,680.0
Work/Live and Mixed Use Units	160 per unit	12,800.0
Commercial Square Feet	0.19 per square foot	26,011.8
Office Square Feet	0.076 per square foot	4,722.3
Hotel Rooms	100 per room	-
Recreation Square Feet	0	-
TOTAL	--	115,414.1

SOURCE: EBA, 2019; DE NOVO PLANNING GROUP, 2021.

The Sonoma County General Plan includes objectives and policies that would reduce impacts related to wastewater treatment. Additionally, the Specific Plan includes infrastructure policies aimed to support the private development and public improvements which would result from implementation of this alternative. Because this alternative would adopt the Specific Plan polices, subsequent development projects under this alternative would be subject to these policies.

Buildout of the Plan area under this alternative would increase wastewater treatment demand; however, due to the decrease in development potential under this alternative, the associated demand on utilities, including wastewater treatment, would slightly decrease. While full buildout of the Project and Alternative 2 would slightly increase the existing treatment capacity of the treatment plant when combined with future growth throughout other areas of the County, the County's General Plan includes provisions to ensure that new development cannot be approved until it can be demonstrated that adequate capacity is available to serve it. As described above, the district must also periodically review and update their master plan, and as growth continues to occur within the Plan area, the district will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development.

Given that the General Plan includes a comprehensive set of objectives and policies to ensure an adequate and reliable wastewater collection and treatment system, impacts associated with wastewater treatment and compliance with waste discharge requirements are less than significant. Because the amount of wastewater generated by this alternative would be slightly reduced, this impact would also be slightly reduced when compared to the Project.

WASTEWATER FACILITIES AND INFRASTRUCTURE

Similar to the Project, the majority of the required wastewater conveyance infrastructure would be constructed on-site in conjunction with development and redevelopment of individual parcels within the Plan area. Wastewater conveyance infrastructure would be located underground, within the right-of-way footprint of future roadways in the Plan area, and must be constructed to meet the requirements contained in the Sonoma Valley County Sanitation District Sanitation Codes and Standards. Wastewater treatment and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. As future development and infrastructure projects are considered by the County, each project would be evaluated for conformance with the General Plan, Zoning Code, and other applicable regulations.

The County's General Plan includes objectives and policies designed to ensure adequate wastewater treatment capacity is available to serve development, to minimize the potential adverse effects of wastewater treatment, and to ensure that development does not move forward until adequate wastewater capacity exists. Policy PF-1d requires all development projects to obtain written certification that either existing services are available or needed improvements will be made prior to occupancy.

Additionally, the Project includes infrastructure and public services policies aimed to support the private development and public improvements which would result from Implementation of the Project. For example, Policy CF-1d requires development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development. Subsequent development projects proposed within the Plan area would be subject to these policies. This is a less than significant impact, similar to the Project.

Impact 3.14-2: Implementation of the Project would not require or result in the relocation of new or expanded water facilities, and would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years

Implementation of this alternative would result in increased population and employment growth within the Plan area, and a corresponding increase in the demand for additional water supplies.

The Project's water demand would be 206 AFY while this alternative would have a demand of 144 AFY as shown in Table 5.0-10. This is 70 percent of the wastewater generated by the Project.

TABLE 5.0-10: ALTERNATIVE 2 WATER DEMAND

LAND USE CATEGORY	*CONNECTION FACTOR*	*WATER DEMAND PER CONNECTION (AFY)*	*WATER DEMAND (AFY)*
Single Family Units	1 connection per unit	0.26681	10.9
Multifamily Units	1 connection per 10 units	1.13296	45.1
Work/Live and Mixed Use Units	1 connection per 12 units	1.13296	7.6
Commercial Square Feet	1 connection per 4,000 SF	1.14525	39.2
Office Square Feet	1 connection per 3,500 SF	1.14525	20.3
Hotel Rooms	0.525 rooms per connection	0.26681	0.0
Recreation Square Feet	1 connection per 4,450 SF	1.6258	6.7
Mixed Use Irrigation	3 new connection equivalent total assumed for irrigation for mixed use projects	1.6258	4.9
Commercial Irrigation	6 new connection equivalent total assumed for irrigation for commercial projects	1.4898	8.9
TOTAL	--	--	143.6

NOTE: SF = SQUARE FEET

SOURCE: EBA, 2019; DE NOVO PLANNING GROUP, 2021.

The County's General Plan includes a range of objectives and policies designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. Subsequent development projects under this alternative would be subject to all relevant General Plan objectives and policies that reduce impacts related to water supply.

Additionally, the Specific Plan includes infrastructure and public services policies aimed to support the private development and public improvements which would result from Implementation of the Project. For example, Policy CF-1d requires development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development. Additionally, Policy CF-1e requires development projects to install off-site infrastructure or pay appropriate in-lieu fees when appropriate. Subsequent development projects proposed under this alternative would be subject to these policies.

Given that the General Plan includes a comprehensive set of goals, objectives, and policies to ensure an adequate and reliable source of clean potable water, impacts associated with water supplies are less than significant. Because this alternative would slightly reduce the water demand compared to the Project, this impact would be slightly reduced under this alternative.

WATER FACILITIES AND INFRASTRUCTURE

Development and growth in the Plan area under this alternative would result in increased demand for water supplies, including water conveyance and treatment infrastructure. As described under Impact 3.14-2 in Section 3.14, the projected 2040 water supplies are adequate to meet demand that would be generated by buildout of the Project. As noted previously, due to the decrease in development potential under this alternative, the associated demand on utilities, including water demand, would also decrease. As such, implementation and buildout of this alternative would not result in the need to construct or expand water supply and treatment facilities that have not already been described and accounted for in the SCWA's 2015 UWMP.

Future development in the Plan area under both the Project and this alternative would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates. Future projects may be required to

implement site specific and limited off-site improvements to the water distribution system in order to connect new project sites to the County's existing water infrastructure network. Any future improvements to the existing water distribution infrastructure would be primarily provided on sites with land use designations that allow for urbanized land uses, and the environmental impacts of constructing and operating the new water distribution infrastructure would likely be similar to those associated with new development, redevelopment, and infrastructure projects under this alternative.

This Draft EIR addresses the potential impacts of development that may occur under this alternative, including residential, commercial, public facilities, and a range of other uses. Where potentially significant or significant impacts are identified, this EIR identifies mitigation measures to reduce the impacts and discloses which impacts cannot be reduced to less than significant levels. There are no additional environmental impacts, apart from those disclosed in the relevant chapters of this EIR, which are anticipated to occur. Therefore, this impact is considered less than significant and no additional mitigation is necessary. Because the water demand generated by this alternative would be slightly reduced, this impact would also be slightly reduced when compared to the Project.

Impact 3.14-3: The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

As shown in Table 5.0-4, Alternative 2 could result in up to 519 dwelling units and 218,490 square feet of non-residential uses. This alternative would accommodate up to approximately 1,453 new residents (compared to 1,977 residents under the Project) and up to 429 new employees (compared to 632 employees under the Project). Implementation of this alternative would result in an increase in solid waste generation. Compared to the Project, the amount of solid waste would be reduced due to the reduction in development potential and associated population.

While there is adequate permitted landfill capacity to accommodate future growth, the County's General Plan includes policies to further reduce the project's impact on solid waste services. Implementation of this alternative would not exceed the permitted capacity of the landfill serving the County. Therefore, through compliance with the General Plan policies, impacts to solid waste are less than significant. Because the amount of solid waste generated by this alternative would be slightly reduced, this impact would also be slightly reduced when compared to the Project.

Tribal Cultural Resources

Impact 3.15-1: Implementation of the Project has the potential to cause a substantial adverse change to a tribal cultural resource as defined in CEQA Guidelines Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or to a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Seventeen cultural resources have been identified within the Plan area, according to files maintained by the Northwest Information Center (Information Center) of the CHRIS. The CHRIS records search identifies buildings, structures, historic sites, prehistoric sites, and any other cultural resources that have been reported to the Information Center. The Information Center did not indicate that any of the reported resources are included on the California Office of Historic Preservation's Archaeological Determination of

Eligibility list. In addition, none are listed on the CRHR or the NRHP. The results of Sacred Land files search were negative.

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance or discovery of an archaeological, historic, or tribal cultural resource.

The General Plan policies and objectives, listed in the Regulatory Setting subsection provided in Section 3.15: Tribal Cultural Resources, provide a robust framework for ensuring that effects on significant historic, archaeological and tribal cultural resources are reduced. Although ministerial projects are exempt from CEQA and do not require an archaeological records search or survey, Section 11.14.050 of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

Alternative 2 would result in a similar development pattern and impact areas as the Project. The Specific Plan includes Measure Cult-A through Cult-D as discussed under Impact 3.4-1 in Section 3.4, as well as measures TCR-A, B, and C, in Chapter 3.15, which require resources consultation and coordination for all discretionary projects and avoidance of known resources. Measures Cult-C and Cult-D are protocol for if cultural resources are identified in the project area. These measures are consistent with CEQA Guidelines Section 15064.5 which requires a site-specific cultural or archaeological survey to be performed for all ground-disturbing projects located on sites within the Plan area where a known cultural, archaeological, or cultural resource is located or where the site is sensitive for such resources. With implementation of Measures Cult-A, Cult-B, Cult-C, Cult-D and Cult-E, this impact would be less than significant, similar to the Project.

Wildfire

Impact 3.16-1: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The County has an Emergency Operations Plan, Hazard Mitigation Plan, and Community Wildfire Protection Plan. The EOP and its Annexes are not a formally "adopted" plan. However, the EOP functions as the emergency response plan and emergency evacuation plan for the unincorporated County, including for the Plan area. For the reasons discussed below, the Project would not impair implementation of or physically interfere with the EOP.

According to the EOP Evacuation Annex, the County has primary responsibility for emergency evacuation in unincorporated areas, such as the Springs. Any new development in the Plan area, facilitated by this plan, would be accessed by preexisting roadways. No new roads are provided for or contemplated in the Plan. The Specific Plan would not create physical impediments or interfere with the use of the roadways for evacuation or response during an emergency. All future development in the Plan area would be required to meet the most current applicable fire safety and emergency access and egress standards, including those regarding roadway width, turnarounds, and other necessary capacities.

As described in Section 3.12, Public Services, all new construction within the Plan Area would be subject to a Fire Impact Fee, adopted on March 23, 2021. The purpose of the fire impact fee is to fund the cost of fire protection and emergency response facilities, apparatus, and equipment attributable to new residential and nonresidential development in the District. The fire impact fee will ensure that new

development will not burden existing development with the cost of expanded facilities, apparatus, and equipment required to accommodate growth as it occurs within the District. (Sonoma Valley, 2022).

The EOP's Evacuation Annex discusses evacuation methods, routes, and assets. The primary mode of evacuation is assumed to be various forms of ground transport (personal vehicle, bicycle, rail, bus, etc.) for most persons in an evacuation area. Because evacuation routes are situation-specific, the Evacuation Annex does not identify specific routes but states that routes may include interstate, state and surface roads, and will be chosen based on the relative safety of roadway infrastructure and current traffic conditions. Evacuation routes will be selected by law enforcement officials, approved by the Incident Commander at the time of the evacuation decision, then communicated to the EOC.

The Evacuation Annex assumes that the majority of residents can self-evacuate using personal vehicles, and acknowledges that transit-dependent populations (such as those with disabilities and with access and/or functional needs and households without a vehicle) may require public transportation to evacuate. In those cases, Transportation Assembly Points (TAPs) would be used to transport persons who require evacuation assistance to temporary evacuation points and/or shelters in safe areas. The Annex acknowledges that evacuees may arrive at TAPs by foot, bicycle, public transit, paratransit, or private vehicles, and identifies public and private transportation assets (public and private buses) that would be used for evacuation from TAPs. As with evacuation routes, the location of TAPs in a particular emergency will be selected and activated depending on the immediate circumstances.

The Project is proposed in an existing urbanized area. Implementation of the Project would support improvements to transportation systems throughout the Plan area. The Plan identifies future improvements including addition of new crosswalks, bulb-outs and flashing beacons to improve pedestrian visibility at crossings. Sidewalks would be added along portions of Donald Street, Harley Street and smaller segments throughout the Plan area. Furthermore, the plan's emphasis on improved pedestrian and bicycle infrastructure is intended to support reduced congestion and improved circulation, and may facilitate evacuation, especially for those without access to vehicles who will need to make their way to the designated TAP for their area in the event of an evacuation. Development facilitated by the Project will use existing roadways. Accordingly, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, nor would it reduce existing levels of emergency response service as discussed above. While the area of disturbance associated with future development projects under Alternative 2 would be less than the Project, the impacts to this topic would be similar to the Project with regard to this issue.

Impact 3.16-2: Implementation of the Project has the potential to:

> ***a) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;***
>
> ***b) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may***

exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or

c) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), weather (winds, temperatures, humidity levels and fuel moisture content) and topography (degree of slope). The California Department of Forestry and Fire Protection (CalFIRE) uses these factors to quantify fire hazards and categorizes them as Fire Hazard Severity Zones (FHSZ). Areas are designated as Moderate, High or Very High FHSZ, with areas of significant risk being Very High FHSZ. These areas are fully mapped in State Responsibility Areas, and areas within local jurisdiction (LRAs) are also mapped if they are Very High FHSZ.

All of the Plan area is near an SRA, and small portions of the Plan area are located within an SRA. A majority of the Plan area is urbanized and located in a Local Responsibility Area (LRA) that is not mapped by CalFIRE as a Very High FHSZ. Small portions of the plan area are in a Moderate or High FHSV, but none of the Plan area is within or adjacent to a Very High FHSZ. (See Figure 3.7-1) The Project does not propose development in or adjacent to Very High FHSZ, which is approximately 0.6 miles from the northern end of the Plan area at its closest point. Limiting development in Very High FHSZ limits exposure of people or structures to the areas of greatest fire hazard. A majority of the Plan area is in areas of existing urban development with minimal slope, where wildland fuels are low and wildfire hazards are limited. As shown in Figure 3.7-1, a portion of the southeast Plan area is in a Moderate Fire Hazard Zone (15 parcels or approximately 17 acres) and a portion of the northeast plan area is in a High Fire Hazard Zone (47 parcels or approximately 11 acres).

All future projects allowed under the Project would be required to comply with all applicable provisions of Federal, State, and local requirements related to wildland fire hazards, including State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. As future development and infrastructure projects are considered by the County, each project would be evaluated for consistency with all applicable building and safety code sections that reduce fire risk. Compliance with these State and Local regulations would ensure that potential wildland fire hazards are mitigated through requirements for home hardening, automatic fire sprinkler systems or other on-site fire detection and suppression systems in new residential and commercial structures, and ensuring adequate fire protection services.

As discussed in Section 3.7-5 and as required by Specific Plan Policies Wildfire-1 and Wildfire-2, future projects would be subject to the applicable State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. These policies would ensure that future development does not exacerbate fire risk, and that risks to structures in the case of a wildland fire are reduced compared to those subject to less stringent requirements. In addition, because the Plan area encompasses properties with minimal vegetation, in an urbanized setting, projects built within the Plan area do not represent a new encroachment into wildland areas. As a result, the Plan would not introduce new sources of ignition to areas of very high wildfire hazard.

The Project does not propose to install any major new infrastructure that may exacerbate fire risk. Future infrastructure improvements in the Plan area would include the maintenance of existing water, sewer and roadways associated with new development which are typically underground and not located in wildland areas. Specifically, Policy CF-1f of the Specific Plan requires new utilities in the Plan area to be installed

underground. As discussed in Section 3.16-1 above, the circulation and road improvements would increase connectivity and may have a beneficial impact on emergency response, and it is expected that improvements to water infrastructure supported by future development would support firefighting capacity as well. The construction of these improvements would comply with State and local fire standards. Thus, the installation and maintenance of the proposed infrastructure would not exacerbate fire risk or result in temporary or ongoing impacts to the environment.

As discussed in the Geology and Soils Section (3.5), hillsides in the County have a medium to high susceptibility for landslides, while the valleys have a low susceptibility. Given the planning area's relatively level slopes, landslide potential is very low for all but a small portion of land located between Fetters and Central Avenue. Landslide potential increases in the foothills and mountains to the east of the Planning Area where wildland fire hazard potential also increases. In addition, development in the Plan area would be set back from watercourses that could channel post-wildfire debris flow.

Severe wildfires can damage the forest or shrub canopy, the plants below, as well as the soil. In general, this can result in increased runoff after intense rainfall, which can put homes and other structures below a burned area at risk of localized floods and landslides. Some of the Plan Area is located downslope from hillside areas, or contains some landslide-susceptible areas, and vegetative wildfire fuels, as described above. If a severe wildfire were to occur adjacent to the Plan Area, structures within the area may be at risk of landslides and could expose project residents to wildfire pollutants. If a fire were to occur in more flat and urbanized areas, the risk of flooding or landslides afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to developed conditions.

Though the Plan area is downslope from areas with elevated landslide or fire hazards, the Plan area is consistent with the pattern of development countywide and due to its predominantly level topography and surrounding pattern of urbanization and soil cover would not expose people or structures to elevated post-fire risks such as downslope or downstream flooding or landslides.

Future development projects in the Plan area would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the site and does not result in downstream flooding or major drainage changes. Future development projects located within the area covered by the storm water permit boundary would be subject to the Guidelines for the Standard Urban Storm Water Mitigation Plan. Some of the treatment controls in the Guidelines can be used to provide flood control by including additional flood detention storage.

Because existing codes and regulations cannot fully prevent wildfires from damaging structures or occupants, the Project could increase the exposure of new residential development to risk of loss or damage from wildfire. The Specific Plan includes Policy Wildfire-1 to reduce the risk of wildfire for future development associated with the Project. Specific Plan Policies Wildfire-1 and Wildfire-2 would reduce construction wildfire risk and include project siting considerations for future development.

Overall, while the area of disturbance associated with future development projects under Alternative 2 would be less than the Project, this alternative would result in potentially significant impacts associated with potential ground-disturbing activities, similar to the Project. Mitigation would be required to reduce this impact to a less than significant level. Therefore, this impact would be similar to the Project.

ALTERNATIVE 3 – LOW GROWTH

Alternative 3 provides for reduced growth in comparison to the Project. This alternative would reduce the residential and non-residential development potential to a greater extent than Alternative 2. For example, Alternative 3 would result in 120 fewer dwelling units and a reduction of the non-residential development uses by 20,475 square feet. This alternative was designed to reduce the project's contribution to significant impacts that would occur with project implementation, particularly Impacts related to traffic noise levels at existing receptors and traffic performance measures (such as total VMT).

Under Alternative 3, buildout of the Plan area would result in approximately:

- 413 dwelling units, including:
  - 63 single family dwelling units;
  - 270 multifamily dwelling units; and
  - 80 mixed use or work/live units; and
- 198,015 square feet of non-residential uses, including:
  - 125,617 square feet of commercial uses;
  - 53,948 square feet of office uses; and
  - 18,450 square feet of recreation uses.

Aesthetics and Visual Resources

Impact 3.1-1: Project implementation could result in a substantial adverse effect on a scenic vista, or could substantially degrade the existing visual character of the site and its surroundings

As discussed in Section 3.1 under Impact 3.1-1, development allowed under the Project would result in increased development along the Highway 12 corridor which is identified as being a County designated Scenic Corridor. The hillside and open agricultural lands west and east of the Plan area are the most prominent visual feature visible from the Plan area and Highway 12. As described in Section 3.1 under Impact 3.1-1, the Plan area is considered to be of High visual sensitivity and Project features would be Co-dominant with the existing visual environment. While new development within the Plan area has the potential to interrupt views of the surrounding naturalized foothills and hillsides from Highway 12, local roads, and other public viewpoints within and adjoining the Plan area, the Plan area is urbanized. The Design Guidelines chapter (Chapter 4) of the Specific Plan establishes the aesthetic vision for future developments' architecture, building character, land massing, site design, streetscape, lighting, signage, and landscape standards and would reduce the potential of the project to result in substantial adverse effects on a scenic vista or substantially degrade the visual character of the area. Impacts associated with the Project were determined to be less than significant.

The Specific Plan includes Design Guidelines chapters (Chapter 4) that establish the aesthetic vision for future developments' architecture, building character, land massing, site design, streetscape, lighting, signage, and landscape standards within the Plan area. The purpose of the Guidelines is to ensure consistency of design across a wide range of uses within the Plan area. Furthermore, development standards included within the Specific Plan regulate building intensity and separation, façade design, massing, height, and setback requirements. Design Guidelines included within the Specific Plan provide guidance for the development of well-designed projects that are compatible with adjacent land uses, while continuing to advance the residential opportunities, economic vitality and job growth in the County.

Alternative 3 would result in adoption of the Specific Plan, including the goals, policies, and Design Guidelines. Future development allowed under Alternative 3 would be subject to these Guidelines.

As discussed above, under Alternative 3, buildout of the Plan area would result in approximately 413 dwelling units and 198,015 square feet of non-residential uses. This is a reduction of 293 dwelling units and 78,888 square feet of non-residential uses. The reduced development potential under this alternative could result in decreased building heights and/or decreased densities in the Plan area.

The Plan area is largely urbanized and developed. The Project and Alternative 3 would allow for an increase in intensity and density of the existing land uses than currently allowed. Under this alternative, future development would result in densification of urban uses along the Highway 12 corridor. However, this alternative would likely result in decreased building scale and heights due to the decrease in residential densities and mixed use intensities allowed in the Plan area, compared to the Project. Development would occur on either vacant, infill parcels, or on parcels where redevelopment potential exists. Under this alternative, there would be no high or medium density residential development in the Donald/Verano neighborhood; low density residential development would be allowed in the Donald/Verano neighborhood. Future development and design review processes would ensure that future uses are pedestrian scale, blend with the existing built environment, and connect to existing and future open space and public space. This impact is considered to be less than significant. Because the reduced development potential under this alternative could result in decreased building heights and decreased densities in the Plan area, this impact would be slightly reduced compared to the Project.

Impact 3.1-2: Project implementation could result in substantial damage to scenic resources within a state scenic highway

Because the Plan area is not located within a state scenic highway, implementation of this alternative would not result in substantial damage to scenic resources within a state scenic highway. Therefore, this impact is less than significant, similar to the Project.

Impact 3.1-3: Project implementation could result in the creation of new sources of nighttime lighting and daytime glare

Implementation of this alternative would introduce new sources of daytime glare and nighttime lighting into previously undeveloped areas of the Plan area.

The Specific Plan, which would be adopted as part of this alternative, includes Design Guidelines for exterior lighting that would reduce potential adverse impacts associated with light and glare. The exterior lighting guidelines require the use of light shielding fixtures. The building character guidelines prohibit the use of reflective or mirrored glass in order to reduce glare. Future development within the Plan area under this alternative would also be subject to design review and approval.

Implementation of the Design Guidelines in the Specific Plan would ensure that project lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the design requirements, and the subsequent design review of future projects within the Plan area, would ensure that excessively reflective building materials are not used, and that the Project would not result in significant impacts related to daytime glare. As such, through implementation of the Specific Plan's Design Guidelines, and the design review process, the County can ensure that adverse impacts associated with daytime glare and nighttime lighting are reduced to a less than significant level, similar to the Project.

Air Quality

Alternative 3 could result in up to 63 single family dwelling units, 270 multifamily dwelling units, 80 mixed use dwelling units, 125,617 square feet of commercial uses, 53,948 square feet of office uses, and 18,450 square feet of recreation uses. This alternative would accommodate up to approximately 1,156 new residents (compared to 1,977 residents under the Project) and up to 382 new employees (compared to 632 employees under the Project).

Impact 3.2-1: Implementation of the Project would not conflict with or obstruct implementation of the applicable air quality plan, cause a violation of any air quality standard, or result in a cumulatively considerable net increase of criteria pollutants

CONSISTENCY WITH THE 2017 CLEAN AIR PLAN

The 2017 Clean Air Plan defines an integrated, multi-pollutant control strategy to reduce emissions of particulate matter, TACs, ozone precursors, and greenhouse gases. One of the key elements in the control strategy is to reduce motor vehicle travel by promoting transit, bicycling, walking, and ridesharing, and to direct new development to areas that are well-served by transit, and conducive to bicycling and walking. This is consistent with the Specific Plan, which aims to improve the pedestrian, bicycle, and transit network within the Plan area and provides policies in support of these travel modes. This alternative would include the goals and policies of the Specific Plan discussed under Impact 3.2-1 in Section 3.2 that support the pedestrian, bicycle, and transit modes of travel. These policies and goals, which would be adopted as part of this alternative, support the Clean Air Plan strategies to reduce emissions.

Another key element of the 2017 Clean Air Plan is to accelerate the widespread adoption of electric vehicles. Policy SC-4j of the Specific Plan, which would be adopted by this alternative, encourages the installation of electric charging stations on both public property and in private development. This alternative would be consistent with all of the key elements of the 2017 Clean Air Plan relating to transportation.

Alternative 3 would develop new residential and non-residential buildings that would comply with or exceed the latest version of the California Title 24 building energy efficiency standards, and would thereby be consistent with the key elements of the 2017 Clean Air Plan relating to buildings and energy. This alternative would also comply with the latest state legislation relating to water and waste management, which ensures that this alternative would not conflict with the key elements of the 2017 Clean Air Plan relating to the water and waste management sectors. Separately, similar to the Project, this alternative would not include new stationary sources (i.e. industrial facilities, landfills, wastewater treatments plants, etc.), and therefore would not conflict with the key elements of the 2017 Clean Air Plan relating to stationary sources. Moreover, similar to the Project, this alternative does not propose agricultural land uses, or land uses that would use “super-GHGs’, such as methane, black carbon, or fluorinated gases, which can have very large greenhouse gas effects.

Alternative 3 does not cause the disruption, delay, or otherwise hinder the implementation of any quality plan control measure; therefore, it is consistent with the 2017 Clean Air Plan. For the above-specified reasons, Alternative 3 would be consistent with the 2017 Clean Air Plan as promulgated by the BAAQMD, and implementation of this alternative would have a less than significant impact relative to this topic, similar to the Project.

CONSISTENCY WITH THE SONOMA COUNTY GENERAL PLAN

The existing Sonoma County General Plan Open Space and Resource Conservation Element includes an extensive list of objectives and policies that are specifically aimed at improving air quality. This alternative is consistent with these objectives and policies by promoting a compact urban development form, emphasizing infill development, and ensuring that land use patterns do not expose sensitive receptors to pollutant concentrations.

Additionally, the Circulation and Transit Element of the Sonoma County General Plan includes a wide range of objectives and policies that would effectively reduce vehicle miles travelled throughout the Plan area, through the use of improved circulation for pedestrians, bicyclists, and transit systems. Alternative 3 is consistent with these objectives and policies and includes the Specific Plan goals and policies discussed under Impact 3.2-1 in Section 3.2. Because this alternative includes adoption of these policies, this alternative would be consistent with the County General Plan. All future development and infrastructure projects within the Plan area would be subject to all relevant General Plan emissions and air quality goals, objectives, and policies, which were adopted in order to reduce emissions and air quality impacts.

Implementation of this alternative and the Project which are both consistent with all applicable Sonoma County General Plan objectives and policies, would have a less than significant impact relative to this topic, similar to the Project.

THRESHOLDS OF SIGNIFICANCE

The analysis provided above demonstrates that this alternative would be consistent with the current air quality plan control measures.

Alternative 3 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The revised densities and standards would result in a reduction of 293 dwelling units and 78,888 square feet of non-residential uses. The reduced development potential under this alternative could reduce VMT slightly compared to the Project.

As discussed in Section 3.2, the Project would not result a VMT increase that would exceed the projected population increase, and would also be consistent with all BAAQMD current air quality plan control measures. Under Alternative 3, VMT would increase by 41,052 and population would increase by 1,156 persons. This results in a population increase of 0.23% compared to the existing County population of 504,217 and a VMT increase of 0.14% compared to the baseline VMT of 28,570,046 (see Table 5.0-12). Therefore, Alternative 3 would also not result in a VMT increase that would exceed the projected population increase. Therefore, both the Project and this alternative area consistent with the adopted BAAQMD thresholds. For these reasons, this impact is considered less than significant, similar to the Project.

CONSISTENCY WITH THE PLAN BAY AREA 2040

The Plan Bay Area 2040 is the most recently adopted Regional Transportation Plan prepared by the MTC for the San Francisco Bay Area region. The MTC calculated employment and household projections for Plan Bay Area 2040.

The adopted Plan Bay Area does not include population projections at the local level, but rather presents regional projections. Plan Bay Area 2040 states that by 2040 the San Francisco Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year.

While no specific development projects are proposed as part of this alternative, this alternative would accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential uses. As shown in Table 5.0-4, full buildout of this alternative area would result in a maximum of 419 residential units. This would represent a maximum residential population of up to approximately 1,156 persons, which is well within the projections of Plan Bay Area 2040. In addition, the projected employment increase associated with the non-residential development within the Plan area would be relatively modest and would be consistent with the Bay Area's overall employment and housing growth projections. Development of this alternative would also assist Sonoma County in providing additional housing opportunities and accommodating the County's Regional Housing Needs Allocation. This alternative, including its anticipated population growth, does not conflict with the latest adopted and conforming Regional Transportation Plan. This is a less than significant impact, similar to the Project.

CONCLUSION

Alternative 3 would be consistent with the 2017 Clean Air Plan, the Sonoma County General Plan, the BAAQMD Thresholds of Significance, and the Plan Bay Area 2040. Therefore, this alternative would not conflict with or obstruct implementation of the applicable air quality, cause a violation of an air quality standard or contribute to an air quality violation, or result in a cumulatively considerable net increase in criteria pollutants. There would be a less than significant impact, similar to the Project.

Impact 3.2-2: Implementation of the Project would not cause health risks associated with toxic air contaminants

The BAAQMD has also promulgated a *Planning Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning* document in May 2016, to address the issue of healthy infill development. This document includes important information for local governments, developers, and the general public, including the location of communities and places throughout the region that are estimated to have elevated levels of fine particulates and/or toxic air contaminants, as well as best practices that may be implemented by local governments and developers to reduce health risks from air pollution in these locations that experience elevated air pollution levels. The purpose of this guidance document is to encourage local governments to address and minimize potential local air pollution issues early in the land-use planning process, and to provide technical tools to assist them in doing so.

Highway 12 in Sonoma County, which includes the segment of Highway 12 within the Plan Area, is identified in the Planning Healthy Places document as heaving relatively elevated levels of air pollution,[5] due to its traffic volume exceeding 10,000 vehicles per day. For such areas, the Air District recommends implementing all of their "best practices to reduce exposure" that are feasible and applicable to a project or plan in these locations. The proposed project would implement these best practices to reduce exposure, where determined to be appropriate by the developers of individual projects within the Plan Area.

Additionally, the BAAQMD has also identified a number of areas within the Bay Area where additional analysis (i.e. further study) is recommended to assess the local concentrations of TACs and fine PM, and therefore the health risks from air pollution. These areas are provided by the Air District's mapping tool.[6] The Air District recommends using caution when considering sensitive land uses in these areas. There are

[5] See Figure 2, on page 10 of the Planning Healthy Places document.

[6] https://www.baaqmd.gov/plans-and-climate/planning-healthy-places

two such areas identified by the Air District within the Plan Area (i.e. two gasoline stations). Specifically, the gasoline stations are a Valero Station, located at 18605 Sonoma Highway, and a Sonoma Beacon station, located at 18618 Sonoma Highway. To help clarify and standardize analysis and decision-making in the environmental review process for development that would occur in the vicinity of these gas stations, future projects would be required to implement Measure Air-B, which would minimize risks associated with any new sensitive receptors located within 1,000 feet of Highway 12 or within 300 feet of the gas stations.

Separately, the BAAQMD CEQA Guidelines provide recommendations for all communities to ensure reduced health risks associated with TACs. The existing Sonoma County General Plan includes policies that are intended to minimize exposure of TACs to sensitive receptors (listed in the Regulatory Setting). These policies help to protect sensitive receptors, and otherwise limit air pollution during construction and operation activities. These objectives and policies are consistent with the BAAQMD recommendations that are intended to reduce health risks associated with TACs. Specifically, General Plan Policy OSRC-16i requires that any proposed new sources of toxic air contaminants provide adequate buffers to protect sensitive receptors and comply with applicable health standards. In addition, there are several policies that relate to reducing diesel particulate matter (DPM), which is a common TAC emitted from heavy-duty long-haul vehicles, as well as wood-burning fireplaces (see Policy OSRC-16l and Policy OSRC-16g). The implementation of these Sonoma County General Plan objectives and policies that are intended to mitigate TACs impacts would ensure that impacts associated with this alternative are reduced to a less than significant level, similar to the Project.

Impact 3.2-3: Implementation of the proposed Specific Plan would not create objectionable odors or other emissions that would adversely impact a substantial number of people

Future development projects under this alternative which would result in biological materials or other odorous waste would provide waste receptacles and would utilize outdoor trash dumpsters with lids, which would be picked up regularly during normal solid waste collection operating hours within the area. The dumpster lids are intended to contain odors emanating from the dumpsters. The dumpsters would be stored in screened areas for further protection from potential objectionable odors. The garbage collected on-site and stored in the outdoor dumpsters would not be on-site long enough to cause substantial odors. Thus, the outdoor, enclosed, and covered trash dumpsters that would be picked up regularly would provide proper containment and handling of the trash generated on-site.

As with the Project, Alternative 3 does not include uses that are anticipated to result in significant levels of objectionable odors or other emissions that would adversely impact a substantial number of people. Implementation of this alternative would have a less than significant impact relative to this topic, similar to the Project.

Biological Resources

Impact 3.3-1: Implementation of the Project could have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

Alternative 3 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The area of disturbance under this alternative would be similar to the Project. The area of

disturbance, potential for tree removal, and loss of habitat associated with future development projects under Alternative 3 could result in the direct and indirect loss or indirect disturbance of special-status plant or wildlife, similar to the Project.

The Project includes components that mitigate potential impacts to special-status species, specifically Measures Bio-A through Bio-E as discussed under Impact 3.3-1 in Section 3.1. Alternative 3 would also include these components since the Specific Plan would be adopted under this alternative. The implementation of Specific Plan Measures Bio-A through Bio-E, as well as Federal and State regulations, would reduce impacts to these resources to a less than significant level, similar to the Project.

Impact 3.3-2: Implementation of the Project could result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

As noted in Section 3.3, the Plan area is located in an urban area and the majority of the project site is built out. The only aquatic resources in the Plan area are Agua Caliente Creek and Pequeno Creek. Other known wetlands or other waters are not found. The Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Agua Caliente Creek crosses the southern portion of the Plan area north of Maxwell Farms. Pequeno Creek crosses the northern portion of the Plan area near Larson Park. Scattered riparian habitat exists along both creeks. Under Alternative 3, Medium Density Residential and High Density Residential uses are zoned within the Plan area adjacent to Aqua Caliente Creek, and Mixed Use and Recreation uses are proposed within the Plan area adjacent to Pequeno Creek. The future construction and operation of these uses will be required to comply with all applicable laws and regulations, so as not to disturb existing creek habitat.

Similar to the Project, there is a chance that water features could be impacted throughout the buildout of the individual projects allowed under Alternative 3. The implementation of an individual project would require a detailed and site-specific review of the site to determine the presence or absence of water features. If water features are present and disturbance is required, Federal and State laws require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these Federal and State laws are implemented through the permit process.

Similar to the Project, subsequent development projects allowed under this alternative will be required to comply with the County General Plan and adopted Federal, State, and local regulations for the protection of sensitive natural communities, including protected wetlands. The Sonoma County General Plan includes numerous policies and actions intended to protect wetlands and waters of the U.S. from adverse effects associated with future development and improvement projects. While future development has the potential to result in significant impacts to protected water features, compliance with existing Federal and State regulations would reduce impacts to these resources. Therefore, similar to the Project, this impact is less than significant.

Impact 3.3-3: Implementation of the Project may result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

The segments of Agua Caliente and Pequeno Creek that traverse the Plan area are designated with the Riparian Corridor Combining Zone, which generally prohibits ground-disturbing activities, with certain exceptions. Under Alternative 3, the Riparian Corridor Combining Zone designation would be maintained,

which generally prohibits ground-disturbing activities within the riparian corridor, with certain exceptions where vegetation removal is minimized, minor activities associated with an existing structure are involved, where it is determined that the area has no substantial value for riparian functions, or if a conservation plan is adopted that provides for protection of the riparian functions. Additionally, the Specific Plan Design Guidelines and policies require development to incorporate, preserve, and enhance natural creek habitats within the Plan area. This alternative would be subject to the Specific Plan Design Guidelines and policies.

Similar to the Project, subsequent development projects allowed under this alternative will be required to comply with the County's General Plan and adopted Federal, State, and local regulations for the protection of sensitive natural communities, including riparian habitat. While future development allowed under both the Project and Alternative 3 has the potential to result in significant impacts to protected habitats, this impact is less than significant, similar to the Project.

Impact 3.3-4: Implementation of the Project may result in interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

The only movement corridors for wildlife through the Plan area are for aquatic species along creeks and drainages. As noted previously, the Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Future development in these areas allowed under both the Project and Alternative 3 would include appropriate buffers/setbacks and preserve the habitat along the creeks. The implementation of an individual project adjacent to the creeks would require a detailed and site-specific review of the site to determine any impact on the movement habitat along Agua Caliente Creek or Pequeno Creek and would be required to be consistent with the Riparian Corridor Combining Zone standards.

Subsequent development projects allowed under the Project and this alternative would be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of movement corridors. While future development projects have the potential to result in significant impacts to protected movement corridors, the implementation of the Specific Plan Design Guidelines and policies, as well as Federal, State, and local regulations, would ensure impacts to these resources to a less than significant level, similar to the Project.

Impact 3.3-5: Implementation of the Project may result in conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

As discussed in Section 3.3, adoption of the Project would not conflict with local policies or ordinances protecting biological resources. The Specific Plan itself does not conflict with the policies contained in the County's General Plan. Alternative 3 would also not conflict with local policies or ordinances protecting biological resources. Subsequent development projects allowed under both the Project and this alternative would be required to comply with the General Plan policies, as well as the Zoning Code. Similar to the Project, this is a less than significant impact.

Impact 3.3-6: Implementation of the Project may result in conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

The Plan area is not subject to an adopted habitat conservation plan or natural community conservation plan. Therefore, implementation of the Project and Alterative 2 would have no impact relative to this topic.

Cultural Resources

Impact 3.4-1: Implementation of the Project has the potential to cause a substantial adverse change to a significant archaeological or historical resource, as defined in CEQA Guidelines Section 15064.5, or a significant tribal cultural resource, as defined in Public Resources Code Section 21074

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance of an archaeological, historic, or tribal cultural resource or the discovery of a previously unknown archaeological, historical, or tribal cultural resource under both the Project and Alternative 3. The Sonoma County General Plan includes policies that would reduce impacts to cultural, historic, and archaeological resources, as well as policies for the conservation of cultural, historic, and archaeological resources. Although ministerial projects are exempt from CEQA and do not require an archaeological records search or survey, Section 11.14.050 (see above) of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

Alternative 3 would result in a similar development pattern and impact areas as the Project. The Specific Plan includes Measure Cult-A through Cult-D as discussed under Impact 3.4-1 in Section 3.4. This alternative would be subject to the same measures. With implementation of Measures Cult-A, Cult-B, Cult-C, and Cult-D, this potential impact would be less than significant, similar to the Project.

Impact 3.4-2: Implementation of the Project has the potential to cause a significant impact on archaeological resources if development facilitated by the project would cause a substantial adverse change in the significance of an archaeological resources, including those that qualify as historical resources.

Ground-disturbing activities associated with development facilitated by the project have the potential to damage or destroy historic-age or prehistoric archaeological resources that may be present on or below the ground surface, though this potential is expected to be low based on evaluation the Cultural Resource Assessment for the Springs Specific Plan, Sonoma County, California (Peak & Associates, Inc., 2016). Alternative 3 would result in a similar development pattern and impact areas as the Project. The Specific Plan includes Measure Cult-A through Cult-D as discussed under Impact 3.4-1 in Section 3.4. This alternative would be subject to the same measures. With implementation of Measures Cult-A, Cult-B, Cult-C, and Cult-D, this potential impact would be less than significant, similar to the Project.

Impact 3.4-3: Implementation of the Project has the potential to disturb human remains, including those interred outside of dedicated cemeteries

The area of disturbance associated with future development projects under Alternative 3 could result in the direct and indirect loss or indirect destruction of human remains, similar to the Project. Implementation of Mitigation Measure Cult-F would ensure that all construction activities that inadvertently discover human remains implement state required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure Cult-F, in conjunction with County regulations and General Plan policies and objectives, would reduce this impact to a less than significant level, similar to the Project.

Geology and Soils

Impact 3.5-1: Project implementation has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides

Alternative 3 would result in future development of the Plan area consistent with the existing General Plan land use designations and existing zoning. This alternative would not result in development of land outside the Plan area. As such, the geologic and seismic-related conditions are identical to the Project. Under both Alternative 3 and the Project, all future projects within the Plan area will be required to comply with the provisions of the CBSC, which requires development projects to: perform geotechnical investigations in accordance with State law, engineer improvements to address potential seismic and ground failure issues, and use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. As future development and infrastructure projects are considered by the County, each project would be evaluated for conformance with the CBSC, General Plan, Zoning Ordinance, and other regulations. Additionally, the Sonoma County General Plan goals, objectives, and policies require new land development proposals to avoid unreasonable exposure to geologic hazards, including earthquake damage, subsidence, liquefaction, and expansive soils. All development and construction proposals must be reviewed by the County to ensure conformance with applicable General Plan requirements and CBSC building standards.

All future projects within the Plan area would be required to prepare geotechnical soils investigations to address seismic safety issues and provide adequate mitigation for potential hazards identified, as required by Policy PS-1f and the CBSC. With the implementation of the policies and actions required by the Sonoma County General Plan, as well as applicable State and County codes, potential impacts associated with a seismic event, including rupture of an earthquake fault, seismic ground shaking, and liquefaction would be less than significant, similar to the Project.

Impact 3.5-2: Project implementation has the potential to result in substantial soil erosion or the loss of topsoil

Future development allowed under the Project and Alternative 3 would be evaluated for conformance with the state and local requirements. For example, future projects would be subject to the County's Construction Grading and Drainage Ordinance, which outlines the construction grading permit requirements, as well as the County's erosion prevention and sediment control best management practices guide. A construction drainage permit will be required prior to commencing any construction drainage involving construction or modification of drainage facilities or related work, including preparatory land clearing, vegetation removal, or other ground disturbance (except where exempted from permit requirements by Subsection C of Chapter 11 of the Code). Future projects allowed under the Project and Alternative 3 would also be required to implement Low Impact Development strategies, as well as best management practices. In addition to compliance with County standards and policies, the RWQCB will require a project specific SWPPP to be prepared for each project that disturbs an area of one acre or larger. The SWPPP will include project specific best management practices that are designed to control drainage and erosion.

With the implementation of the applicable State and County requirements, potential impacts associated with erosion and loss of topsoil would be less than significant, similar to the Project.

Impact 3.5-3: Project implementation has the potential to result in development located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site, lateral spreading, subsidence, liquefaction or collapse

As noted above, Alternative 3 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. This alternative would not result in development of land outside the Plan area. As such, the geologic and seismic-related conditions are identical to the Project. Under both Alternative 3 and the Project, each future project in the Plan area would be evaluated for conformance with the CBSC, the General Plan, Zoning Ordinance, and other regulations. Future development and improvement projects would be required to have a geotechnical study prepared and incorporated into the improvement design, consistent with State and County requirements.

With the implementation of applicable County requirements, including the policies and actions in the General Plan and County Code provisions, as well as applicable State requirements, potential impacts associated with ground instability or failure would be less than significant, similar to the Project.

Impact 3.5-4: Project implementation has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property

The linear extensibility of the soils within the Plan area ranges from Low to Moderate. Figure 3.5-4 illustrates the shrink-swell potential of soils in the Plan area. Moderate expansive soils will require special design considerations due to shrink-swell potential. Design criteria and specifications set forth in the design-level geotechnical investigation (required by the County General Plan and CBSC) would ensure impacts from problematic soils are minimized. Therefore, this impact is considered less than significant, similar to the Project.

Impact 3.5-5: Project implementation has the potential to result in development on soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems

The Plan area is located in an Urban Service Area and is served by municipal sewer and water. Alternative 3 would not require the use of septic tanks or alternative waste water disposal systems for the disposal of waste water. Implementation of the this alternative result in no impact relative to this topic, similar to the Project.

Impact 3.5-6: Implementation of the Project has the potential to directly or indirectly destroy a unique paleontological resource

The Plan area is not expected to contain subsurface paleontological resources, although it is possible. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. The Project includes one component that mitigates potential impacts to paleontological resources by ensuring that steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. Alternative 3 would not include this component since the Specific Plan would not be adopted under this alternative. Under Alternative 3, including the Springs Specific Plan, associated rezoning, and associated General Plan amendment, would be adopted. The area of disturbance associated with future development projects under Alternative 3 could result in the direct and indirect loss or indirect destruction of a unique

paleontological resources, similar to the Project. Implementation of Specific Plan Measure Paleo-A would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. With this measure, this impact would be reduced to a less than significant level, similar to the Project.

Greenhouse Gases and Energy

Alternative 3 could result in up to 63 single family dwelling units, 270 multifamily dwelling units, 80 mixed use dwelling units, 125,617 square feet of commercial uses, 53,948 square feet of office uses, and 18,450 square feet of recreation uses. This alternative would accommodate up to approximately 1,156 new residents (compared to 1,977 residents under the Project) and up to 382 new employees (compared to 632 employees under the Project). Impacts associated with air quality are discussed in the following section.

Impact 3.6-1: Implementation of the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

CONSISTENCY WITH THE CARB'S 2017 CLIMATE CHANGE SCOPING PLAN

The Specific Plan includes a number of goals and policies to decrease vehicle trips. These goals and policies would apply to this alternative. Alternative 3 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The revised densities and standards would result in a reduction of 293 dwelling units and 78,888 square feet of non-residential uses. The reduced development potential under this alternative could reduce vehicle trips slightly compared to the Project.

The new buildings constructed and operated within the Plan area under the Project and this alternative would be subject to the current CalGreen energy efficiency standards, resulting in development that is significantly more energy efficient than the current buildings in the surrounding area, many of which were constructed under previous versions of the Title 24 energy code. The Project and this alternative would also need to operate in accordance with the goals of AB 341 that requires a 75 percent diversion rate of waste from landfills. Overall, emissions from this alternative would continue to decline beyond the buildout year due to regulations that would indirectly affect project emissions.

As discussed in Section 3.2, although buildout of the Project would be below the CARB's 2017 Climate Change Scoping Plan threshold for specific plans (for operational emissions) of 6 MT CO_2e per capita for year 2040 with 4.98 MT CO_2e per capita under the unmitigated scenario and 3.65 MT CO_2e per capita under the mitigated scenario. The Project would not be below the 2 MT CO_2e per capita for year 2050, generating 4.87 MT CO_2e per capita under the unmitigated scenario, and 3.57 MT CO_2e per capita under the mitigated scenario, and therefore would not be considered to be fully consistent with the CARB's 2017 Climate Change Scoping Plan.

Table 5.0-11, below, provides the CalEEMod modeling results for Alternative 3. As shown in Table 5.0-11, Alternative 3 is estimated to generate in 2040 approximately 7,756.1 MT CO_2e under the unmitigated scenario and 5,618.6 MT CO_2e under the mitigated scenario, and in 2050 of approximately 7,575.3 MT CO_2e in the unmitigated scenario and 5,495.4 MT CO_2e under the mitigated scenario. Alternative 3 would generate approximately 1,156 new residents by Project buildout. Therefore, in 2040, Alternative 3 would generate approximately 6.71 MT CO_2e per capita under the unmitigated scenario, and 4.86 MT CO_2e per capita under the mitigated scenario. By 2050, Alternative 3 would generate approximately 6.55 MT CO_2e

per capita under the unmitigated scenario, and 4.75 MT CO_2e per capita under the mitigated scenario. Both of the scenarios for year 2040 would not exceed the CARB threshold of 6 $MTCO_2e$ per capita for year 2030. However, both scenarios for year 2040 would exceed the interpolated CARB threshold of 4 $MTCO_2e$ per capita for year 2040. Additionally, both the unmitigated and mitigated scenarios for year 2050 exceed the CARB threshold of 2 $MTCO_2e$ per capita for year 2050. However, Alternative 3 would have less $MTCO_2e$ per capita than the Project under the mitigated and unmitigated 2040 and 2050 scenarios.

TABLE 5.0-11: OPERATIONAL GHG EMISSIONS UNDER BUILDOUT OF ALTERNATIVE 3 (YEARS 2040 AND 2050)

EMISSIONS CATEGORY	*EMISSIONS CATEGORY (DETAIL)*	*UNMITIGATED CO_2E (METRIC TONS/YEAR)*	*MITIGATED CO_2E (METRIC TONS/YEAR)*
Year 2040			
Area	Energy to fuel landscaping equipment	39.0	5.1
Energy	Electricity and natural gas	1,230.3	1,100.5
Mobile	Energy for vehicle travel	6,088.2	4,133.7
Waste	Off-gassing from landfilled solid waste	295.6	295.6
Water	Energy for transport of water to consumer	102.9	83.7
Total Annual		**7,756.1**	**5,618.6**
Year 2050			
Area	Energy to fuel landscaping equipment	39.0	5.1
Energy	Electricity and natural gas	1,230.3	1,100.5
Mobile	Energy for vehicle travel	5,907.4	4,010.5
Waste	Off-gassing from landfilled solid waste	295.6	295.6
Water	Energy for transport of water to consumer	102.9	83.7
Total Annual		**7,575.3**	**5,495.4**

SOURCES: CALEEMOD (V.2020.4.0)
NOTE: EMISSIONS MAY NOT ADD UP DUE TO ROUNDING.

CONSISTENCY WITH THE SONOMA COUNTY GENERAL PLAN

The existing Sonoma County General Plan provides goals, policies, and actions that reduce air pollutants and GHG emissions. This alternative would be consistent with and rely on these goals, objectives, and policies. Therefore, this alternative would help to reduce air pollutants and GHG emissions, consistent with the goals, objectives, and policies contained within the Sonoma County General Plan.

CONSISTENCY WITH THE SONOMA COUNTY CLIMATE CHANGE ACTION RESOLUTION

The Sonoma County Climate Change Action Resolution contains local goals to reduce GHG emissions. This alternative would be consistent with all applicable GHG reduction goals identified within the Sonoma County Climate Change Action Resolution. Similar to the Project, this alternative would not conflict with the local goals included in the Sonoma County Climate Change Action Resolution.

CONSISTENCY WITH BAAQMD GUIDANCE

As discussed in Section 3.2, buildout of the Project would be below the BAAQMD Plan-level threshold for specific plans (for operational emissions) of 4.6 MT CO_2e/service population/year for specific plans. Separately, to account for the year 2030 goals contained in SB 32, the project-level threshold of 2.8 CO_2e/SP/year is also used. Because this alternative would substantially reduce the development potential of the Plan area, and would reduce the associated service population, this alternative would also likely be below the BAAQMD operational threshold. Based on the CalEEMod modeling provided in Table 5.0-11, Alternative 3 would generate approximately 2.97 MT CO_2e/service population/year in 2040 under the unmitigated scenario, and 2.15 MT CO_2e/service population/year in 2040 under the mitigated scenario. Therefore, Alternative 3 would be below the BAAQMD Plan-level threshold for specific plans (for

operational emissions) for both scenarios, and the mitigated scenario would be below the 2.8 CO_2e/SP/year for a specific plan (calculated to account for the 2030 goals contained in SB 32).

Separately, the BAAQMD recommends Basic Construction Mitigation Measures for all projects, whether or not construction-related emissions exceed the thresholds of significance. The BAAQMD also encourages lead agencies to incorporate best management practices to reduce GHG emissions during construction, as applicable. Compliance with the BAAQMD construction-related mitigation requirements are considered to reduce GHG impacts at both the local and basin-wide levels. Development within the Plan area under both the Project and this alternative would implement the BAAQMD Basic Mitigation Measures, as applicable, as required by the BAAQMD.

CONCLUSION

Impacts associated with GHG plans, policies, and regulations would be significant and unavoidable under Alternative 3, similar to the Project. Alternative 3 would have lower MT CO_2e/service population/year than the Project and this impact would be better under Alternative 3 than the Project.

Impact 3.6-2: Implementation of the Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

Alternative 3 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The revised densities and standards would result in a reduction of 293 dwelling units and 78,888 square feet of non-residential uses. The reduced development potential under this alternative could reduce vehicle trips, electricity and natural gas usage, and associated GHG emissions compared to the Project.

This alternative would comply with all relevant goals, policies, and actions as provided with the Springs Specific Plan, Sonoma County General Plan, as well as all relevant GHG reduction goals contained within the Sonoma County Climate Change Action Resolution. Additionally, this alternative would be consistent with AB 32, SB 375, and SB 32, and all other relevant federal, state, and local strategies to help reduce GHG emissions.

Overall, this alternative has taken a progressive and proactive approach to the reduction of GHG emissions. Alternative 3 is designed to be walkable, provides convenient access to nearby transit options, provides higher density housing, and includes infill development. New high density and mixed-use housing would bring new housing opportunities to the Springs and would be located within walking distance of transit, shops, restaurants, and other amenities. In addition, a centrally-located community plaza would be developed, which would serve as a gathering place for farmer's markets, concerts, and other community events. This alternative has been designed to provide alternative modes of transportation, beyond automobile travel, which acts as the largest single source of GHG emissions in the County.

Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of this alternative. Long-term operational emissions associated with this alternative are not expected to be greater than the emissions expected as compared with the land uses allowed under current land uses (as included within the County General Plan). Alternative 3 would comply with all relevant goals, policies, and actions as provided with the Sonoma County General Plan, as well as all relevant GHG reduction goals contained within the Sonoma County Climate Change Action Resolution. As previously discussed, while Alternative 3 would meet the State's GHG reduction goals for 2040, Alternative 3 would exceed the State's per capita GHG goals for

2050. Alternative 3 would have lower per capita GHG emissions than the Project under the 2030 and 2050 scenarios, as discussed previously. Therefore, implementation of this alternative would generate GHGs that would have a significant and unavoidable impact on the environment but would be better than the Project.

Impact 3.6-3: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources

This alternative includes residential and non-residential land uses. The amount of energy used within the Plan area would directly correlate to the number and size of the residential units, the energy consumption of associated unit appliances, outdoor lighting, and the energy use associated with non-residential Plan area buildings and activities. Buildout of this alternative would use energy resources for the operation of buildings (electricity and natural gas), for on-road vehicle trips (e.g. gasoline and diesel fuel), and from off-road construction activities associated with buildout of this alternative (e.g. diesel fuel). Each of these activities would require the use of energy resources. The project applicant(s)/developer(s) responsible for buildout of all or part of this alternative would be responsible for conserving energy, to the extent feasible. This includes an emphasis on reducing per capita energy consumption, including through Statewide and local measures.

As noted previously, this alternative would result in a slight reduction in development potential for the Plan area compared to the Project. This would result in an associated reduction in energy use (including reduced fossil fuel use resulting from the reduction in automobile trips, and reduced natural gas and electricity use resulting from the reduction in residential and non-residential development). As such, the associated energy resources required for development and operation of this alternative would be slightly reduced compared to the Project.

As a result, this alternative would not result in any significant adverse impacts related to energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of building of this alternative, including construction, operations, maintenance, and/or removal. The electricity and natural gas provider to the Plan area maintains sufficient capacity to serve the Plan area. This alternative would comply with all existing energy standards, including those established by Sonoma County, and would not result in significant adverse impacts on energy resources. This alternative would be linked closely with existing transportation networks that, in large part, are sufficient for most residents of the Plan area and the Plan area as a whole.

Development within the Plan area would be in compliance with all applicable federal, state, and local regulations regulating energy usage. For example, PG&E is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E is expected to achieve at least a 33 percent mix of renewable energy resources by 2020, and 60 percent by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), are expected to continue to improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

As a result, this alternative would not result in any significant adverse impacts related to energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of building of this alternative, including construction, operations, maintenance, and/or

removal. The electricity and natural gas provider to the Plan area maintains sufficient capacity to serve the Plan area. This alternative would comply with all existing energy standards, including those established by Sonoma County, and would not result in significant adverse impacts on energy resources. Furthermore, existing connections exist between the Plan area and nearby pedestrian and bicycle pathways, and public transit access exists nearby, reducing the need for local motor vehicle travel. This alternative would be linked closely with existing networks that, in large part, are sufficient for most residents of the Plan area and the Springs area as a whole. Due to the reduced amount of energy resulting from this alternative compared to the Project, this impact would be reduced.

Hazards and Hazardous Materials

Impact 3.7-1: Implementation of the Project has the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

Future development, infrastructure, and other projects allowed under the Project and Alternative 3 may involve the transportation, use, and/or disposal of hazardous materials. Accidental release of hazardous materials that are used in the construction or operation of a project may occur. There is also the potential for accidental release of pre-existing hazardous materials, either associated with previous activities on a site or naturally occurring hazards such as asbestos.

No future activities or uses within the Plan area would be at risk due to the Former Heon's Dry Cleaner site.

The use, transportation, and disposal of hazardous materials is regulated and monitored by local fire departments, CUPAs, the State Division of Occupational Safety and Health, and the Department of Toxic Substances Control consistent with the requirements of Federal, State, and local regulations and policies. Facilities that store hazardous materials on-site are required to maintain a Hazardous Materials Business Plan in accordance with State regulations. In the event of an accidental release of hazardous materials, the local CUPA and emergency management agencies (e.g., Police Department and Fire District) would respond. All future projects allowed under the Project and Alternative 3 would be required to comply with the provisions of Federal, State, and local requirements related to hazardous materials. Compliance with federal, state and local regulations in addition to General Plan Policies PA-4a through PS-4o would ensure that this potential impact is less than significant, similar to the Project.

Impact 3.7-2: Implementation of the Project has the potential to have projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5

As noted in Section 3.7, there are three sites in Sonoma County on the Cortese database, located in Windsor, Santa Rosa, and Bodega Bay. None of these sites are located in the Plan area. Therefore, this is considered a less than significant impact, similar to the Project.

Impact 3.7-3: Implementation of the Project has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

Alternative 3, similar to the Project, has limited potential for the routine transport, use, or disposal of hazardous materials as discussed above (Impact 3.7-1). One school, Sonoma Charter School, is located

within the Plan area. Flowery Elementary school is located immediately west of the Plan area. Additionally, one other school is located within one-quarter mile of the Plan Area: El Verano Elementary School. The area within ¼-mile of these three schools is mostly developed, but some development potential exists in the area.

Similar to the Project, Alternative 3 does not propose actual businesses. As such, it is currently not possible to determine if a specific use will result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste. The land use designations with the highest possibility of having businesses that result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste are the Retail Business and Service and Neighborhood Commercial designations.

The Sonoma Charter School, which is located within the Plan area, is surrounded by existing residential development, and the school site is designated Public Facility by the existing zoning map. The zoning map for this alternative identifies areas of Medium Density Residential to the north, west and east of the Sonoma Charter School site and Planned Community to the south of the school site. These designations are not anticipated to have uses that would emit hazardous emissions or handle significant amounts of hazardous materials, substances, or waste.

Additionally, there are no known existing commercial, industrial, or agricultural businesses that are known to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school.

All hazardous materials would be handled in accordance with Federal, State, and County requirements, which would limit the potential for a project to expose nearby uses, including schools, to hazardous emissions or an accidental release. Hazardous emissions are monitored by the BAAQMD, RWQCB, Department of Toxic Substances Control, and the local CUPA. In the event of a hazardous materials spill or release, notification and cleanup operations would be performed in compliance with applicable Federal, State, and local regulations and policies, including hazard mitigation plans. Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan policies that reduce impacts associated with hazardous materials.

Implementation of General Plan policies would ensure that this potential impact is less than significant, similar to the Project.

Impact 3.7-4: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Future development under Alternative 3 would allow a variety of new development, including residential, commercial, mixed use, recreation, and public facility projects, which would result in increased jobs and population in the Plan area. Road and infrastructure improvements would occur to accommodate the new growth. Future projects are not anticipated to remove or impede evacuation routes. Subsequent development projects in the Plan area allowed under Alternative 3 would be subject to the County's General Plan policies which were designed to ensure that an emergency response plan is prepared and maintained. Similar to the Project, this impact would be less than significant.

Impact 3.7-5: Implementation of the Project has the potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where

wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

Development allowed under Alternative 3 and the Project would place people and structures in areas located within the Wildland-Urban Interface. The northeastern portion of the Plan area is in a High fire hazard zone, and the southeastern portion of the Plan area is in a Moderate fire hazard zone. The remainder of the Plan area is designated as a Local Responsibility Zone. No portion of the Plan area is in a Very High fire hazard zone.

Because the entire Plan area is located within the Wildland-Urban Interface, all existing and future properties in the area are required to be built in accordance to specific codes. Future development of the Plan area under Alternative 3 and the Project would be subject to all relevant General Plan objectives and policies that provide protections from wildland fires. Compliance with the County's General Plan objectives and policies would ensure that potential wildland fire hazards are mitigated through requirements for automatic fire sprinkler systems or other on-site fire detection and suppression systems in new residential and commercial structures, ensuring adequate fire protection services, and ensuring public awareness regarding fire safety. Implementation of Alternative 3 would have a less than significant impact with regard to this issue, similar to the Project.

Impact 3.7-6: Implementation of the Project has the potential to result in a safety hazard for people residing or working in the project are due to proximity to a private airstrip or public airport

The Federal Aviation Administration (FAA) establishes distances of ground clearance for take-off and landing safety based on such items as the type of aircraft using the airport. The nearest airport to the Plan area is the Sonoma Valley Airport. The Sonoma Valley Airport is located approximately 5.7 miles south of the project site. There are no private airstrips in the Vicinity of the Plan area. The Plan area is not located within the airport's referral area or safety zones. Additionally, the Plan area is located adjacent to urban uses on all sides. Implementation of Alternative 3 would have a less than significant impact with regards to this environmental issue, similar to the Project.

Hydrology and Water Quality

Impact 3.8-1: Implementation of the Project could result in a violation of water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality

The Plan area does not include any water bodies listed on the Section 303(d) list of impaired water bodies. However, Sonoma Creek, which is located west of the Plan area, is listed on the Section 303(d) list of impaired water bodies. The listing for sediment in Sonoma Creek originated from fine sediment impacts to spawning and rearing habitat as noted in the Total Maximum Daily Load (TMDL). The TMDL provides actions to reduce fine sediment input to the non-tidal portions of the main stems and all freshwater tributaries.

The potential construction and operational water quality impacts are discussed below.

CONSTRUCTION-RELATED WATER QUALITY IMPACTS

Future development project applicants within the Plan area under both the Project and Alternative 3 may be required to submit the SWPPP with a Notice of Intent to the RWQCB to obtain a General Permit. The

RWQCB is an agency responsible for reviewing the SWPPP with the Notice of Intent, prior to issuance of a General Permit for the discharge of storm water during construction activities. The RWQCB accepts General Permit applications (with the SWPPP and Notice of Intent) after specific projects have been approved by the lead agency. The lead agency for each specific project that is larger than one acre is required to obtain a General Permit for discharge of storm water during construction activities prior to commencing construction (per the California CWA). For ministerial projects, applicants will typically submit a grading or building permit application consisting of a Water Quality Management Plan and construction plans that incorporate BMPs.

Based upon the wide scope of this alternative, development of detailed, site-specific information on this impact is not feasible. However, each future project must include detailed project specific drainage plans that control storm water runoff and erosion, both during and after construction. The RWQCB will require a project specific SWPPP to be prepared for each future project that disturbs an area one acre or larger. The SWPPPs will include project specific best management measures that are designed to control drainage and erosion.

NEW DEVELOPMENT-RELATED WATER QUALITY IMPACTS

New development under this alternative would introduce constituents into the storm water that are typically associated with urban runoff. The amount and type of runoff generated by the various future projects would be greater than under existing conditions, due to increases in impervious surfaces. There would be a corresponding increase in urban runoff pollutants and first flush roadway contaminants, as well as an increase in nutrients and other chemicals from landscaped areas. These constituents would result in water quality impacts to onsite and offsite drainage flows to area waterways.

CONCLUSION

Under this alternative, the amount of future ground disturbance would be comparable to the Project. Although the development potential would be decreased, future projects under both the Project and this alternative would be subject to applicable water quality and runoff related regulations and policies.

Each future development project within the Plan area is required to prepare a detailed project specific drainage plan and a SWPPP that will control storm water runoff and erosion, both during and after construction. If the project involves the discharge of dewatering into surface waters, the project proponent will need to acquire a Dewatering permit, NPDES permit, and Waste Discharge permit from the RWQCB. Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan objectives and policies that aim to reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality features. The General Plan policies include numerous requirements that would reduce the potential for implementation of the Project to result in increased water quality impacts. For example, General Plan Policy WR-1h requires grading plans to include measures to avoid soil erosion and requires the consideration of upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable. In addition, compliance with the CWA and regulations enforced by the RWQCB would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations. The implementation of these General Plan policies, combined with compliance with Federal and State regulations, would ensure that Implementation of the Alternative would have a less than significant impact from these issues, similar to the Project.

Impact 3.8-2: Implementation of the Project could result in decreased groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

Subsequent development projects proposed within the Plan area, such as residential, commercial, office, and recreational projects, under both the Project and this alternative would result in new impervious surfaces and could reduce stormwater infiltration and groundwater recharge.

Projects located in urban areas, such as the uses along the developed Highway 12 corridor, would have less of an impact than projects located on undeveloped or underutilized parcels. Development would be required to be consistent with all applicable County and service provider in infrastructure master plans and regulations pertaining to storm water quality and groundwater recharge. For example, the Groundwater Sustainability Plan, which was adopted in 2021, establishes a standard for "sustainability" of groundwater management and use, and determines how the basin will achieve this standard. The Plan includes sustainable management criteria, establishes a groundwater monitoring network, and includes management actions and plan implementation measures to address groundwater recharge. While this plan initially emphasizes voluntary actions, future implementation may include new development requirements for future projects in the plan area in order to maintain sustainable groundwater levels. Irrespective of those potential measures, under adoption of the Project future projects within the Plan area would be required to develop and incorporate sustainability measures, such as creek and sensitive habitat setbacks (which would allow for groundwater infiltration), use of drought tolerant plants (which would minimize groundwater demand for landscaping), or permeable concrete of pavers (compared to impermeable concrete, permeable pavers would provide opportunities for groundwater infiltration in areas used which would typically be paved with impermeable surfaces). The sustainability measures incorporated would vary based on the project size, project location, and project type.

Additionally, the County's General Plan includes objectives and policies which address groundwater quality and groundwater recharge. For example, General Plan Policy WR-2f requires that discretionary projects maintain the site's pre-development recharge of groundwater to the maximum extent practicable. For ministerial projects, applicants will typically submit a grading or building permit application consisting of a Water Quality Management Plan and construction plans that incorporate BMPs. These BMPs and Water Quality Management Plan details would control storm water runoff while also maintaining opportunities for recharge, as applicable. Implementation of the relevant General Plan objectives and policies would ensure that this alternative would have a less than significant impact relative to this topic, similar to the Project.

Impact 3.8-3: Implementation of the Project could alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation, increase the rate or amount of runoff which would result in flooding, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows

Individual future projects developed within the Plan area under both the Project and this alternative would create new impervious surfaces. This would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, potentially generating additional runoff during storm events. The amount of impervious surfaces under this alternative would be comparable to the Project.

The County of Sonoma has developed the Specific Plan to include goals and policies that, when implemented, will reduce storm water pollution from new development, and protect and enhance natural storm drainage and water quality features, which will in turn reduce water quality impacts. This alternative would include adoption of the Specific Plan goals and policies. The Sonoma County General Plan also contains numerous policies that would reduce the potential for implementation of this alternative to result in increased flooding or result in water quality impacts associated with increased runoff, siltation, or erosion. Further, Chapter 7B, Flood Damage Prevention, of the County Code outlines the flood prevention standards. Such measures apply to all structures or land constructed, located, extended, converted, or altered within special flood hazard areas in the county, as identified on the FEMA floodplain maps. Chapter 11A of the County Code outlines the County's stormwater regulations. The purpose of the chapter is to protect and enhance the water quality of the County's watercourses pursuant to and consistent with the Federal CWA and amendments thereto and to assure compliance with the conditions set forth by the NPDES as requirements of stormwater discharge permits. Implementation of the General Plan policies, Specific Plan policies, and County Code requirements would ensure that the alternative would have a less than significant impact relative to this topic, similar to the Project.

Impact 3.8-4: Implementation of the Project could result in flood hazards due to 100-year flood hazard, tsunami, or seiche zones

The majority of the Plan area and surrounding area is designated by FEMA as Zone X (unshaded) which is an area determined to be outside the 500-year floodplain. However, small portions of the Plan area are subject to flooding along the natural creeks and drainages that traverse the southern portion of the Plan area. The 100-year flood plain extends across Highway 12 between Encinas Lane and Meadowbrook Avenue along Agua Caliente Creek.

Subsequent development, infrastructure, and planning projects would be subject to the aforementioned General Plan and County Code requirements. The policies contained in the General Plan combined with the County Code standards for floodplain development represent a comprehensive and holistic approach by Sonoma County to reduce the risks of flooding to city residents and properties. Furthermore, as described in the regulatory setting section, numerous Federal, State, and local agencies are responsible for maintaining flood protection features in the County, including the U.S. Army Corps of Engineers, DWR, and Department of Fish and Wildlife at the Federal and State level.

The implementation of these policies and regulations would ensure that implementation of this alternative would have a less than significant impact related to these issues, similar to the Project.

Impact 3.8-5: Implementation of the Project may conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

The San Francisco Bay Basin Water Quality Control Plan and the Sonoma Valley Groundwater Management Plan are the two guiding documents for water quality and sustainable groundwater management in the Plan area. Consistency with the two plans are discussed below.

WATER QUALITY CONTROL PLAN

As discussed in Impact 3.8-1, impacts related to water quality during construction and operation would be less-than-significant with implementation of a project specific drainage study and SWPPP and compliance with relevant General Plan objectives and policies that aim to reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality features. The County General Plan policies include numerous requirements that would reduce the

potential for implementation of the Project to result in increased water quality impacts. For example, General Plan Policy WR-1h requires grading plans to include measures to avoid soil erosion and requires the consideration of upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable. In addition, compliance with the CWA and regulations enforced by the RWQCB would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations.

SONOMA VALLEY GROUNDWATER MANAGEMENT PLAN

As discussed in Impact 3.8-2, this alternative would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the alternative may impede sustainable groundwater management of the basin. Projects located in urban areas, such as the uses along the developed Highway 12 corridor, would have less of an impact than projects located on undeveloped or underutilized parcels. The Plan area is largely built out and developed. Development of the 15.6 acres of vacant parcels would result in an increase in impervious surfaces within the Plan area under both the Project and this alternative. However, development would be required to be consistent with all applicable County and service provider in infrastructure master plans and regulations pertaining to storm water quality and groundwater recharge. Additionally, future projects within the Plan area under this alternative would be required to develop and incorporate sustainability measures, such as creek and sensitive habitat setbacks (which would allow for groundwater infiltration), use of drought tolerant plants (which would minimize groundwater demand for landscaping), or permeable concrete of pavers (which would provide opportunities for groundwater infiltration in areas which would typically be paved with impermeable surfaces). The sustainability measures incorporated would vary based on the project size, project location, and project type. For ministerial projects, applicants will typically submit a grading or building permit application consisting of a Water Quality Management Plan and construction plans that incorporate BMPs. These BMPs and Water Quality Management Plan details would control storm water runoff while also maintaining opportunities for recharge, as applicable.

CONCLUSION

Overall, implementation of this alternative would have a less than significant impact related to conflicts with the Basin Plan and Sonoma Valley Groundwater Management Plan, similar to the Project.

Land Use

Impact 3.9-1: Implementation of the Project would not physically divide an established community

The land uses allowed under Alternative 3 provide opportunities for cohesive new growth within existing urbanized areas of the County, as well as new infill growth adjacent to existing urbanized areas, but would not create physical division within the community. This alternative does not include any new areas designated for urbanization or new roadways, infrastructure, or other features that would divide existing communities. Alternative 3 would have a less than significant impact associated with the physical division of an established community, similar to the Project.

Impact 3.9-2: Implementation of the Project may conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect

STATE PLANS

As noted above, Alternative 3 would maintain the Springs Specific Plan goals, policies, design guidelines, and land uses as the Project, but the development potential would be reduced due to revised densities and development standards. The Specific Plan was prepared in conformance with State laws and regulations associated with the preparation of specific plans. Discussion of the Specific Plan's consistency with State regulations, plans, and policies associated with specific environmental issues (e.g., air quality, traffic, water quality, etc.) is provided in the relevant chapters of this Draft EIR. Highway 12, which traverses the Plan area, is a State-owned highway facility. The State would continue to have authority over any State-owned lands in the vicinity of the Plan area, such as Highway 12, and the Project would not conflict with continued application of State land use plans, policies, and regulations adopted to avoid or mitigate environmental effects.

COUNTY PLANS

In September 2008, Sonoma County completed and adopted a comprehensive update to the General Plan. The Sonoma County General Plan 2020 is the overarching policy document that guides land use, housing, transportation, infrastructure, community services, and other policy decisions. The Land Use Element of the General Plan establishes land uses for the Plan area. As shown in Figure 2.0-6 in Chapter 2.0, the Plan area is currently designated General Commercial/Limited Commercial, Public/Quasi-Public, Recreation/Visitor-Serving Commercial, and Urban Residential by the Sonoma County General Plan Land Use Map.

The land uses as proposed by Alternative 3 are not consistent with the General Plan. When land uses are not consistent with a General Plan there are two courses of action: 1) the uses are not allowed due to the inconsistency, or 2) the land uses are changed through an amendment to the General Plan to create consistency. Similar to the Project, this alternative would require amendments to the General Plan land use map and to land use policies to create consistency with the document. Similar to the Project, the land uses for the Plan area under Alternative 3 would include Urban Residential, General Commercial, Public/Quasi-Public, and Recreation & Visitor-Serving Commercial. Although an amendment would be required to change the General Plan land uses in the area, the location and type of uses are similar to the existing uses. For example, the core of the Highway 12 corridor is currently designated for General Commercial/Limited Commercial, Public/Quasi-Public, and Urban Residential land uses, while the proposed Highway 12 core would be designated for General Commercial, Public/Quasi-Public, and Urban Residential land uses. Additionally, the southeastern portion of the Plan area (off Donald Street) is currently designated for Urban Residential land uses, and the proposed land use designation for this area is also Urban Residential. The change in land use designations would allow for increased land use intensities and increased residential densities over the existing condition; however, the development potential would be reduced compared to the Project due to revised densities and development standards. The zoning districts under this alternative would establish permitted uses and standards for each zone. Upon approval of the requested General Plan amendment, the Plan would be consistent with the County General Plan.

The Specific Plan contains detailed development standards, design guidelines, distribution of uses, infrastructure requirements, and goals and policies for the development of a specific geographic area. The Specific Plan carries forward and enhances policies and measures from the County's existing General Plan that were intended for environmental protection and would not remove or conflict with County plans, policies, or regulations adopted for environmental protection.

Similar to the Project, Alternative 3 would require modifications to the County's Zoning Ordinance to provide consistency between the General Plan and zoning; however, these modifications will not remove or adversely modify portions of the Sonoma County Code that were adopted to mitigate an environmental effect. This alternative would also require amendments to the adopted General Plan land use map. Once the requested amendment is approved, this alternative would be consistent with the County's General Plan.

CONCLUSION

Subsequent development projects within the Plan area would be required to be consistent with all applicable policies, standards, and regulations, including those land use plans, policies, and regulations adopted to mitigate environmental effects by the County as well as those adopted by agencies with jurisdiction over components of future development projects. Approval of the General Plan amendment would ensure that this alternative would be substantially consistent with the Sonoma County General Plan land use requirements and would have a less than significant impact relative to land use and planning, similar to the Project.

Impact 3.9-3: Implementation of the Project may conflict with an applicable habitat conservation plan or natural community conservation plan

No natural community conservation plans or habitat conservation plans have been adopted in Sonoma County. Alternative 3 would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Implementation of this alternative would have no impact relative to this topic, similar to the Project.

Noise

Alternative 3 could result in up to 63 single family dwelling units, 270 multifamily dwelling units, 80 mixed use dwelling units, 125,617 square feet of commercial uses, 53,948 square feet of office uses, and 18,450 square feet of recreation uses. This alternative would accommodate up to approximately 1,156 new residents (compared to 1,977 residents under the Project) and up to 382 new employees (compared to 632 employees under the Project).

Impact 3.10-1: Implementation of the Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of applicable standards

TRAFFIC NOISE – EXISTING RECEPTORS

Table 3.10-9 in Section 3.10 shows the predicted traffic noise level increases on the local roadway network for Existing No Project, Existing + Project, Cumulative, and Cumulative + Project conditions as a result of the Project. As shown in Table 5.0-12, Alternative 3 would result in a substantial reduction of automobile trips compared to the Project. This reduction in trips would correspond to a reduction in predicted traffic noise levels compared to the Project.

Some of the existing noise sensitive receptors located along the Plan area roadways are currently exposed to exterior traffic noise levels exceeding the Sonoma County 60 decibels (dB) day/night average sound level (LDN) exterior noise level standard in outdoor activity areas set in the General Plan Noise Element. These areas would continue to experience elevated exterior noise levels upon future development of the Project and this alternative. Under the Project, Robinson Road from Donald Street to East Verano Street will experience a 6 dB LDN increase under both the Existing Plus Project and the Cumulative Plus Project

scenarios and Donald Street east of Robinson Road will exceed the County's 60 dB standard under Cumulative plus Project conditions. These are the only roadway segments which experience a significant increase in traffic noise (although the resulting noise level would not exceed the 60 dB threshold). Additionally, the Cumulative Plus Project traffic noise level at the nearest residences along Robinson Road is predicted to be 54 dB LDN, and would not exceed the County standard of 60 dB LDN.

Under Alternative 3, development in the Donald/Verano neighborhood would be reduced compared to the Project and this area would maintain low density residential land use designation and zoning. The reduction in development under Alternative 3, and particularly in the Donald/Verano neighborhood, traffic noise at the study roadway segments, including the Robinson Road from Donald Street to East Verano Street and Donald Street east of Robinson Road roadway segments, would be reduced compared to the Project. It is anticipated that the potentially significant impact would be avoided under Alternative 3 and impacts associated with exposure of existing sensitive receptors to traffic noise would be less than significant.

TRAFFIC NOISE – NEW SENSITIVE RECEPTORS

As described in Section 3.10, subsequent development projects proposed within the Plan area would be subject to all relevant General Plan and Specific Plan policies that alleviate noise impacts. Implementation of General Plan Policies NE-1a, NE-1b, NE-1c, and NE-1g, and the Specific Plan Environmental Measures related to noise, would ensure that this potential impact is less than significant for the Project. Since Alternative 3 would generate less traffic than the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

STATIONARY AND OPERATIONAL NOISE

As described in Section 3.10, the County's General Plan and the proposed Specific Plan include policies that are intended to reduce operational noise associated with point sources. Specifically, General Plan Policies NE-1a, NE-1c, NE-1d, NE-1e, NE-1f, and NE-1h, and Specific Plan Environmental Measures related to noise, would reduce noise associated with point or operational sources. Implementation of proposed Specific Plan policies, would ensure that this impact is less than significant for the proposed Project. Since Alternative 3 would generate less stationary and operational noise than the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

CONSTRUCTION NOISE

During construction of subsequent development projects proposed within the Plan area, including roads, water and sewer lines, and related infrastructure, construction noise would add to the noise environment in the vicinity of the Plan area. Construction-related noise would also be generated by increased truck traffic on area roadways. A significant noise source resulting from construction of subsequent development projects in the Plan area would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. These future noise increases would be of short duration, and would likely occur primarily during daytime hours. As provided in Section 3.10, implementation of Specific Plan Noise Measure B would ensure that this impact for the proposed Project is less than significant. Since Alternative 3 would generate less construction than the proposed Project, traffic noise generated would be reduced compared to the Project and would have less of an impact.

Impact 3.10-2: Implementation of the Project has the potential to expose persons to or generate excessive groundborne vibrations or groundborne noise

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage. Construction vibration levels anticipated for future development projects within the Plan area are less than the 0.1 in/sec criteria at distances of 50 feet. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors. Implementation of this alternative would have a less than significant impact, similar to the Project.

Population and Housing

Impact 3.11-1: Implementation of the Project would not induce substantial population growth

Alternative 3 accommodates future growth in the Plan area, including new businesses and new residential uses. Infrastructure and services would need to be extended to accommodate future growth. While no specific development projects are proposed as part of the Project or this alternative, both would accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential development. Under Alternative 3, buildout of the Plan area would result in approximately 413 dwelling units and 198,015 square feet of non-residential uses.

As discussed in Section 3.11, given the historical and current population, housing, and employment trends, growth in the County, as well as the entire state, is inevitable. Plan Bay Area 2040 states that by 2040 the Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year. From 2010 through 2040, Plan Bay Area 2040 anticipates 33,200 new households in Sonoma County, including 3,000 households in the unincorporated area, and 40,900 new employees, including 10,100 employees in the unincorporated area. During this same period, the California Department of Finance projected that Sonoma County's population would increase by 99,976 persons countywide. While the 2040 Plan Bay Area does not include community-specific growth projections, the 2013 Plan Bay Area projected that The Springs would grow by 1,150 households and 480 jobs. This alternative would accommodate up to 413 new households (up to approximately 1,156 new residents) and up to 382 new employees. Overall, the growth associated with this alternative is within the level of growth planned for the County and Bay Area.

Future development under this alternative is anticipated to be primarily infill development as well as redevelopment and intensification of existing uses, since the Plan area is substantially built-out. In order to accommodate the planned growth, surrounding infrastructure (i.e., water, sewer, and storm drainage facilities) would be extended to vacant infill sites from nearby and/or adjacent roadways or developments. Additionally, some internal access roadways may be required for future infill development. This alternative would not extend infrastructure to areas outside of the Plan area that are not currently served by infrastructure and does not increase capacity of infrastructure beyond that necessary to accommodate the growth anticipated for this alternative. Growth under this alternative is anticipated to remain within the general growth levels projected statewide, as well as locally, and would not be anticipated to exceed any applicable growth projections or limitations that have been adopted to avoid an environmental effect. This alternative is intended to assist in accommodating the County's fair share of statewide housing needs, which are allocated by the Association of Bay Area Governments, based on regional numbers provided by the California Department of Housing and Community Development on a regular basis (every five to eight years).

With adherence to the existing General Plan goals, objectives, and policies intended to guide growth to appropriate areas and provide services necessary to accommodate growth, development of the land uses allowed under Alternative 3 and the infrastructure anticipated to accommodate such development would be consistent with the long-range growth planned for the County and Bay Area and would not induce growth that would exceed adopted thresholds. Therefore, population and housing growth associated with Alternative 3 would result a less than significant impact. Because Alternative 3 would reduce the population of the Plan area at full buildout compared to the Project, this alternative would have reduced impacts associated with population growth.

Impact 3.11-2: Implementation of the Project would not displace substantial numbers of people or existing housing

There are approximately 557 existing residences (approximately 347 single-family units and 210 multi-family units) located within the Plan area. As buildout of the Plan area progresses under both the Project and Alternative 3, it is likely that some of the existing housing units would be remodeled, renovated, expanded on, demolished, or otherwise removed or replaced with new development. However, Alternative 3 does not require the removal of any housing. Alternative 3 would accommodate up to 413 new housing units. New development allowed under Alternative 3 would significantly increase the available housing stock in the County, but the number of units would be reduced from 706 to 413 units. Therefore, Alternative 3 would not displace substantial numbers of people or housing units. Therefore, impacts associated with displacement would be less than significant, similar to the Project.

Public Services and Recreation

Impact 3.12-1: Implementation of the Project could result in adverse physical impacts on the environment associated with governmental facilities and the provision of public services

As shown in Table 5.0-4, Alternative 3 could result in up to 63 single family dwelling units, 270 multifamily dwelling units, 80 mixed use dwelling units, 125,617 square feet of commercial uses, 53,948 square feet of office uses, and 18,450 square feet of recreation uses. Development and growth facilitated by Alternative 3 would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. As the demand for services increases, there will likely be a need to address acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and administrative buildings, schools, parks, fire facilities, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the County.

As future development and infrastructure projects (including potential new public facilities) within the Plan area are considered by the County, each project will be evaluated for conformance with the Specific Plan, Sonoma County General Plan, Sonoma County Municipal Code, and other applicable regulations. The Sonoma County General Plan includes a range of objectives and policies to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the County and appropriate service agency, and that new development funds its fair share of services. Therefore, this impact is considered less than significant and no additional mitigation is necessary. Alternative 3 would reduce the development potential in the Plan area, which would slightly decrease demand on governmental facilities compared to the Project. Therefore, impacts related to governmental facilities and the provision of public services would be slightly reduced compared to the Project.

Impact 3.12-2: Implementation of the Project may result in adverse physical impacts associated with the deterioration of existing parks and recreation facilities or the construction of new parks and recreation facilities

Growth accommodated under Alternative 3 would include a range of uses that would increase the population of the county and also attract additional workers and tourists to the county. This growth would result in increased demand for parks and recreation facilities. The provision of new park and recreational facilities is required by Sonoma County General Plan Policy PS-2g. The additional demand on existing parks and recreational facilities, particularly regional facilities, would increase the need for maintenance and improvements. These improvements could have environmental impacts, although the exact impacts cannot be determined since the potential improvements are unknown. This alternative would significantly reduce the development potential in the Plan area. Therefore, impacts related to parks and recreation facilities would be reduced compared to the Project.

Overall, this impact is considered less than significant and no mitigation is necessary, similar to the Project. As noted previously, Alternative 3 would reduce the development potential in the Plan area, which would slightly decrease demand on park and recreation facilities compared to the Project. Therefore, impacts related to existing park and recreation facilities would be slightly reduced compared to the Project.

Impact 3.12-3: Implementation of the Project may increase demand for schools and result in the need to construct new schools

Implementation of Alternative 3 would indirectly lead to new population growth within the county, which would increase the demand for schools and school facilities. Subsequent development projects within the Plan Area would be subject to the applicable school facility impact fees. Additionally, subsequent development projects proposed within the Plan area would be subject to all relevant General Plan objectives and policies that provide provisions related to schools. For these reasons, implementation of Alternative 3 would have a less than significant impact related to school facilities. Because the number of units would be reduced from 706 under the Project to 413 units under Alternative 3, the resulting student generation would be slightly reduced compared to the Project. Therefore, impacts related to school facilities would be slightly reduced compared to the Project.

Transportation and Circulation

The trip generation associated with Alternative 3 uses the same methodologies and trip generation rates as applied for the Alternative 2 and the Project. Buildout of the Alternative 3 is projected to result in a total of 6,073 added daily trips including 314 added during the a.m. peak hour and 547 added during the p.m. peak hour, as shown in Table 5.0-12. Compared to the Project, Alternative 3 would generate 41 to 45 percent fewer trips, and compared to Alternative 2 it would generate approximately 14 percent fewer trips. A summary of the trip generation estimates by TAZ, including copies of the internal trip deduction worksheets, is included in Appendix F.

Table 5.0-12 summarizes total VMT, daily VMT, population, and daily trips associated with the Project and Alternative 3, based on information provided by W-trans in 2019 and 2021. It is noted that the trip generation analysis was prepared based on an estimated 685 units, 275,903 non-residential square feet, and 120 hotel rooms for the Project and 382 units, 198,015 non-residential square feet, and 120 hotel rooms for Alternative 3. While the projected units and non-residential development have slightly changed for the Project and Alternative 3, the daily trip analysis remains useful for comparative purposes.

TABLE 5.0-12: VEHICLE MILES TRAVELED, DAILY VMT, POPULATION, AND DAILY TRIPS – PROJECT AND ALTERNATIVE 3

	BASELINE	*PROJECT*	*ALTERNATIVE 3*
VEHICLE MILES TRAVELED			
Daily VMT (Baseline + Project)[1]	28,570,046	28,621,505	28,611,098
Scenario Daily VMT less Baseline[2]	-	51,459	41,052
Increase over Baseline	-	0.18%	0.14%
Scenario Annual VMT[1]	-	18,319,304	14,614,690
POPULATION			
Residential Population[1,2]	504,217	1,977	1,156
Residential Population Increase	-	0.39%	0.23%
Employees[2]	-	632	382
Service Population	-	2,609	1,538
VMT per Service Population	-	19.72	26.69
DAILY VEHICLE TRIPS			
Northern Plan Area[3]	-	6,524	4,696
Southern Plan Area[3]	-	3,934	1,377
Total[3]	-	10,458	6,073
HOME-BASED AND EMPLOYEE BASED DAILY VMT			
Home-based Daily VMT[2]	-	29,062	16,119
Employee-based Daily VMT[2]	-	9,988	6,796
Residential VMT (per capita)[2]	12.8 Regional Threshold	14.7	13.9
Employment Daily VMT (per capita)[2]	18.5 Regional Threshold	15.8	17.8

SOURCE: 1 W-TRANS, 2021B
2 W-TRANS, 2021A
3 W-TRANS, 2019

Each impact is discussed qualitatively in the following section.

Impact 3.13-1: Implementation of the Project would conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b) concerning significance of transportation impacts in terms of vehicle miles traveled (VMT)

As shown in Table 5.0-12, the VMT modeling results produced by the SCTM\15 travel demand model indicate that the increase in residential uses under Alternative 3 would result in 13.9 home-based VMT per capita, which exceeds the home-based daily VMT threshold of 12.8 but is less than the Project's residential VMT of 14.7. Under Alternative 3, employee-based VMT associated with the increase in non-residential uses would be 17.8 VMT, which is less than the threshold of 18.5 VMT and exceeds the Project's employee-based VMT of 15.8. Alternative 3 would result in a significant impact associated with the home-based VMT. Alternative 3 would not result in a significant impact associated with employee-based VMT. Overall, Alternative 3 would have a higher VMT overall per service population (26.69) than the Project (19.72).

As discussed in Section 3.13 under Impact 3.13-1, while regional strategies such as VMT mitigation fees, exchanges, and banks hold much promise, they have yet to be implemented and their structures and

resulting effectiveness remain uncertain. Therefore, the impact would be significant and unavoidable under Alternative 3 and the impact would be worse than the Project.

Impact 3.13-2: Implementation of the Project would not substantially increase hazards due to a geometric design feature or incompatible uses

As discussed under Impact 3.13-2 of Section 3.13, the Project would have a less than significant impact associated with the potential to substantially increase hazards due to a design feature. While Alternative 3 would reduce land use densities and intensities, it would not result in any significant changes to design features associated with the Project or subsequent development in comparison to the Project. Therefore, the same evaluation of design hazards completed under Impact 3.13-2 in Section 3.13 for the Project also applies to Alternative 3. Impacts associated with Alternative 3 would remain less than significant, similar to the Project.

Impact 3.13-3: Implementation of the Project would not result in impacts related to emergency access

As discussed under Impact 3.13-3 of Section 3.13, the Project would have a less than significant impact associated with impacts related to emergency access. Alternative 3 would not change any features of the circulation plan or result in any changes that would affect emergency access. Therefore, the assessment of the Plan's potential impacts to emergency access is the same for both the Project and Alternative 3, as is the list of Specific Plan policies anticipated to mitigate potential impacts. Emergency access impacts associated with Alternative 3 would remain less than significant.

Impact 3.13-4: Implementation of the Project would not conflict with a program, plans, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, or pedestrian facilities

As discussed under Impact 3.13-4 of Section 3.13, the Project would have a less than significant impact associated with impacts related to potential conflicts with multi-modal circulation policies, plans, or programs or the potential to decrease performance or safety of public transit, bicycle, or pedestrian facilities. As with the Project, Alternative 2 is consistent with and expands upon the pedestrian and bicycle network identified in the Sonoma County Bicycle and Pedestrian Plan. The Project and Alternative 3 also support existing policies regarding non-motorized transportation, including SCTA's Moving Forward 2040 and Sonoma County's General Plan 2020.

Alternative 3 includes the same set of recommended pedestrian improvements as the Project including sidewalk gap filling, establishing new path segments, and identification of locations on the Highway 12 corridor where new crosswalks and pedestrian enhancements would be installed. It is noted that in areas where Alternative 2 has lower densities than the Project and therefore lower levels of pedestrian activity would occur, some of the Highway 12 crosswalks identified in the Specific Plan would not be needed until a later timeframe, or potentially not at all. Ultimately, the determination of when a particular crosswalk is needed to support pedestrian connectivity would be dependent on the actual types, locations, and timing of individual projects constructed in the future within the Plan area.

Alternative 3 also includes the same proposed bicycle network as depicted on the Bicycle Circulation Plan (Figure 6 in the Springs Specific Plan) including modification of existing bicycle lanes on Highway 12 to include a striped buffer between the bike lane and vehicle lanes. Alternative 3 would generate slightly less vehicular and bicyclist traffic to side streets in the Plan area, and the potential for any individual side

street to be so impacted by traffic as to create a hazard to bicyclists is limited. The Specific Plan identifies new bicycle facilities to increase bicyclist comfort and safety.

Alternative 3 is expected to increase population and employment within the Plan area, adding to the demand for transit service provided by Sonoma County Transit, albeit at slightly lower levels than the Project since the intensity of new development would be lower. Alternative 3 would retain a transit orientation, reducing reliance on travel by single-occupant vehicles and helping to further a travel mode shift from autos to transit.

In summary, while buildout of Alternative 3 would be expected to generate slightly lower levels of pedestrians, bicyclists, and transit riders than the Project, the assessment of the Plan's potential impacts to multi-modal circulation would essentially be the same. The list of Specific Plan policies anticipated to mitigate potential impacts would also remain unchanged. As a result, the potential impacts to multi-modal circulation associated with Alternative 3 would remain less than significant.

Utilities

Alternative 3 could result in up to 73 single family dwelling units, 222 multifamily dwelling units, 61 mixed use dwelling units, 124,6147 square feet of commercial uses, 53,948 square feet of office uses, and 18,450 square feet of recreation uses. This alternative would accommodate up to approximately 1,156 new residents (compared to 1,977 residents under the Project) and up to 382 new employees (compared to 632 employees under the Project).

Impact 3.14-1: Implementation of the Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments, or require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects

WASTEWATER GENERATION AND CAPACITY

The Project would generate 166,654.8 gallons per day (gpd), or 0.17 mgd. As shown in Table 5.0-13, Alternative 3 would generate 96,567.3 gpd, or 0.10 mgd. This is 58 percent of the wastewater generated by the Project.

TABLE 5.0-13: ALTERNATIVE 3 WASTEWATER GENERATION

LAND USE CATEGORY	*WASTEWATER FLOW RATE*	*WASTEWATER FLOW INCREASE (GPD)*
Single Family Units	200 per unit	12,600.0
Multifamily Units	160 per unit	43,200.0
Work/Live and Mixed Use Units	160 per unit	12,800.0
Commercial Square Feet	0.19 per square foot	23,867.2
Office Square Feet	0.076 per square foot	4,100.0
Hotel Rooms	100 per room	-
Recreation Square Feet	0	-
TOTAL	--	96,567.3

SOURCE: EBA, 2019; DE NOVO PLANNING GROUP, 2021.

The Sonoma County General Plan includes objectives and policies that would reduce impacts related to wastewater treatment. Additionally, the Specific Plan includes infrastructure policies aimed to support the private development and public improvements which would result from implementation of this

alternative. Because this alternative would adopt the Specific Plan polices, subsequent development projects under this alternative would be subject to these policies.

Buildout of the Plan area under this alternative would increase wastewater treatment demand; however, due to the decrease in development potential under this alternative, the associated demand on utilities, including wastewater treatment, would slightly decrease. While full buildout of the Project and Alternative 3 would slightly increase the existing treatment capacity of the treatment plant when combined with future growth throughout other areas of the County, the County's General Plan includes provisions to ensure that new development cannot be approved until it can be demonstrated that adequate capacity is available to serve it. As described above, the district must also periodically review and update their master plan, and as growth continues to occur within the Plan area, the district will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development.

Given that the General Plan includes a comprehensive set of objectives and policies to ensure an adequate and reliable wastewater collection and treatment system, impacts associated with wastewater treatment and compliance with waste discharge requirements are less than significant. Because the amount of wastewater generated by this alternative would be slightly reduced, this impact would also be slightly reduced when compared to the Project.

WASTEWATER FACILITIES AND INFRASTRUCTURE

Similar to the Project, the majority of the required wastewater conveyance infrastructure would be constructed on-site in conjunction with development and redevelopment of individual parcels within the Plan area. Wastewater conveyance infrastructure would be located underground, within the right-of-way footprint of future roadways in the Plan area, and must be constructed to meet the requirements contained in the Sonoma Valley County Sanitation District Sanitation Codes and Standards. Wastewater treatment and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. As future development and infrastructure projects are considered by the County, each project would be evaluated for conformance with the General Plan, Zoning Code, and other applicable regulations.

The County's General Plan includes objectives and policies designed to ensure adequate wastewater treatment capacity is available to serve development, to minimize the potential adverse effects of wastewater treatment, and to ensure that development does not move forward until adequate wastewater capacity exists. Policy PF-1d requires all development projects to obtain written certification that either existing services are available or needed improvements will be made prior to occupancy.

Additionally, the Project includes infrastructure and public services policies aimed to support the private development and public improvements which would result from Implementation of the Project. For example, Policy CF-1d requires development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development. Subsequent development projects proposed within the Plan area would be subject to these policies. This is a less than significant impact, similar to the Project.

Impact 3.14-2: Implementation of the Project would not require or result in the relocation of new or expanded water facilities, and would have sufficient water supplies available to

serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years

Implementation of this alternative would result in increased population and employment growth within the Plan area, and a corresponding increase in the demand for additional water supplies.

The Project's water demand would be 206 acre-feet per year (AFY). As shown in Table 5.0-14, the water demand for this alternative would be approximately 124 AFY. This is 59 percent of the water generated by the Project.

TABLE 5.0-14: ALTERNATIVE 3 WATER DEMAND

LAND USE CATEGORY	*CONNECTION FACTOR*	*WATER DEMAND PER CONNECTION (AFY)*	*WATER DEMAND (AFY)*
Single Family Units	1 connection per unit	0.26681	16.8
Multifamily Units	1 connection per 10 units	1.13296	30.6
Work/Live and Mixed Use Units	1 connection per 12 units	1.13296	7.6
Commercial Square Feet	1 connection per 4,000 SF	1.14525	36.0
Office Square Feet	1 connection per 3,500 SF	1.14525	17.7
Hotel Rooms	0.525 rooms per connection	0.26681	0.0
Recreation Square Feet	1 connection per 4,450 SF	1.6258	6.7
Mixed Use Irrigation	3 new connection equivalent total assumed for irrigation for mixed use projects	1.6258	4.9
Commercial Irrigation	6 new connection equivalent total assumed for irrigation for commercial projects	1.4898	8.9
TOTAL	--	--	129.1

NOTE: SF = SQUARE FEET
SOURCE: EBA, 2019; DE NOVO PLANNING GROUP, 2021.

The County's General Plan includes a range of objectives and policies designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. Subsequent development projects under this alternative would be subject to all relevant General Plan objectives and policies that reduce impacts related to water supply.

Additionally, the Specific Plan includes infrastructure and public services policies aimed to support the private development and public improvements which would result from Implementation of the Project. For example, Policy CF-1d requires development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development. Additionally, Policy CF-1e requires development projects to install off-site infrastructure or pay appropriate in-lieu fees when appropriate. Subsequent development projects proposed under this alternative would be subject to these policies.

Given that the General Plan includes a comprehensive set of goals, objectives, and policies to ensure an adequate and reliable source of clean potable water, impacts associated with water supplies are less than significant. Because this alternative would slightly reduce the water demand compared to the Project, this impact would be slightly reduced under this alternative.

WATER FACILITIES AND INFRASTRUCTURE

Development and growth in the Plan area under this alternative would result in increased demand for water supplies, including water conveyance and treatment infrastructure. As described under Impact 3.14-2 in Section 3.14, the projected 2040 water supplies are adequate to meet demand that would be

generated by buildout of the Project. As noted previously, due to the decrease in development potential under this alternative, the associated demand on utilities, including water demand, would also decrease. As such, implementation and buildout of this alternative would not result in the need to construct or expand water supply and treatment facilities that have not already been described and accounted for in the SCWA's 2015 UWMP.

Future development in the Plan area under both the Project and this alternative would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates. Future projects may be required to implement site specific and limited off-site improvements to the water distribution system in order to connect new project sites to the County's existing water infrastructure network. Any future improvements to the existing water distribution infrastructure would be primarily provided on sites with land use designations that allow for urbanized land uses, and the environmental impacts of constructing and operating the new water distribution infrastructure would likely be similar to those associated with new development, redevelopment, and infrastructure projects under this alternative.

This Draft EIR addresses the potential impacts of development that may occur under this alternative, including residential, commercial, public facilities, and a range of other uses. Where potentially significant or significant impacts are identified, this EIR identifies mitigation measures to reduce the impacts and discloses which impacts cannot be reduced to less than significant levels. There are no additional environmental impacts, apart from those disclosed in the relevant chapters of this EIR, which are anticipated to occur. Therefore, this impact is considered less than significant and no additional mitigation is necessary. Because the water demand generated by this alternative would be slightly reduced, this impact would also be slightly reduced when compared to the Project.

Impact 3.14-3: The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

As shown in Table 5.0-4, Alternative 3 could result in up to 63 single family dwelling units, 270 multifamily dwelling units, 80 mixed use dwelling units, 125,617 square feet of commercial uses, 53,948 square feet of office uses, and 18,450 square feet of recreation uses. This alternative would accommodate up to approximately 1,156 new residents (compared to 1,977 residents under the Project) and up to 382 new employees (compared to 632 employees under the Project). Implementation of this alternative would result in an increase in solid waste generation. Compared to the Project, the amount of solid waste would be reduced due to the reduction in development potential and associated population.

While there is adequate permitted landfill capacity to accommodate future growth, the County's General Plan includes policies to further reduce the project's impact on solid waste services. Implementation of this alternative would not exceed the permitted capacity of the landfill serving the County. Therefore, through compliance with the General Plan policies, impacts to solid waste are less than significant. Because the amount of solid waste generated by this alternative would be slightly reduced, this impact would also be slightly reduced when compared to the Project.

Tribal Cultural Resources

Seventeen cultural resources have been identified within the Plan area, according to files maintained by the Northwest Information Center (Information Center) of the CHRIS. The CHRIS records search identifies

buildings, structures, historic sites, prehistoric sites, and any other cultural resources that have been reported to the Information Center. The Information Center did not indicate that any of the reported resources are included on the California Office of Historic Preservation's Archaeological Determination of Eligibility list. In addition, none are listed on the CRHR or the NRHP. The results of Sacred Land files search were negative.

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance or discovery of an archaeological, historic, or tribal cultural resource.

The General Plan policies and objectives, listed in the Regulatory Setting subsection provided in Section 3.15: Tribal Cultural Resources, provide a robust framework for ensuring that effects on significant historic, archaeological and tribal cultural resources are reduced. Although ministerial projects are exempt from CEQA and do not require an archaeological records search or survey, Section 11.14.050 of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

Alternative 2 would result in a similar development pattern and impact areas as the Project. The Specific Plan includes Measure Cult-A through Cult-D as discussed under Impact 3.4-1 in Section 3.4, as well as measures TCR-A, B, and C, in Chapter 3.15, which require resources consultation and coordination for all discretionary projects and avoidance of known resources. Measures Cult-C and Cult-D are protocol for if cultural resources are identified in the project area. These measures are consistent with CEQA Guidelines Section 15064.5 which requires a site-specific cultural or archaeological survey to be performed for all ground-disturbing projects located on sites within the Plan area where a known cultural, archaeological, or cultural resource is located or where the site is sensitive for such resources. With implementation of Measures Cult-A, Cult-B, Cult-C, Cult-D and Cult-E, this impact would be less than significant, similar to the Project.

Wildfire

Impact 3.16-1: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The County has an Emergency Operations Plan, Hazard Mitigation Plan, and Community Wildfire Protection Plan. The EOP and its Annexes are not a formally "adopted" plan. However, the EOP functions as the emergency response plan and emergency evacuation plan for the unincorporated County, including for the Plan area. For the reasons discussed below, the Project would not impair implementation of or physically interfere with the EOP.

According to the EOP Evacuation Annex, the County has primary responsibility for emergency evacuation in unincorporated areas, such as the Springs. Any new development in the Plan area, facilitated by this plan, would be accessed by preexisting roadways. No new roads are provided for or contemplated in the Plan. The Specific Plan would not create physical impediments or interfere with the use of the roadways for evacuation or response during an emergency. All future development in the Plan area would be required to meet the most current applicable fire safety and emergency access and egress standards, including those regarding roadway width, turnarounds, and other necessary capacities.

As described in Section 3.12, Public Services, all new construction within the Plan Area would be subject to a Fire Impact Fee, adopted on March 23, 2021. The purpose of the fire impact fee is to fund the cost of

fire protection and emergency response facilities, apparatus, and equipment attirubtable to new residential and nonresidential development in the District. The fire impact fee will ensure that new development will not burden existing development with the cost of expanded facilities, apparatus, and equipment required to accommodate growth as it occurs within the District. (Sonoma Valley, 2022).

The EOP's Evacuation Annex discusses evacuation methods, routes, and assets. The primary mode of evacuation is assumed to be various forms of ground transport (personal vehicle, bicycle, rail, bus, etc.) for most persons in an evacuation area. Because evacuation routes are situation-specific, the Evacuation Annex does not identify specific routes but states that routes may include interstate, state and surface roads, and will be chosen based on the relative safety of roadway infrastructure and current traffic conditions. Evacuation routes will be selected by law enforcement officials, approved by the Incident Commander at the time of the evacuation decision, then communicated to the EOC.

The Evacuation Annex assumes that the majority of residents can self-evacuate using personal vehicles, and acknowledges that transit-dependent populations (such as those with disabilities and with access and/or functional needs and households without a vehicle) may require public transportation to evacuate. In those cases, Transportation Assembly Points (TAPs) would be used to transport persons who require evacuation assistance to temporary evacuation points and/or shelters in safe areas. The Annex acknowledges that evacuees may arrive at TAPs by foot, bicycle, public transit, paratransit, or private vehicles, and identifies public and private transportation assets (public and private buses) that would be used for evacuation from TAPs. As with evacuation routes, the location of TAPs in a particular emergency will be selected and activated depending on the immediate circumstances.

The Project is proposed in an existing urbanized area. Implementation of the Project would support improvements to transportation systems throughout the Plan area. The Plan identifies future improvements including addition of new crosswalks, bulb-outs and flashing beacons to improve pedestrian visibility at crossings. Sidewalks would be added along portions of Donald Street, Harley Street and smaller segments throughout the Plan area. Furthermore, the plan's emphasis on improved pedestrian and bicycle infrastructure is intended to support reduced congestion and improved circulation, and may facilitate evacuation, especially for those without access to vehicles who will need to make their way to the designated TAP for their area in the event of an evacuation. Development facilitated by the Project will use existing roadways. Accordingly, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, nor would it reduce existing levels of emergency response service as discussed above. While the area of disturbance associated with future development projects under Alternative 2 would be less than the Project, the impacts to this topic would be similar to the Project with regard to this issue.

Impact 3.16-2: Implementation of the Project has the potential to:

a) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;

b) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may

exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or

c) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), weather (winds, temperatures, humidity levels and fuel moisture content) and topography (degree of slope). The California Department of Forestry and Fire Protection (CalFIRE) uses these factors to quantify fire hazards and categorizes them as Fire Hazard Severity Zones (FHSZ). Areas are designated as Moderate, High or Very High FHSZ, with areas of significant risk being Very High FHSZ. These areas are fully mapped in State Responsibility Areas, and areas within local jurisdiction (LRAs) are also mapped if they are Very High FHSZ.

All of the Plan area is near an SRA, and small portions of the Plan area are located within an SRA. A majority of the Plan area is urbanized and located in a Local Responsibility Area (LRA) that is not mapped by CalFIRE as a Very High FHSZ. Small portions of the plan area are in a Moderate or High FHSV, but none of the Plan area is within or adjacent to a Very High FHSZ. (See Figure 3.7-1) The Project does not propose development in or adjacent to Very High FHSZ, which is approximately 0.6 miles from the northern end of the Plan area at its closest point. Limiting development in Very High FHSZ limits exposure of people or structures to the areas of greatest fire hazard. A majority of the Plan area is in areas of existing urban development with minimal slope, where wildland fuels are low and wildfire hazards are limited. As shown in Figure 3.7-1, a portion of the southeast Plan area is in a Moderate Fire Hazard Zone (15 parcels or approximately 17 acres) and a portion of the northeast plan area is in a High Fire Hazard Zone (47 parcels or approximately 11 acres).

All future projects allowed under the Project would be required to comply with all applicable provisions of Federal, State, and local requirements related to wildland fire hazards, including State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. As future development and infrastructure projects are considered by the County, each project would be evaluated for consistency with all applicable building and safety code sections that reduce fire risk. Compliance with these State and Local regulations would ensure that potential wildland fire hazards are mitigated through requirements for home hardening, automatic fire sprinkler systems or other on-site fire detection and suppression systems in new residential and commercial structures, and ensuring adequate fire protection services.

As discussed in Section 3.7-5 and as required by Specific Plan Policies Wildfire-1 and Wildfire-2, future projects would be subject to the applicable State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. These policies would ensure that future development does not exacerbate fire risk, and that risks to structures in the case of a wildland fire are reduced compared to those subject to less stringent requirements. In addition, because the Plan area encompasses properties with minimal vegetation, in an urbanized setting, projects built within the Plan area do not represent a new encroachment into wildland areas. As a result, the Plan would not introduce new sources of ignition to areas of very high wildfire hazard.

The Project does not propose to install any major new infrastructure that may exacerbate fire risk. Future infrastructure improvements in the Plan area would include the maintenance of existing water, sewer and roadways associated with new development which are typically underground and not located in wildland areas. Specifically, Policy CF-1f of the Specific Plan requires new utilities in the Plan area to be installed

underground. As discussed in Section 3.16-1 above, the circulation and road improvements would increase connectivity and may have a beneficial impact on emergency response, and it is expected that improvements to water infrastructure supported by future development would support firefighting capacity as well. The construction of these improvements would comply with State and local fire standards. Thus, the installation and maintenance of the proposed infrastructure would not exacerbate fire risk or result in temporary or ongoing impacts to the environment.

As discussed in the Geology and Soils Section (3.5), hillsides in the County have a medium to high susceptibility for landslides, while the valleys have a low susceptibility. Given the planning area's relatively level slopes, landslide potential is very low for all but a small portion of land located between Fetters and Central Avenue. Landslide potential increases in the foothills and mountains to the east of the Planning Area where wildland fire hazard potential also increases. In addition, development in the Plan area would be set back from watercourses that could channel post-wildfire debris flow.

Severe wildfires can damage the forest or shrub canopy, the plants below, as well as the soil. In general, this can result in increased runoff after intense rainfall, which can put homes and other structures below a burned area at risk of localized floods and landslides. Some of the Plan Area is located downslope from hillside areas, or contains some landslide-susceptible areas, and vegetative wildfire fuels, as described above. If a severe wildfire were to occur adjacent to the Plan Area, structures within the area may be at risk of landslides and could expose project residents to wildfire pollutants. If a fire were to occur in more flat and urbanized areas, the risk of flooding or landslides afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to developed conditions.

Though the Plan area is downslope from areas with elevated landslide or fire hazards, the Plan area is consistent with the pattern of development countywide and due to its predominantly level topography and surrounding pattern of urbanization and soil cover would not expose people or structures to elevated post-fire risks such as downslope or downstream flooding or landslides.

Future development projects in the Plan area would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the site and does not result in downstream flooding or major drainage changes. Future development projects located within the area covered by the storm water permit boundary would be subject to the Guidelines for the Standard Urban Storm Water Mitigation Plan. Some of the treatment controls in the Guidelines can be used to provide flood control by including additional flood detention storage.

Because existing codes and regulations cannot fully prevent wildfires from damaging structures or occupants, the Project could increase the exposure of new residential development to risk of loss or damage from wildfire. The Specific Plan includes Policy Wildfire-1 to reduce the risk of wildfire for future development associated with the Project. Specific Plan Policies Wildfire-1 and Wildfire-2 would reduce construction wildfire risk and include project siting considerations for future development.

Overall, while the area of disturbance associated with future development projects under Alternative 2 would be less than the Project, this alternative would result in potentially significant impacts associated with potential ground-disturbing activities, similar to the Project. Mitigation would be required to reduce this impact to a less than significant level. Therefore, this impact would be similar to the Project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (Existing General Plan) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed Springs Specific Plan.

A comparative analysis of each of the project alternatives is provided in Table 5.0-15 below. As shown in the table, Alternative 3 (i.e., the Low Growth Alternative) is the environmentally superior alternative. Alternative 1 would reduce 11 impacts and would worsen seven impacts. Alternative 2 would reduce 11 impacts and would worsen any impacts. Alternative 3 would reduce 12 impacts and would worsen one impact.

TABLE 5.0-15: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROJECT

ENVIRONMENTAL ISSUE / IMPACT	*ALTERNATIVE 1*	*ALTERNATIVE 2*	*ALTERNATIVE 3*
AESTHETICS AND VISUAL RESOURCES			
Impact 3.1-1 (Scenic Vista and Visual Character)	Less	Slightly Less	Slightly Less
Impact 3.1-2 (Scenic Resources)	Equal	Equal	Equal
Impact 3.1-3 (Light and Glare)	Equal	Equal	Equal
AIR QUALITY			
Impact 3.2-1 (Air Quality Plan and Criteria Pollutants)	Equal	Equal	Equal
Impact 3.2-2 (TACs)	Less	Equal	Equal
Impact 3.2-3 (Odors)	Equal	Equal	Equal
BIOLOGICAL RESOURCES			
Impact 3.3-1 (Species)	Worse	Equal	Equal
Impact 3.3-2 (Wetlands)	Equal	Equal	Equal
Impact 3.3-3 (Riparian Habitat and Sensitive Natural Communities)	Equal	Equal	Equal
Impact 3.3-4 (Wildlife Movement)	Equal	Equal	Equal
Impact 3.3-5 (Policies and Ordinances)	Equal	Equal	Equal
Impact 3.3-6 (Habitat Conservation Plan and Natural Community Conservation Plan)	Equal	Equal	Equal
CULTURAL AND TRIBAL RESOURCES			
Impact 3.4-1 (Historical Resources)	Worse	Equal	Equal
Impact 3.4-2 (Archaeological Resources)	Equal	Equal	Equal
Impact 3.4-3 (Human Remains)	Equal	Equal	Equal
GEOLOGY AND SOILS			
Impact 3.5-1 (Faults)	Equal	Equal	Equal
Impact 3.5-2 (Erosion and Loss of Topsoil)	Equal	Equal	Equal
Impact 3.5-3 (Unstable Soils)	Equal	Equal	Equal
Impact 3.5-4 (Expansive Soils)	Equal	Equal	Equal
Impact 3.5-5 (Septic Tanks)	Equal	Equal	Equal
Impact 3.5-6 (Paleontological Resources)	Worse	Equal	Equal
GREENHOUSE GASES AND ENERGY			
Impact 3.6-1 (GHG Policies)	Worse	Equal	Less
Impact 3.6-2 (GHG Generation)	Worse	Equal	Less
Impact 3.6-3 (Energy)	Less	Less	Less
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.7-1 (Hazardous Materials)	Equal	Equal	Equal
Impact 3.7-2 (Government Code Section 65962.5)	Equal	Equal	Equal
Impact 3.7-3 (Schools)	Equal	Equal	Equal
Impact 3.7-4 (Emergency Response and Evacuation)	Equal	Equal	Equal
Impact 3.7-5 (Wildland Fires)	Equal	Equal	Equal
Impact 3.7-6 (Airports and Airstrips)	Equal	Equal	Equal
HYDROLOGY AND WATER QUALITY			

ENVIRONMENTAL ISSUE / IMPACT	*ALTERNATIVE 1*	*ALTERNATIVE 2*	*ALTERNATIVE 3*
Impact 3.8-1 (Water Quality Standards)	Equal	Equal	Equal
Impact 3.8-2 (Groundwater Supplies and Recharge)	Equal	Equal	Equal
Impact 3.8-3 (Drainage and Runoff)	Equal	Equal	Equal
Impact 3.8-4 (Flood Hazards)	Equal	Equal	Equal
Impact 3.8-5 (Water Quality Control Plan and Sustainable Groundwater Management Plan)	Equal	Equal	Equal
LAND USE			
Impact 3.9-1 (Established Community)	Equal	Equal	Equal
Impact 3.9-2 (Land Use Plan, Policy, and Regulation)	Equal	Equal	Equal
Impact 3.9-3 (Habitat Conservation Plan and Natural Community Conservation Plan)	Equal	Equal	Equal
NOISE			
Impact 3.10-1 (Ambient Noise)	Less	Slightly Less	Less
Impact 3.10-2 (Groundborne Vibration and Noise)	Equal	Equal	Equal
POPULATION AND HOUSING			
Impact 3.11-1 (Population Growth)	Less	Less	Less
Impact 3.11-2 (Displacement)	Equal	Equal	Equal
PUBLIC SERVICES AND RECREATION			
Impact 3.12-1 (Governmental Facilities and Public Services)	Less	Slightly Less	Slightly Less
Impact 3.12-2 (Park and Recreation Facilities)	Less	Slightly Less	Slightly Less
Impact 3.12-3 (Schools)	Less	Slightly Less	Slightly Less
TRANSPORTATION AND CIRCULATION			
Impact 3.13-1 (VMT)	Worse	Slightly Less	Worse
Impact 3.13-2 (Hazards Due to a Design Feature)	Equal	Equal	Equal
Impact 3.13-3 (Emergency Access)	Equal	Equal	Equal
Impact 3.13-4 (Multi-Modal)	Equal	Equal	Equal
UTILITIES			
Impact 3.14-1 (Wastewater)	Less	Slightly Less	Slightly Less
Impact 3.14-2 (Water)	Less	Slightly Less	Slightly Less
Impact 3.14-3 (Solid Waste)	Less	Slightly Less	Slightly Less
TRIBAL CULTURAL RESOURCES			
Impact 3.15-1 (Tribal Cultural Resources)	Worse	Equal	Equal
WILDFIRE			
Impact 3.16-1 (Emergency Responses/Evacuation Plan)	Equal	Equal	Equal
Impact 3.16-2 (Wildfire)	Worse	Equal	Equal

5.4 COMPARATIVE EVALUATION OF THE PROJECT AND ALTERNATIVES TO SATISFY PROJECT OBJECTIVES

This section examines how each of the alternatives selected for more detailed analysis meets the Project objectives.

1. ***Recognize and Promote the Springs Commercial Corridor as a mixed-use "Downtown" Serving the Larger Springs Community.*** *The Springs Specific Plan encompasses the primary commercial district that serves as the "downtown" area of the larger Springs community. New commercial development along the Highway 12 corridor will increase the variety of retail shops and neighborhood services. New mixed-use development will help meet the housing needs of the community while providing pedestrian-oriented retail and restaurants. Wider sidewalks enhanced with pedestrian- and bike-friendly features will make it easier and more pleasant for residents to access local stores and services.*

Alternatives 2 and 3 would meet this project objective because these alternatives both would maintain the Springs Specific Plan, including the policies and design guidelines, which promote commercial vitality along the Highway 12 corridor. While Alternative 1 would generally meet this project objective, it would

not be as effective as the Project as it would not include the same potential for community-serving uses as the Project.

2. ***Develop a Centrally-Located Community Plaza.*** *Provide a central gathering place where farmers markets, concerts, and other community events can take place to enhance the vitality of the Springs area. The Community Plaza should be designed to reflect the multi-cultural character of the community.*

Alternatives 2 and 3 would meet this project objective because these alternatives both would develop a centrally-located community plaza. Alternative 1 would not meet this project objective because a central gathering place would not be provided.

3. ***Celebrate the Unique, Multi-cultural Identity of the Springs.*** *Recognize that the Springs is a diverse, multi-cultural community with significant historic resources and character. Ensure that new development respects the area's treasured past.*

All three alternatives would meet this project objective.

4. ***Increase Affordable, Workforce, and Mixed Use Housing.*** *Create new infill opportunities for higher density housing, while also expanding the variety of housing choices on vacant parcels in the vicinity of the Highway 12 corridor and in the Donald St/Verano Ave area. New high density and mixed-use housing will bring additional, attractive housing opportunities to the Springs and should be located within walking distance of transit, shops, restaurants, and other amenities.*

Alternatives 2 and 3 would meet this project objective because these alternatives both would include development of mixed use housing, and new infill opportunities would be created. It is noted that Alternatives 2 and 3 would not be as effective as the Project as both alternatives would reduce the potential for multifamily and mixed-use residential development compared to the Project. Similar, while Alternative 1 would allow residential development in the Plan area, it would provide limited opportunities for multifamily and mixed-use housing, which would provide more affordable and workforce-oriented opportunities.

5. ***Improve the Pedestrian, Bicycle, and Transit Network.*** *Provide bicycle, pedestrian, and transit facilities throughout the Springs that are safe, well-lit, shaded, comfortable, well-connected, and accessible. This improved multimodal network will provide greater incentive for people to choose non-vehicular travel for their daily trips. The Springs mobility network should recognize that non-vehicular travel is the primary travel mode for some residents.*

Alternatives 2 and 3 would meet this project objective because these alternatives both would maintain the Springs Specific Plan, including the policies and design guidelines, which would promote and improve the pedestrian, bicycle, and transit network in the Plan area. While Alternative 1 would provide pedestrian, bicycle, and transit improvements consistent with existing plans, it would not be as effective as the Project because the Springs Specific Plan policies and guidelines which incentivize and encourage non-vehicular travel would not be maintained.

6. ***Ensure an Adequate Parking Supply.*** *Provide parking garages and/or surface parking lots adjacent to Highway 12, particularly in areas where there are existing parking shortages and near the area planned for the community plaza.*

Alternatives 2 and 3 would include the same policies and programs related to increasing the parking supply as the Project. It is noted that because Alternative 1 would not plan for additional parking opportunities, it would not be as effective as the Project.

7. ***Address Community Safety.*** *Create a safe environment for residents and employees by providing attractive, well-lit, and well-maintained public and community facilities that encourage regular use.*

All three alternatives would meet this project objective through adhering to adopted County General Plan and Code of Ordinances requirements related to design, lighting, and safety. However, Alternatives 2 and 3 would include additional policies in support of creating a safe environment for residents that would not be included under Alternative 1.

8. ***Create and Connect to More Parks and Open Space.*** *Create new public and semi-public spaces, such as plazas, pocket parks, parklets, and green space, to create a desirable system of parks and community gathering areas.*

Alternatives 2 and 3 would meet this project objective because these alternatives both would maintain the Springs Specific Plan, including the policies and design guidelines, which encourage creation of public and semi-public spaces in future development. Alternative 1 would not be as effective as the Project because it would not provide the framework to encourage additional parks and community gathering areas that are provided in the Springs Specific Plan policies and guidelines.

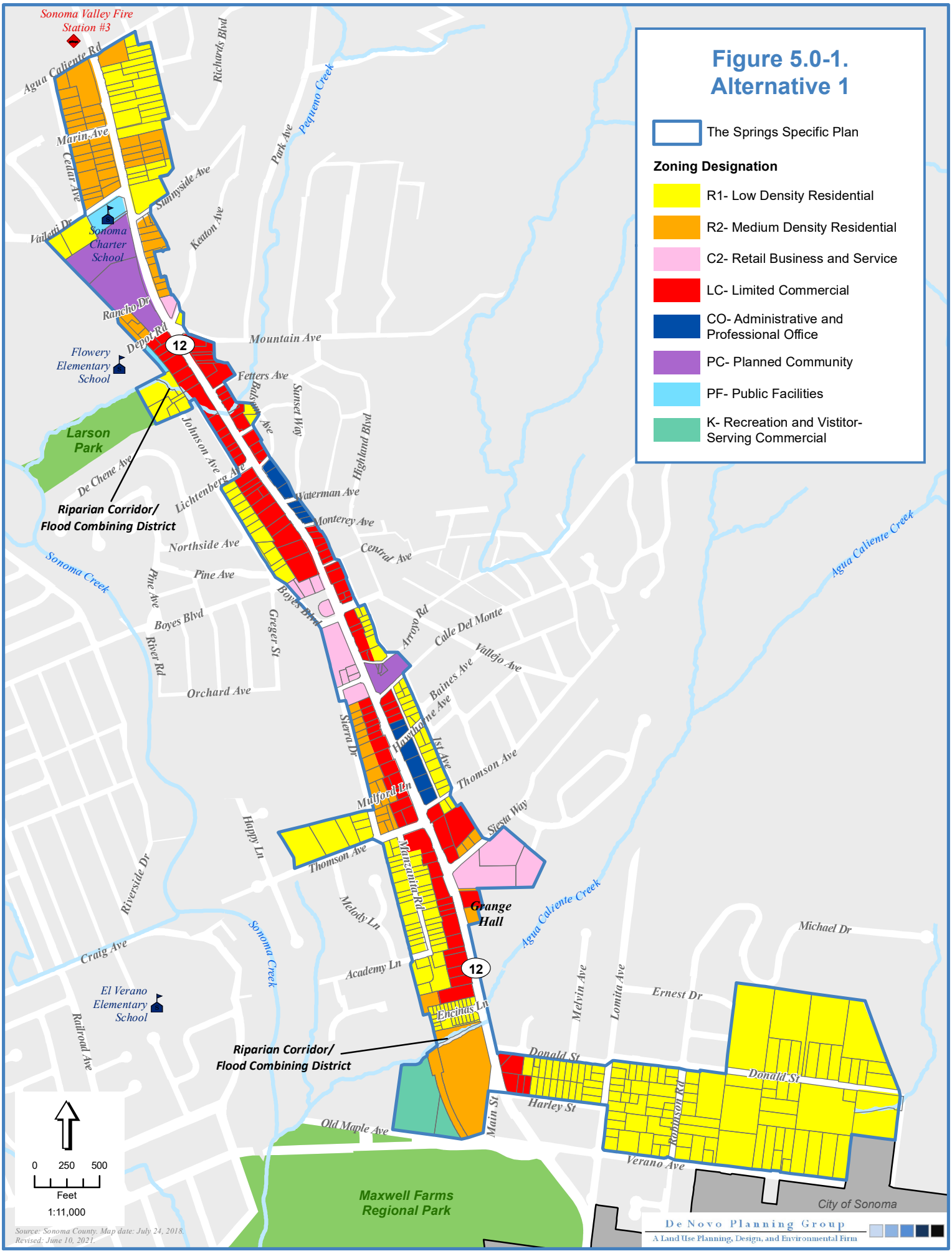
Figure 5.0-1.
Alternative 1
The Springs Specific Plan
Zoning Designation
R1- Low Density Residential
R2- Medium Density Residential
C2- Retail Business and Service
LC- Limited Commercial
CO- Administrative and Professional Office
PC- Planned Community
PF- Public Facilities
K- Recreation and Visitor-Serving Commercial
Sonoma Valley Fire Station #3
Agua Caliente Rd
Richards Blvd
Pequeno Creek
Park Ave
Marin Ave
Cedar Ave
Sunnyside Ave
Vallejo Dr
Sonoma Charter School
Keaton Ave
Rancho Dr
Depot Rd
12
Mountain Ave
Flowery Elementary School
Fetters Ave
Broadway Ave
Sunset Way
Highland Blvd
Larson Park
Johnson Ave
De Chene Ave
Lichtenberg Ave
Riparian Corridor/ Flood Combining District
Waterman Ave
Monterey Ave
Central Ave
Northside Ave
Sonoma Creek
Pine Ave
Boyes Blvd
Prune Ave
River Rd
Greger St
Orchard Ave
Arroyo Rd
Calle Del Monte
Vallejo Ave
Baines Ave
Sierra Dr
Hawthorne Ave
1st Ave
Thomson Ave
Mulford Ln
Siesta Way
Happy Ln
Riverside Dr
Manzanita Rd
Grange Hall
Melody Ln
Agua Caliente Creek
Michael Dr
Craig Ave
Academy Ln
Ernest Dr
Melvin Ave
Lomita Ave
El Verano Elementary School
Railroad Ave
Encinas Ln
Donald St
Harley St
Main St
Robinson Rd
Old Maple Ave
Verano Ave
Maxwell Farms Regional Park
City of Sonoma
0 250 500
Feet
1:11,000
Source: Sonoma County. Map date: July 24, 2018.
Revised: June 10, 2021.
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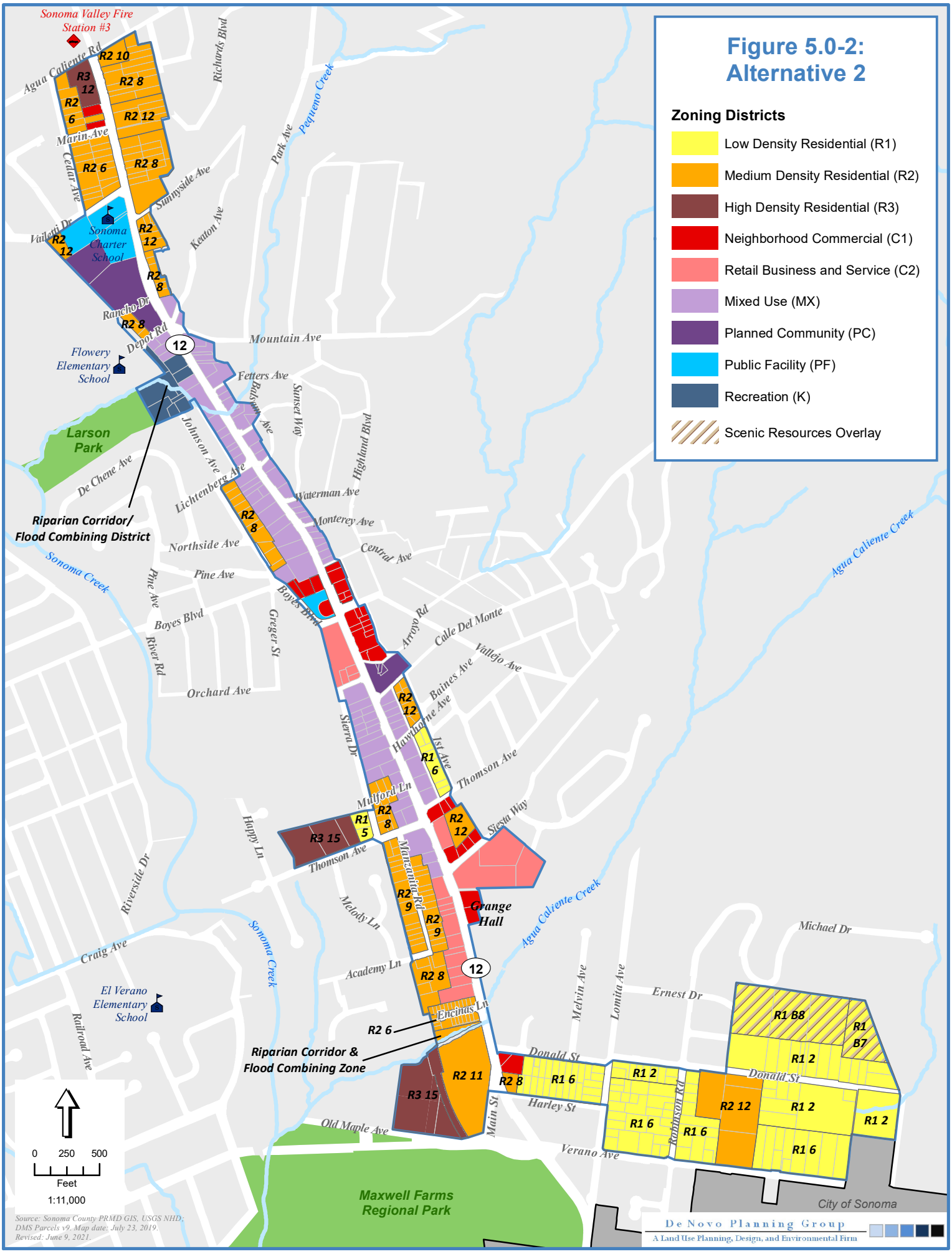
Figure 5.0-2:
Alternative 2
Zoning Districts
Low Density Residential (R1)
Medium Density Residential (R2)
High Density Residential (R3)
Neighborhood Commercial (C1)
Retail Business and Service (C2)
Mixed Use (MX)
Planned Community (PC)
Public Facility (PF)
Recreation (K)
Scenic Resources Overlay
Sonoma Valley Fire Station #3
Agua Caliente Rd
Richards Blvd
Pequeno Creek
Park Ave
Marin Ave
Cedar Ave
Sunnyside Ave
Keaton Ave
Vailetti Dr
Sonoma Charter School
Rancho Dr
Depot Rd
Flowery Elementary School
Mountain Ave
Fetters Ave
Sunset Way
Highland Blvd
Larson Park
De Chene Ave
Johnson Ave
Lichtenberg Ave
Riparian Corridor/ Flood Combining District
Waterman Ave
Monterey Ave
Central Ave
Northside Ave
Sonoma Creek
Pine Ave
Boyes Blvd
Greger St
River Rd
Orchard Ave
Arroyo Rd
Calle Del Monte
Vallejo Ave
Baines Ave
Hawthorne Ave
Sierra Dr
1st Ave
Thomson Ave
Siesta Way
Mulford Ln
Happy Ln
Riverside Dr
Manzanita Rd
Grange Hall
Melody Ln
Agua Caliente Creek
Michael Dr
Craig Ave
Academy Ln
Encinas Ln
Melvin Ave
Lomita Ave
Ernest Dr
El Verano Elementary School
Railroad Ave
R2 6
Riparian Corridor & Flood Combining Zone
Donald St
Harley St
Main St
Old Maple Ave
Verano Ave
Robinson Rd
Maxwell Farms Regional Park
City of Sonoma
0 250 500
Feet
1:11,000
Source: Sonoma County PRMD GIS, USGS NHD; DMS Parcels v9, Map date: July 23, 2019. Revised: June 9, 2021.
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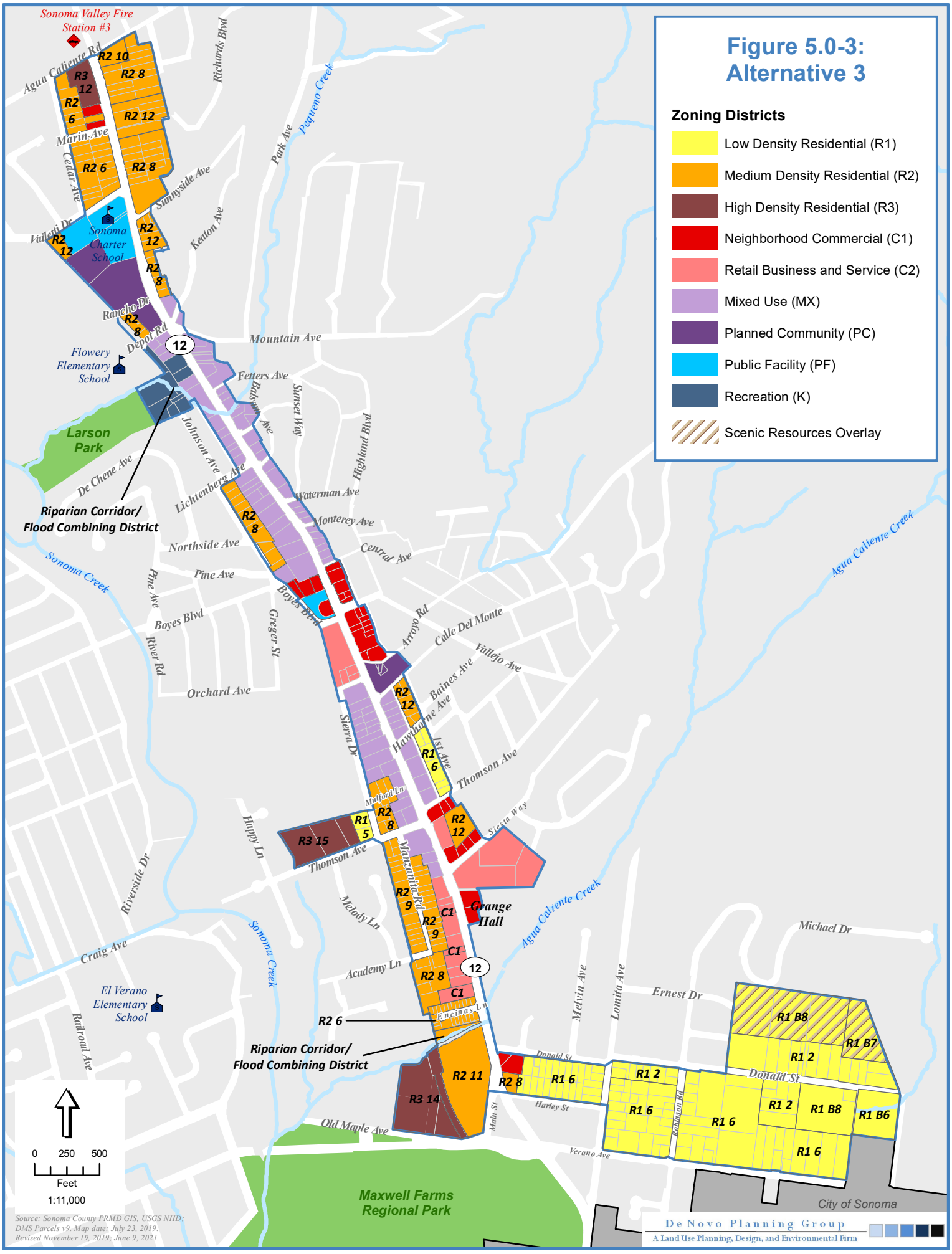
Figure 5.0-3:
Alternative 3
Zoning Districts
Low Density Residential (R1)
Medium Density Residential (R2)
High Density Residential (R3)
Neighborhood Commercial (C1)
Retail Business and Service (C2)
Mixed Use (MX)
Planned Community (PC)
Public Facility (PF)
Recreation (K)
Scenic Resources Overlay
Sonoma Valley Fire Station #3
Agua Caliente Rd
Richards Blvd
Pequeno Creek
Park Ave
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Central Ave
Northside Ave
Sonoma Creek
Pine Ave
Boyes Blvd
River Rd
Greger St
Orchard Ave
Arroyo Rd
Calle Del Monte
Vallejo Ave
Baines Ave
Hawthorne Ave
Sierra Dr
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Mulford Ln
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Happy Ln
Riverside Dr
Manzanita Rd
Grange Hall
Melody Ln
Craig Ave
Academy Ln
Encinas Ln
El Verano Elementary School
Railroad Ave
R2 6
Riparian Corridor/ Flood Combining District
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Source: Sonoma County PRMD GIS, USGS NHD; DMS Parcels v9, Map date: July 23, 2019. Revised November 19, 2019; June 9, 2021.
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Appendix A

Notice of Preparation and NOP Comments

permit SONOMA

County of Sonoma
Permit & Resource Management Department

Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report for The Springs Specific Plan

Date:	June 27, 2018
To:	State Clearinghouse, Agencies, Organizations and Interested Parties
Subject:	Notice of Scoping Meeting and Preparation of an Environmental Impact Report for the Springs Specific Plan
Scoping Meeting:	**July 10, 2018, 11:00 a.m. to Noon** **Permit Sonoma Hearing Room** **2550 Ventura Ave, Santa Rosa, CA**
Comment Period:	**June 28, 2018 to July 30, 2018 at 5:00 p.m.**

The County of Sonoma (County) will serve as Lead Agency in the preparation of a programmatic Environmental Impact Report (EIR) for the Springs Specific Plan (also referred to as 'Plan'). This programmatic EIR will address the environmental impacts associated with the adoption and implementation of the Springs Specific Plan. Information regarding the project description, project location, and topics to be addressed in the Draft EIR is provided below. Additional project documents and information are available at Permit Sonoma, 2550 Ventura Ave, Santa Rosa, and on-line at: thesprings.specificplan.org.

Scoping Meeting

The County will hold a scoping meeting to provide an opportunity for agency staff and interested members of the public to submit written or oral comments on the scope of the environmental issues to be addressed in the EIR.

The scoping meeting will be held on **Tuesday, July 10th, from 11:00 a.m. to Noon** at the Permit Sonoma Hearing Room, located at 2550 Ventura Avenue, Santa Rosa.

For questions regarding this notice, please contact Yolanda Solano at (707) 565-7387.

Submit Your Written Comments

Agencies and interested parties are invited to submit comments in writing as to the scope and content of the EIR. If you are a responsible or trustee agency, we would like to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection to the proposed project. All comments must be received prior to 5:00 p.m. on July 30, 2018.

Please send your written comments to:

Yolanda Solano
Permit and Resource Management Department
2550 Ventura Ave
Santa Rosa CA 95403
Email: yolanda.solano@sonoma-county.org

Project Location and Setting

The Springs is an unincorporated community located in central Sonoma Valley immediately north of the City of Sonoma. The Springs includes portions of the unincorporated communities of Agua Caliente, Fetters Hot Springs, and Boyes Hot Springs. Covering approximately 178 acres, the Springs Specific Plan area is bounded by Agua Caliente Road at the north and Verano Avenue at the south and is bisected by the Highway 12 commercial corridor. The project's location is shown in Figure 1 and the Plan boundary is shown in Figure 2.

The 'L'-shaped Plan area has several distinct settings: the 1.6-mile stretch of mixed use Highway 12 corridor that forms the vertical stroke of the 'L', the residential neighborhoods just east and west of the highway, and the residential area that forms the base of the 'L' to the east along Donald and Harley Streets. The area's terrain generally slopes gently down from east to west. Agua Caliente Creek crosses the Plan area south of Encinas Lane. In 2016, the Springs population was estimated to be 1,803.

Project Description

The Springs Specific Plan will be the primary planning document and reference guide for future development in the Springs. The Specific Plan is intended to be an expression of the community's vision for the Springs and constitutes the policy and regulatory framework by which future development projects will be reviewed and public improvements will be implemented. The County will implement the Specific Plan by requiring development, infrastructure improvements, and other projects to be consistent with the policies and design guidelines of this plan.

The Specific Plan is intended to foster a vibrant, attractive, multimodal community with increased opportunities for housing and improved circulation for pedestrians, bicyclists, and transit. The Plan will also designate a location for a community plaza and promote other public spaces while preserving the community's character and scale.

Specific Plan Contents

The Specific Plan includes six chapters:

1. Introduction. This chapter provides an overview of the Plan, describes the community outreach and engagement process used to develop the Plan, and identifies the guiding principles that informed preparation of the Plan.

2. Land Use. The Land Use chapter establishes the General Plan and zoning designations for the Plan area, describes key land use concepts in the Plan, identifies the Plan's development capacity, and provides the goals and policies to guide future land use.

3. Circulation. The Circulation chapter provides goals and policies to guide future decisions related to pedestrian, bicycle, vehicle, and transit circulation in the Plan area. This chapter also provides road standards to be used for future development and roadway improvement projects.

4. Design Guidelines. The Design Guidelines chapter is intended to facilitate well-designed projects that reflect the community's rich history and harmonize with the notable architectural styles found in the Springs. The Design Guidelines provide specific requirements for site design, architectural style, orientation, scale/massing, color, signs, lighting, landscaping, streetscapes, gateways, and development of the Plaza.

5. Infrastructure. The Infrastructure chapter addresses community services and infrastructure, including water, sewer, storm drainage, dry utilities, and emergency services, needed to support development of the Plan area.

6. Implementation & Financing Plan. The Implementation & Financing Plan chapter identifies the County department responsible for Plan implementation, provides an action plan identifying specific actions to be taken by the County to implement the Plan, identifies funding sources for Plan implementation, and identifies incentives to encourage development under the Plan.

Zoning

The Springs Zoning Map identifies the applicable zoning district for each parcel within the Specific Plan. The Springs Zoning Map is attached as Figure 2. The Springs Specific Plan's zoning districts are listed in Table 1. This table also includes a summary of permitted uses and standards for each zone. The Sonoma County Zoning Code should be consulted for a detailed

list of allowed uses and specific development standards for each particular zoning district. The proposed Mixed-Use Community (CM) zone will be added to the Zoning Code concurrent with the adoption of the Specific Plan.

Table 1: Zoning Districts, Total Acres, Allowed Uses, and Standards Summary

Zoning District	Acres	Permitted Uses [1]	Standards
Low Density Residential (R1)	15.21	▪ Single family ▪ Accessory dwelling unit ▪ Junior accessory dwelling unit	Density: 4 to 6 units per acre Minimum lot size: 6,000 square feet Main building height: 35 feet
Medium Density Residential (R2)	68.85	▪ Single family attached & detached ▪ Accessory dwelling unit ▪ Junior accessory dwelling unit ▪ Duplex ▪ Triplex ▪ Fourplex ▪ Multifamily ▪ Cottage Housing ▪ Single Room Occupancy	Density: 6 to 12 units per acre Minimum lot size: 4,000 square feet Main building height: 35 feet
High Density Residential (R3)	17.39	▪ Single family attached ▪ Accessory dwelling unit ▪ Junior accessory dwelling unit ▪ Micro apartments ▪ Duplex ▪ Triplex ▪ Fourplex ▪ Multifamily ▪ Cottage Housing ▪ Single Room Occupancy	Density: 12 to 20 units per acre Minimum lot size: 4,500 square feet Main building height: 35 feet, except maximum 40 feet for three stories
Planned Community (PC)	4.94	The PC district allows for a range of uses that are consistent with the General Plan land use designation for the parcel.	Residential Density: As allowed by the General Plan, subject to any zoning restrictions Non-Residential Maximum floor-area-ratio[2]: 1.0 Lot coverage: 50% Building height: 35 feet

Zoning District	Acres	Permitted Uses [1]	Standards
Neighborhood Commercial (C1)	8.40	▪ Neighborhood retail ▪ Restaurants ▪ Neighborhood and community services ▪ Offices ▪ Mixed Use ▪ Work/Live units **Prohibited Uses** ▪ Adult-oriented business ▪ Cannabis-related uses ▪ Convenience store sale of alcoholic beverages ▪ Drive-in or drive-through uses ▪ Mobile Food Trucks ▪ Industrial uses ▪ Tobacco/Smoking related sales or use (as a Primary Use) ▪ Vehicle Oriented Uses: auto sales, rental, service, repair, car wash, fueling, tire, and part sales, etc.	Maximum floor-area-ratio[2]: 1.0 Lot coverage: 65% Building height: 35 feet
Retail Business and Service (C2)	8.59	▪ Community Retail ▪ Auto repair and services ▪ Restaurants ▪ Financial institutions ▪ Theaters	Maximum floor-area-ratio[2]: 1.0 Lot coverage: 50% Building height: 35 feet
Recreation and Visitor Serving Commercial (K)	5.12	▪ Public parks ▪ Aquatic centers ▪ Sport fields ▪ Retail as part of recreational use	Maximum floor-area-ratio[2]: 1.0 Lot coverage: 50% Building height: 35 feet

Zoning District	Acres	Permitted Uses [1]	Standards
Mixed-Use Community (CM)	22.31	Ground Floor of Mixed-Use or Single-Story Commercial ▪ Neighborhood-serving retail: Grocery stores, drug stores book stores, gift shops, floral shops, art supplies, candy and ice cream shops, etc. ▪ Community-oriented services: Hair salons, barber shops, child day care, etc. ▪ Restaurants & retail food: Restaurants, coffee & tea shops, bakeries, candy and ice cream shops, sale of other foods ▪ Public Facilities Upper floor(s) ▪ Multifamily residential, office Other Uses ▪ Parking (stand alone) ▪ Community serving uses: Library, schools, museums, clinics, post office, etc. ▪ Work/live units **Prohibited Uses** Same prohibited uses as C1 district.	Maximum floor-area-ratio[2] (mixed-use): 2.0 Maximum floor-area-ratio[2] (other): 1.0 Lot coverage: 65% Building height: 35 feet, except maximum 40 feet for three stories with a use permit
Public Facilities (CF)	4.24	▪ County- and city-owned facilities ▪ Special district facilities for utilities ▪ Schools	Maximum floor-area-ratio[2]: 0.8 Lot coverage: 40% Building height: 35 feet

1 *Planning Permits may be required.*

2 *Floor area ratio is based on the lot coverage multiplied by the number of building stories allowed as a permitted use; 35 ft building heights are assumed to allow two stories and 40 foot or greater building heights are assumed to allow three stories.*

Growth Projections

Anticipated growth in the Specific Plan area includes new businesses, expansion of existing businesses, and new residential development. Table 2 summarizes the range of residential (single family units, multifamily units, and mixed use or live-work units) and commercial, office, and recreation (square footage) that could occur. Actual future development would depend on future market conditions, property owner preferences, site-specific constraints, and other factors.

Table 2: New Development Projections

Type of Development	Base Residential Units[1]	Density Bonus Units[2]	Maximum Residential Units	Non-Residential Square Footage
Single Family	69 - 94	22	**116**	**-**
Multifamily	229 - 272	160	**432**	**-**
Mixed Use or Live Work	14 – 146	21	**167**	**-**
Commercial	-	-	**-**	**53,208 – 181,041**
Office	-	-	**-**	**15,179 – 95,070**
Recreation	-	-	**-**	**22,654 – 156,134**
TOTAL	**312 - 512**	**203**	**715**	**91,041 – 432,245**

1 *Base residential units is based on the minimum and maximum units allowed for each zoning district and overlay.*

2 *Density bonus units are based on the County's Type A density bonus for R2 and R3 sites that can accommodate at least ten base units, the County's Type C density bonus for R1 sites that can accommodate at least four base units, and the State maximum density bonus of 35% for mixed use and work live sites that can accommodate at least eight base units.*

Program EIR Analysis

The County, as the Lead Agency under the California Environmental Quality Act (CEQA), will prepare a Program EIR for the Springs Specific Plan. The EIR will be prepared in accordance with CEQA, the CEQA Guidelines (Guidelines), relevant case law, and County procedures. No Initial Study will be prepared pursuant to Section 15063(a) of the CEQA Guidelines.

The EIR will analyze potentially significant impacts associated with adoption and implementation of the Springs Specific Plan. In particular, the EIR will focus on areas that have development potential.

The EIR will evaluate the full range of environmental issues contemplated under CEQA and the CEQA Guidelines, with the exception of Agricultural and Forestry Resources and Mineral Resources. At this time, the County anticipates that EIR sections will be organized in the following manner:

- Aesthetics and Visual Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Population
- Noise
- Public Services and Recreation
- Transportation and Circulation
- Utilities
- Mandatory Findings of Significance/Cumulative Impacts

There are no agricultural lands, including Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, Williamson Act lands, timberlands, or forest-designated lands located within the Specific Plan project area (California Department of Conservation, 2016 Sonoma County Important Farmland Map; Sonoma County, 2017 Williamson Act Map). The project would have no impact on agriculture and forestry resources. There are no known mineral resource lands, including locally-important mineral recovery sites, within the Specific Plan area. The project would have no impact on mineral resources. Therefore, agriculture, forestry, and mineral resources will not be analyzed in the EIR.

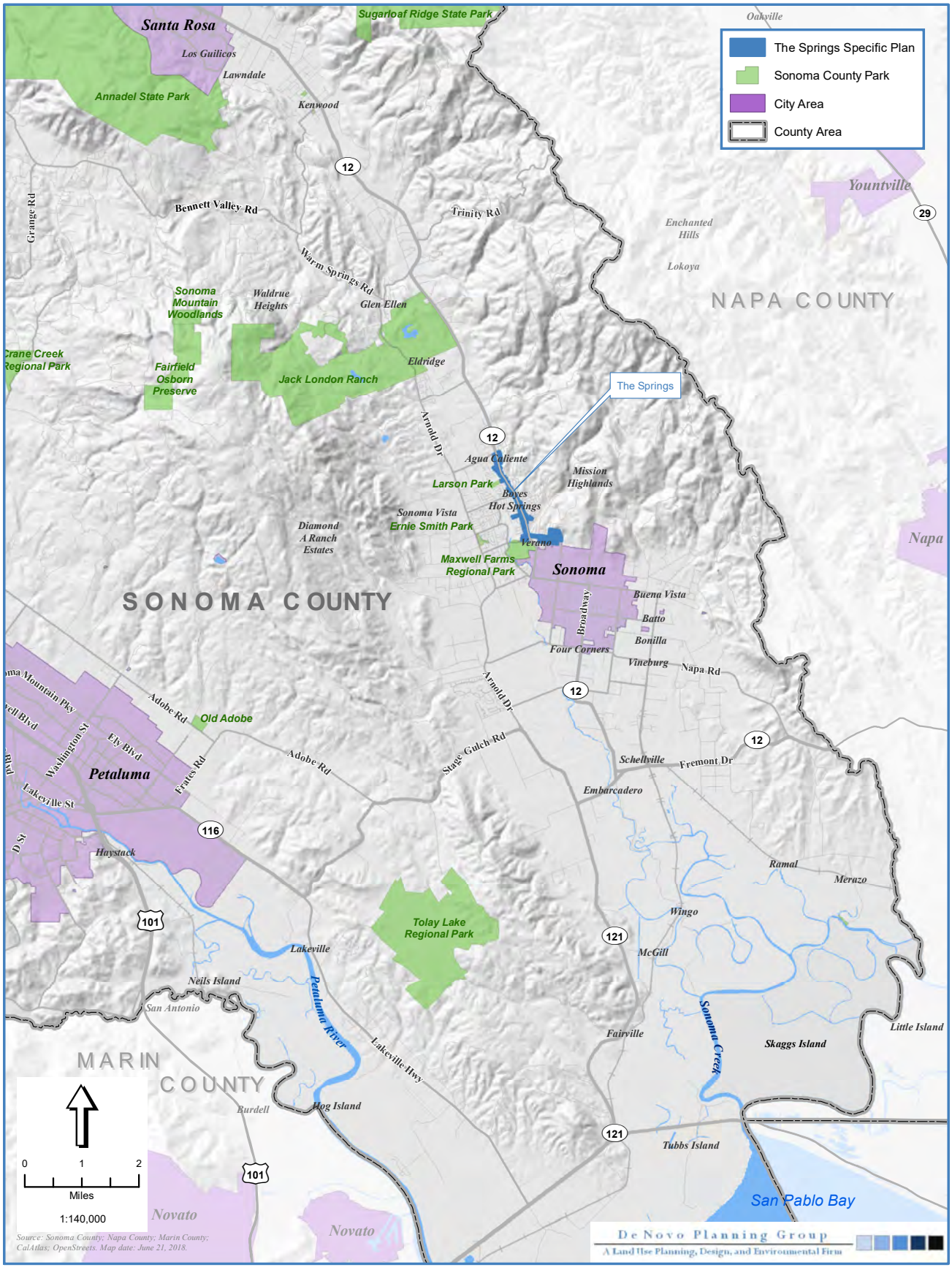

Figure 1: Project Location

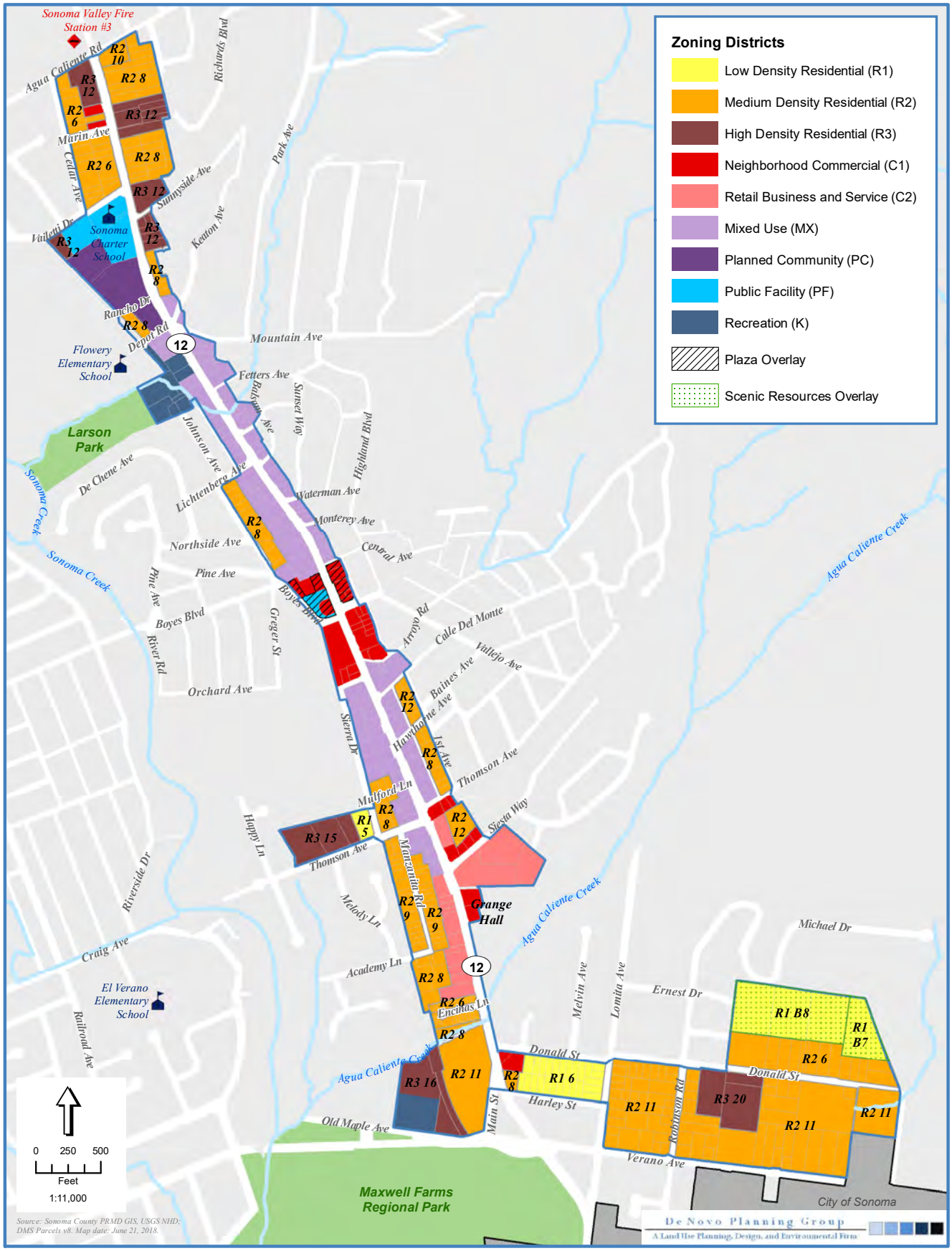

Figure 2: Springs Zoning Map

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
P.O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life!

July 25, 2018

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04-SON-2018-00298
PM: SON – 12 – Var
GTS ID 11204

Ms. Yolanda Solano
Project Planner
Sonoma County
Permit and Resource Management Department
2550 Ventura Avenue
Santa Rosa, CA 95403

The Springs Specific Plan – Notice of Preparation (NOP)

Dear Ms. Solano:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), Caltrans mission signals a modernization of our approach to evaluating and mitigating impacts to the State Transportation Network (STN). Caltrans' *Strategic Management Plan 2015-2020* aims to reduce Vehicle Miles Travelled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the NOP.

Project Understanding

The Springs Specific Plan (Plan) would establish specific guiding principles and a design framework for the approximately 178 acres that is bounded by Agua Caliente Road at the north and Verano Avenue at the south and is bisected by State Route (SR) 12. The project study area includes portions of the unincorporated communities of Agua Caliente, Fetters Hot Springs, and Boyes Hot Springs. The Plan would accommodate approximately 312 to 715 residential units and 91,041 to 432,245 square-feet of commercial, office, and recreation uses. The Plan will also designate a location for a community plaza and promote other public uses while preserving the community's character and scale.

The General Plan recognizes the Springs as a secondary commercial center in the Sonoma Valley area and encourages redevelopment by providing a flexible range of land uses within the Springs area. In addition, the General Plan encourages reducing the need for automobile use through improvements to the pedestrian, bicycle, and transit systems and through land development measures. In any case where there appears to be a conflict between the General Plan and any Specific or Area Plan, the more restrictive policy or standard shall apply.

The Plan envisions a revitalized mixed-use corridor extending from Depot Road to Thomson Avenue, where residential and neighborhood commercial are concentrated around a central activity hub. This hub area would be strategically designed to provide pedestrian connectivity to a public plaza that would serve as the central community gathering area for the Springs. The plaza will accommodate various community activities, such as festivals, cultural events, concerts, and farmers markets, as well as provide seating, shade structures, and greenery for the community to enjoy. Neighborhood-oriented commercial uses would surround the plaza, providing opportunities for ground-floor restaurants and shops with residential units above.

The Plan includes a range of residential densities, providing opportunities for single family, multifamily, mixed use, and work/live units. Medium density residential land use designations are concentrated in the northern and southern portions of the planning area. Higher densities are provided north of Rancho Drive, on West Thompson Avenue, and in the Donald Street/Verano Avenue neighborhood.

Parking lots would be located along or adjacent to the SR 12 corridor to accommodate a portion of the parking demand generated by the community plaza, commercial, and mixed-use development.

Travel Demand Analysis
In Caltrans' *Smart Mobility 2010: A Call to Action for the New Decade*, this project falls under **Place Type 5 Rural and Agricultural Lands – Rural Towns**, which includes settlement patterns with widely-spaced towns separated by farms, vineyards, orchard, or grazing lands, which can significantly affect land uses, character and mobility needs. This place type has a mix of housing, services and public institutions in compact form to serve surrounding rural areas. Given this Place Type and intensification of use, which typically leads to high levels of VMT and corresponding low levels of active transportation, we recommend providing VMT analysis resulting from the proposed project, which includes:

- A vicinity map, regional location map, and site plan clearly showing the project's location in relation to the STN. Clearly identify State right-of-way (ROW), bicycle paths, and transit facilities within the study area.

- A VMT analysis pursuant to the County's guidelines or, if the County has no guidelines, the Office of Planning and Research's Draft Guidelines. Projects that result in automobile VMT per capita greater than 15 percent below existing (i.e. baseline) county-wide or regional values for similar land use types may indicate a significant impact. If necessary, mitigation for increasing VMT should be identified. Mitigation should support the use of transit and active transportation modes. Potential mitigation measures that include the requirements of other agencies—such as Caltrans—are fully enforceable through permit conditions, agreements, or

other legally-binding instruments under the control of the County.
- Potential safety issues for all road users should be identified and fully mitigated.

Vehicle Trip Reduction

We encourage the implementation of a robust Transportation Demand Management (TDM) program including the elements described below. If a given project does not achieve the VMT reduction goals, the Mitigation and Monitoring reports should also include next steps to take in order to achieve those targets. Also, reducing parking supply can encourage active forms of transportation, reduce regional VMT, and lessen future transportation impacts on SR 12 and other State facilities.

- Commuter subsidy for transit, carpool, and vanpool for residents and employees on an ongoing basis;
- Membership in a transportation management association;
- Annual reporting with the Lead Agency monitoring;
- Onsite TDM coordinator;
- Emergency ride home program;
- Transit and trip planning resources such as a commute information kiosk;
- Kick-off commuter event at full occupancy;
- Project design to encourage walking, bicycling, and convenient transit access;
- Ten percent vehicle parking reduction;
- Unbundle parking;
- Electric vehicle (EV) charging stations and designated parking spaces for EVs and clean fuel vehicles;
- A carshare fleet for the development or incentives for residents to join a peer-to-peer carsharing such as Getaround;
- Dedicated parking spaces for carpooling employees;
- Enhanced bus stops including bus shelters;
- Bicycle route mapping resources and bicycle parking incentives;
- Bicycle share membership;
- Fix-it bicycle repair station(s);
- Showers, changing rooms, and clothing lockers; and
- Decrease headway times and improve way-finding on Sonoma County Transit bus routes and the Downtown Petaluma Sonoma-Marin Area Rail Transit (SMART) station to provide a better connection within the County, nearby transit stations and regional destinations.

For additional TDM options, please refer to Chapter 8 of Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference*,

regarding TDM at the local planning level. The reference is available online at: http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf.
For information about parking ratios, please see MTC's report, Reforming Parking Policies to Support Smart Growth, or visit the MTC parking webpage: http://www.mtc.ca.gov/planning/smart_growth/parking.

Operations Analysis
We are concerned with the projected increase in generated trips, which have the potential to create significant speed differentials and increase the number of conflicts. Please submit a Travel Demand Analysis (TDA) evaluating project-related trip generation, distribution, turning movements, and trip assignment estimates on SR 12 between Agua Caliente Road and Donald Street/ Verano Avenue. This analysis of state facilities is necessary to determine the scope and significance of issues that may arise from the project's potential conflicts. The California Environmental Quality Act (CEQA) does not exempt these types of operational concerns from evaluation. Please ensure that sections 4 (Design Guidelines), 5 (Infrastructure), and 6 (Implementation), as well as the configurations of Figures 8 and 9 street cross-sections are included in the DEIR.

Cultural Resources
There are cultural resources recorded within the boundaries of the Plan Area that are State-owned cultural resources as they are within Caltrans ROW. As part of the programmatic environmental review for the Specific Plan, we recommend that, in compliance with CEQA Guidelines Section 15064.5, Sonoma County require environmental review for specific projects that includes the preparation of cultural resource technical studies that at a minimum contain a records search at the Northwest Information Center of the California Historical Resources Information System (CHRIS) at Sonoma State University, Native American consultation, and a field survey of the project area by a qualified archaeologist and qualified architectural historian.

If an encroachment permits are needed for work within Caltrans ROW, we may require cultural resource technical studies be prepared in compliance with CEQA, Public Resources Code (PRC) 5024, and the Caltrans Standard Environmental Reference (SER) Chapter 2 (http://www.dot.ca.gov/ser/vol2/vol2.htm).

Should ground-disturbing activities take place within Caltrans ROW and there is an inadvertent archaeological or burial discovery, in compliance with CEQA, PRC 5024.5, and the SER, all construction within 60 feet of the find shall cease and the Caltrans District 4 Office of Cultural Resource Studies (OCRS) shall be immediately contacted at (510) 622-1673.

Biological Resources
If there are proposed plans to remove trees for specific projects, we recommend implementing

such plan outside of the nesting bird season February 1 - September 15 in order to comply with the Migratory Bird Treaty Act. Pre-construction surveys for special status species will be needed in Caltrans ROW, especially for bridge widening. Compliance with best management practices are recommended on an as needed basis (re: e.g., night work, vegetation removal, dust control, etc.)

Hydraulics

Agua Caliente Creek is located at the southern end of the project study area. According to Federal Emergency Management Agency, Flood Insurance Rate Map 06097C0936E, there is a 100-year floodplain designated along Agua Caliente Creek. Development in designated floodplain should not cause an increase flooding elsewhere. Encroachment permits will be required for future development within State's right-of-way. Provide calculations of design discharge for pre-and post-development for specific projects. The design discharge of post development shall not exceed the design discharge under existing site conditions. Please provide the plans and drainage calculations for our review.

Multimodal Planning

Future project(s) should be conditioned to provide connections to existing bike lanes and multi-use trails to facilitate walking and biking to respective residential, commercial, and recreational areas. By providing these connections and configuring streets for alternative transportation modes, the County will reduce VMT and create multi-modal links to increase ridership for the Sonoma County Transit bus routes 30, 30X, 32, 34 and 38 and the Downtown Petaluma SMART Station. The County should work with Sonoma County Transit Agency and other entities to provide bus services from the Downtown Petaluma SMART Station to the project study area.

In addition, secondary impacts on pedestrians and bicyclists resulting from any traffic impact mitigation measures should be analyzed. The analysis should describe any pedestrian and bicycle mitigation measures and safety countermeasures that would in turn be needed as a means of maintaining and improving access to transit facilities and reducing vehicle trips and traffic impacts on State highways. Provide maps of existing and proposed improvements to the pedestrian, bicycle, and transit networks.

Please include Parking Study and Transportation Impact Study analyzing parking demand, as well as consider flexible use of parking that can be easily converted to other land uses in the future in the case of decreased parking demand.

Traffic Impact Fees

Given the potential for increased VMT and proximity to SR 12, the project should be conditioned to contribute fair share traffic impact fees. These contributions would be used to lessen future traffic congestion and improve multimodal forms of transportation in the project vicinity.

The fair share information should also be presented in the Mitigation Monitoring and Reporting Plan of the Draft Environmental Impact Report (DEIR). Required roadway improvements should be completed prior to the issuance of the Certificate of Occupancy.

Please identify in text and graphics existing and proposed improvements for the pedestrian, bicycle, and transit networks. The County should estimate the cost of needed improvements, expansion, and maintenance for the Plan area, as well as identify viable sources of funding, correlated with the pace of improvements, and a scheduled plan for implementation along with the DEIR.

Encroachment Permit

Please be advised that any sign or work within Caltrans ROW will require an encroachment permit prior to construction. Any improvement of access to SR 12 or changes in its operations shall be coordinated with Caltrans. Lane or shoulder closure charts for any work which interferes with operations of SR 12 shall be submitted to Caltrans for review and approval. To apply for an encroachment permit, please complete an encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW, and submit to the following address: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See the website link below for more information.
http://www.dot.ca.gov/hq/traffops/developserv/permits.

Should you have any questions regarding this letter, please call Stephen Conteh at 510-286-5534 or stephen.conteh@dot.ca.gov.

Sincerely,

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

DP&F
ATTORNEYS AT LAW

THOMAS ADAMS
tadams@dpf-law.com

July 30, 2018

VIA EMAIL TO YOLANDA.SOLANO@SONOMA-COUNTY.ORG

Yolanda Solano
Permit and Resource Management Department
2250 Ventura Ave.
Santa Rosa, CA 95403

Re: The Springs Specific Plan Notice of Preparation of Draft EIR Comments

Dear Ms. Solano:

Thank you for providing us the opportunity to comment on the Notice of Preparation of the Draft Environmental Impact Report for The Springs Specific Plan ("Specific Plan DEIR"). This firm represents Krug Development Corporation ("Krug Development") and MidPen Housing Corporation, a nonprofit affordable housing developer ("MidPen Housing") who are currently working with Splash in a collaborative effort to purchase and redevelop the Sonoma Valley Health and Recreation Association ("SVHRA" or "Splash") property, located north of Old Maple and Verano Avenues, comprised of APN 127-071-002, 127-071-003, and 127-071-005 (the "Project Site" or "Property"). We submit these comments for your consideration in developing the Specific Plan for the purpose of insuring that the Specific Plan reflects the zoning and development standards necessary to facilitate the approval and development of our client's collaborative efforts to provide more affordable housing, reasonably priced hotel rooms, along with other community benefits discussed below.

Project Site and Proposed Project Summary

Both MidPen Housing and Krug Development are proposing the redevelopment of the Project Site as a result of Splash no longer being financially able to achieve its objective of establishing a community pool at this location. In order to insure the property will continue to provide community benefits, Splash has been working with Krug Development and MidPen Housing to facilitate both affordable housing and a reasonably priced hotel component in the redevelopment of the Project Site. The proposed development plan will reconfigure the Project Site's existing three APNs into two legal parcels, one being 2.5 acres fronting Verano Avenue and zoned K with the other remaining 3.4 acres zoned R3 B6 16. The K zoned parcel will be the location of a 120-room affordably priced hotel developed by Krug, with the larger parcel zoned R3 the site of an 81-unit, 100% affordable housing development by MidPen Housing. (See attached Exhibit A Proposed Parcel and Rezone Site Plan.)

Of principal importance to the success of the Project is the perfecting of a lot line adjustment to create the underlying parcels which will be owned by Krug Development and MidPen Housing, under separate ownership. We would like to request an expedited process on the lot line adjustment application in order to facilitate the timely development of the Project Site and conformance with the Specific Plan.

There is a small, triangular portion of property that lies between the Property and West Verano Avenue which is owned and/or controlled by the County. Over the past several years, SVHRA have had numerous discussions with County representatives about incorporating that portion into development plans for the Property in some way, most likely through vacation proceedings or a long-term ground lease for nominal consideration. Doing such would allow a far more pleasing visual aspect from the public road and the recently installed bike path. That portion could be used for landscaping, parking, ingress/egress, all as may be requested by the developer(s) of the Property. Our clients therefore request that the Plan recognize and authorize that potential purpose (from a land use and environmental perspective) in such a manner as to give the County the requisite flexibility to take the necessary actions, in its discretion, at a future time.

Community Benefit

The upfront financing provided by Krug in its purchase of the 2.5-acre site facilitates Splash's ability to partner with MidPen Housing to provide the community with much needed affordable housing units. With Krug Development's up front funding, Splash can make the remaining approximately 3.4 acres of the Project Site available to MidPen Housing for the development of affordable housing without any upfront funding by MidPen Housing prior to it receiving final entitlements. In short, the hotel project financially facilitates Splash's ability to accommodate the longer financing timelines inherent in affordable housing projects.

Additionally, the purchase of the land from SPLASH by Krug will provide $100,000 in funding for the relocated Sonoma Valley Little League baseball field and will also provide funding to assist with the construction of the new public pool.

<u>New Community Pool and Consolidation of Operational Expenses</u>

Proceeds from the sale of the Project Site will be used by Splash to support the construction of the new community pool at Sonoma Valley High School.[1] Creation of the community pool is contingent on Splash's contributing all net proceeds in support of that pool from the sale of the Project Site. The new community pool and consolidation of operations will provide the following benefits to the Sonoma Valley School District and Sonoma Valley Health and Recreation Association:

1. Avoiding the duplicative effort to have a pool at both the High School and the Project Site: donor groups can focus on assisting just one community pool foundation.
2. Operating revenues are the biggest issue for the District; paying to run the pool at Splash was a budget problem.

[1] See "Sonoma Splash to sell Paul's Resort pool site to hotelier, affordable housing developer," Sonoma Index Tribune, July 16, 2018, www.sonomanews.com/news/8536669-181/sonoma-splash-to-sell-pauls , last accessed 7/27/2018.

3. Locating the pool at Sonoma Valley High School means transportation costs for students are eliminated for students from Prestwood Elementary, Adele Harrison Middle School and Sonoma Valley High School.

Increased Affordable Housing Units

MidPen Housing's 100 percent affordable housing community will result in the construction of approximately 81 affordable housing apartments, with recorded deed restrictions requiring that the units remain affordable for a minimum of 55 years.[2]

New Public Trail

The Krug Development's and MidPen Housing's projects are coordinating to create and maintain a public trail that connects the existing bike trail along Verano Avenue to a new public trail that will provide access to Agua Caliente Creek via the Project Site.

Relocation and Improved Baseball Field

Sonoma Valley Little League baseball field relocation to Maxwell Park offers the program the opportunity to benefit from an upgraded baseball facility. The Sonoma County Parks Master Plan currently includes two new baseball fields at Maxwell Park and will be constructed and maintained by the County with financial contributions from Krug Development, MidPen Housing, and others to assist with construction.

Transient Occupancy Tax Revenue

Krug's proposed 120-room reasonably priced hotel is projected to generate $1,000,000.00 annually in new tax revenue at current tax levels for the County to help fund existing and new County projects and programs in the community, and this amount will grow in future years as revenue increases.

Specific Plan Comments

The Springs Specific Plan ("Specific Plan") provides the opportunity to more closely align the land use zoning in the project area with the community's vision of the future development, economic growth, and traffic/pedestrian/bicycle circulation goals. In addition, the Specific Plan can provide for a clear and more streamlined permitting process for development projects that are consistent with the plan. Accordingly, we submit these comments for your consideration in developing the Specific Plan for the purpose of insuring that the Specific Plan reflects the zoning and development standards necessary facilitate the approval and development of our clients' proposed use of the Project Site.

[2] 936 units of housing units are required to be constructed in unincorporated Sonoma County, of which 220 need to be Very Low affordable (0-50% affordability). Sonoma County Regional Housing Needs Allocation (2014-2022) as established by Association of Bay Area Governments (ABAG) https://abag.ca.gov/planning/housingneeds/pdfs/Final%20RHNA%20(2014-2022).pdf. Last accessed 7/27/2018.

The following comments are based upon review of The Springs Specific Plan Land Use and Circulation Alternatives Report, February 2017:

The SP currently identifies the Project Site as a growth opportunity area (see Figure 1). The proposed development of the Project Site will accommodate growth while also providing community benefits, such as, affordable housing, updated recreation facilities, and public access to creek.

The Community Housing and Mixed Use Alternative zoning map designates the Project Site zoned K for Recreation (see Figure 2.) However, the text also states the following:

> "The Sonoma Splash property, located north of the Old Maple Avenue and Verano Avenue, is currently zoned to allow for a variety of recreation and visitor serving uses, such as health clubs, sports facilities, hotels, etc. This alternative designates the Sonoma Splash property, recreational and high density residential uses in order to accommodate a community serving aquatic center and high density workforce housing." (SP, p. 8.)

While the K zoning allows for hotels with up to 200 rooms with a use permit, it does not allow for the affordable housing component of the proposed project; therefore, we are requesting that this alternative be revised such that the Property be zoned K and zoned R3 B6 16du to allow both the affordable housing and hotel projects. See the attached Exhibit A for proposed parcel configuration and zoning of the Project Site.

Additionally, this alternative imposes development standards including thirty-five (35') foot building heights. We request that this alternative be revised such that maximum building height for the parcel be increased to forty-five (45') feet, so as to allow for the maximum architectural and aesthetic flexibility, including flexibility in design, variations in height, and improved land utilization efficiency. The building will be setback more than one hundred (100') feet from the east end of the property line, and more than one hundred and sixty (160') feet from Verano Avenue on the west side of the property, and will be well screened to limit visual impacts to the public.

This proposed change would be consistent with this alternative's objective of increasing affordable housing and would still provide for adequate recreation due to facilitating the updating and relocation of the existing or previously proposed recreational uses (baseball field and community pool) of the Property. The newly proposed public trail connecting the existing bike path with Agua Caliente Creek is also consistent with this alternative's goal of improving walkability since it would expand the public trail system.

The Moderate Growth Alternative zoning map designates the Project Site zoned K for Recreation (see Figure 5.) However, the text of this alternative, similar to the Community Housing and Mixed Use Alternative designates the Sonoma Splash property as:

> "... both Recreation and High Density Residential in order to accommodate a community aquatic center with high density workforce housing." (SP, p. 16.)

Splash will no longer be seeking to establish a community pool at the Project Site, and therefore, we are requesting that this alternative be revised such that the Property be zoned K and zoned R3 B6 16du, in order to accommodate an affordable hotel and high density affordable housing. (See attached Exhibit A.)

Like the Community Housing and Mixed Use Alternative, this alternative imposes development standards including thirty-five (35') foot building heights. We request that this alternative be revised such that maximum building height for parcel be increased to forty-five (45') feet, so as to allow for the maximum architectural and aesthetic flexibility, including flexibility in design, variations in height, and improved land utilization efficiency. The building will be setback more than one hundred (100') feet from the east end of the property line, and more than one hundred and sixty (160') feet from Verano Avenue on the west side of the property, and will be well screened to limit visual impacts to the public.

These proposed changes while changing its treatment of the Project Site would overall be consistent with this alternative's objective of increasing affordable housing and would still provide for adequate local serving recreation due to facilitating the updating and relocation of the existing or previously proposed recreational uses (baseball field and community pool) of the Property. The newly proposed public trail connecting the existing bike path with Agua Caliente Creek is also consistent with this alternative's goal of improving walkability since it would expand the public trail system.

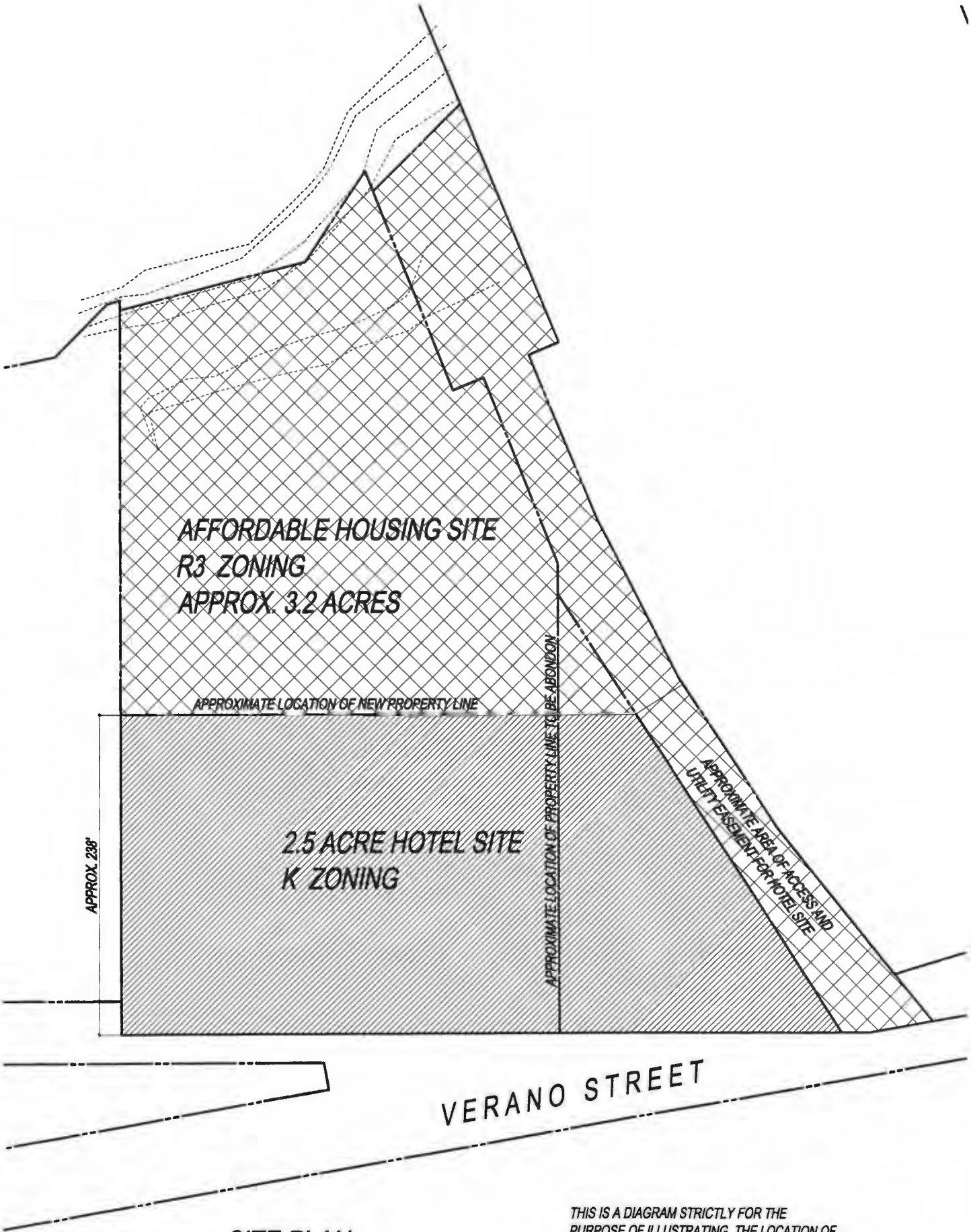
The Existing Zoning Alternative zoning map reflects the existing zoning of the Project Site as two parcels zoned K Recreation and Visitor-Serving Commercial and one zoned R2 Medium Density Residential. This alternative is physically infeasible for multi-family housing due to the existing small and very narrow R2 parcel, and is not consistent with our clients' desire for higher density R3 zoning to facilitate a financially feasible affordable housing development, in comparison to the Community Housing and Mixed Use and Moderate Growth Alternatives. This alternative limits new residential growth at a time when additional affordable housing is needed. Further, this alternative does not reflect the reality that Splash is no longer seeking to establish a community pool in this location. Allowing for rezoning as proposed by our clients (see Exhibit A) and increasing the maximum building height as part of the Specific Plan will facilitate the public benefits of the proposed redevelopment of the Project Site, as discussed above.

Sincerely,

DICKENSON, PEATMAN & FOGARTY

Thomas Adams and Erin Carlstrom

TSA:bab
Enclosure



SITE PLAN

0 20' 60' 120'

THIS IS A DIAGRAM STRICTLY FOR THE PURPOSE OF ILLUSTRATING THE LOCATION OF A PROPOSED LOT LINE ADJUSTMENT. A BOUNDARY SURVEY HAS NOT YET BEEN COMPLETED. THE SCALE AND DIMENSIONS ARE NOT EXACT.

Elise Carroll

From: Beth Thompson <bthompson@denovoplanning.com>
Sent: Tuesday, July 24, 2018 9:13 AM
To: Elise Carroll
Subject: Fwd: EIR and Springs Specific Plan
Attachments: Bear Cave_Water Agency.jpg

FYI - Another Springs scoping comment

Beth Thompson | Principal
De Novo Planning Group | www.denovoplanning.com
bthompson@denovoplanning.com | 916.812.7927
Northern California | 1020 Suncast Lane #106 | El Dorado Hills, CA 95762
Southern California | 180 East Main Street #108 | Tustin, CA 92780

---------- Forwarded message ----------
From: **Yolanda Solano** <Yolanda.Solano@sonoma-county.org>
Date: Wed, Jul 11, 2018 at 6:25 PM
Subject: RE: EIR and Springs Specific Plan
To: "Conlan, Ellen" <Ellen.Conlan@abc.com>
Cc: Rich Lee <richlee@comcast.net>, Beth Thompson <bthompson@denovoplanning.com>, "Ben Ritchie <britchie@denovoplanning.com>" <britchie@denovoplanning.com>

Hi Ellen,

Thank you very much for coming to the scoping meeting yesterday and for your comments.

Please take a look at the attached aerial. Are you referring to parcel 056-481-032 as a potential park site? If so, you are correct. This 2 acre parcel is not intended for development. It was set aside as part of the Creekwood subdivision and is owned by the Water Agency.

The parcel is outside the Specific Plan boundaries, but it is pretty close. The main obstacle as I see it is that the eligibility criteria for a Rural Community Investment area is a maximum of 160 acres. The project area is roughly 178 acres now. But I think it's a good idea. I'll just have to have to look into this further.

My general understanding is that the public has a right to use a navigable river up to the high water mark. We'd probably have to research which creeks are considered "navigable." I'll discuss with our consultants. Maybe we can add a policy to require or encourage public access points as part of new development projects.

The mobile home park east of the Splash site (west of Hwy) is in the Plan area. It is 6.29 acres in size. The property is zoned R2 (Medium Density Residential, 8 acre density), so it could currently be developed with 50 units. If 40% of the units are affordable, the density could be doubled. The Plan proposes to increase the density to 11 units per acre, which would allow 69 units (or up to 138 units if 40% are affordable). Note: The mobile home park south of Acacia (east of Hwy) is not in the Plan area.

The Scenic Resource combining zone was established 25 years ago. You can view the SR zones by using the zoning and land use map at this link:
https://sonomamap.maps.arcgis.com/apps/webappviewer/index.html?id=06ac7fe1b8554171b4682dc141293962

Check the "Scenic Resource SR" box on the layer list. Design review is also required for new development in commercial zones, as well as for substantial modifications to the exterior of existing buildings (commercial zones).

Again, thank you for your comments. Please let me know if you need any further information or clearification.

Yolanda

From: Conlan, Ellen [mailto:Ellen.Conlan@abc.com]
Sent: July 10, 2018 4:21 PM
To: Yolanda Solano <Yolanda.Solano@sonoma-county.org>
Cc: Rich Lee <richlee@comcast.net>
Subject: EIR and Springs Specific Plan

Yolanda, on the Springs Zoning map there is high-density housing planned/recommended (or maybe existing) at the end of Thompson Dr West at Happy Lane. I am wondering if a small park can be planned for the Water district property land indicated as *Bear Cave Park* on old maps as in the map below. This is the flood plain for the river and I don't think housing is built here or, if built, could, in the future, be removed. Is it possible to add this parcel to the EIR evaluation as a future open space/park?

Also, the plan references Aqua Caliente Creek as a bridge rebuild but doesn't reference the creek as a "public space" opportunity. A portion of it is public correct? Can the public portion be added to the plan and EIR? In the Springs we have at least 7 touchpoints of river access. But the plan and the EIR don't specifically take advantage of that natural resource for a community-wide benefit. How can we get **natural** water features into the plan?

I'd like to have a fuller discussion about why developing the large parcels of trailer homes parks is not part of the vision for the future of the Springs. Minimally, we'd like to know what the acreage is for those parks. And how many households they accommodate.

Finally, who determines "Scenic Resources Overlay". Is that a community request? Is that a neighborhood request? At our SCA meeting can we have a discussion about the process of overlays within a community? I believe you, or Tennis, mentioned "overlays" in the past as a way of refining codes for better outcomes of design.

Thank you for the scope meeting, it was informative.

Ellen Conlan

Elise Carroll

From: Beth Thompson <bthompson@denovoplanning.com>
Sent: Friday, August 3, 2018 12:15 PM
To: Elise Carroll
Subject: Fwd: FW: Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report (NOP) for the Springs Specific Plan

Springs NOP comment

Beth Thompson | Principal
De Novo Planning Group | www.denovoplanning.com
bthompson@denovoplanning.com | 916.812.7927
Northern California | 1020 Suncast Lane #106 | El Dorado Hills, CA 95762
Southern California | 180 East Main Street #108 | Tustin, CA 92780

---------- Forwarded message ----------
From: **Yolanda Solano** <Yolanda.Solano@sonoma-county.org>
Date: Fri, Aug 3, 2018 at 12:11 PM
Subject: FW: Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report (NOP) for the Springs Specific Plan
To: Beth Thompson <bthompson@denovoplanning.com>
Cc: "Ben Ritchie <britchie@denovoplanning.com>" <britchie@denovoplanning.com>

Please see comments below. Thank you!

From: Conlan, Ellen [mailto:Ellen.Conlan@abc.com]
Sent: July 30, 2018 8:23 AM
To: Yolanda Solano <Yolanda.Solano@sonoma-county.org>
Cc: Rich Lee <richlee@comcast.net>
Subject: Re: Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report (NOP) for the Springs Specific Plan

Good morning Yolanda. I know that today is the last day for comment on the EIR process for the Springs Specific plan. The scoping document refers to 6 chapters:

Introduction

- Land Use

- Circulation

- Design Guidelines

- Infrastructure

• Implementation

Are those chapters available? They are not on the website. Who provides them? In order to comment it's necessary to see the Plan.

In the Scoping document the Plan refers to a population of 1.8K but fails to mention the HWY 12 is a Main St for 15k people in the area. I think that context is needed.

Also the Scoping memo refers to potential new development projections of 715 residential housing but does not indicate the current housing number. Is the 715 doubling the number of housing units in the Plan area? Tripling it? Could we have the math on that.

The Springs Community Alliance Exec Committee is meeting on Tues evening. Are you available on Wed to discuss your presentation at our Aug 16 meeting?

Thank you,

Ellen

Sent from my iPhone

On Jun 27, 2018, at 5:22 PM, Yolanda Solano <Yolanda.Solano@sonoma-county.org> wrote:

> The County of Sonoma invites you to comment on the scope and content of the Draft Environmental Impact Report (DEIR) that will be prepared for the Springs Specific Plan.
>
> The Environmental Impact Report for the Springs Specific Plan will evaluate the full range of environmental topics, with the exception of agricultural resources, forestry resources, and mineral resources. There are no agricultural lands, timberlands or mineral resource lands in the Specific Plan area so these topics will not be addressed by the EIR.
>
> You may provide either written or oral comments at the Scoping Meeting for the project:
>
> **Scoping Meeting**
>
> **Tuesday, July 10, 2018**
>
> **11:00 a.m. to Noon**

Elise Carroll

From: Beth Thompson <bthompson@denovoplanning.com>
Sent: Friday, August 3, 2018 12:15 PM
To: Elise Carroll
Subject: Fwd: FW: Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report (NOP) for the Springs Specific Plan

Springs NOP Comment

Beth Thompson | Principal
De Novo Planning Group | www.denovoplanning.com
bthompson@denovoplanning.com | 916.812.7927
Northern California | 1020 Suncast Lane #106 | El Dorado Hills, CA 95762
Southern California | 180 East Main Street #108 | Tustin, CA 92780

---------- Forwarded message ----------
From: **Yolanda Solano** <Yolanda.Solano@sonoma-county.org>
Date: Fri, Aug 3, 2018 at 12:12 PM
Subject: FW: Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report (NOP) for the Springs Specific Plan
To: Beth Thompson <bthompson@denovoplanning.com>
Cc: "Ben Ritchie <britchie@denovoplanning.com>" <britchie@denovoplanning.com>

Follow up comment from Ellen Conlan, FYI. Thanks

From: Conlan, Ellen [mailto:Ellen.Conlan@abc.com]
Sent: July 30, 2018 5:06 PM
To: Yolanda Solano <Yolanda.Solano@sonoma-county.org>
Subject: Re: Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report (NOP) for the Springs Specific Plan

One other point, in our last SCA meeting Susan Gorin pointed out that affordable and low income housing does NOT contribute to property taxes.

In the Market & Feasibility Analysis Report it mentions “the community is interested in new residential housing within reach of local residents’ household income.” But the community is not aware that his type of housing undermines the revenue base of the area. Making it more likely that blight will be entrenched.

Does the final draft plan address this?

Sent from my iPhone

On Jun 27, 2018, at 5:22 PM, Yolanda Solano <Yolanda.Solano@sonoma-county.org> wrote:

J. Kapolchok
+ Associates
Land Use Planning
Urban Design

July 29, 2018

Yolanda Solano
Permit Resource and Management Department
County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA. 95403

RE: Comments on Scope and Content of the EIR for The Springs Specific Plan

Dear Yolanda,

Thank you for the opportunity to provide written comment on the scope and content of the Environmental Impact Report (EIR) currently under preparation for The Springs Specific Plan.

My comments regard properties owned by my client and operated by The Fairmont Sonoma Mission Inn & Spa. The properties affected by the proposed Specific Plan are Assessor Parcel Numbers 056-404-020; 014; 023 and 024 and 056-385-009; 011; 012 and 013. All of these properties house improvements essential to the current and future operation of the Fairmont Sonoma Mission Inn & Spa.

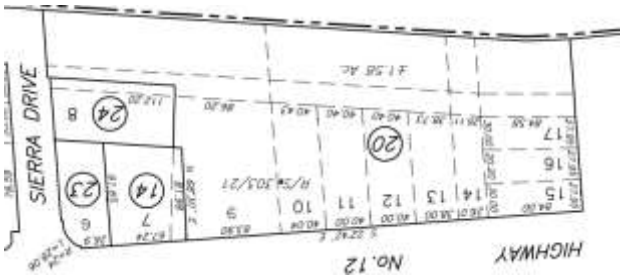
The Big Three/Surface and Underground Parking: This site is 1.92 acres in size and consists of four Assessor parcels: APNs 056-404-020; 014; 023 and 024. The site is developed with (see site map below):

- The Big Three Restaurant building, currently closed
- Surface parking lot

843 Second Street
Santa Rosa, CA 95404
TEL: 707.526.8939
FAX: 707.526.8985
EMAIL: jkapolchok@sbcglobal.net

- Entrance to an underground parking lot
- Sales Office
- Secondary entrance off of Sierra Drive

Site Plan



Assessor Parcels

All of these functions are essential to the operation of the Sonoma Mission Inn & Spa (SMI) and have been approved under SMI's Conditional Use Permit. Furthermore, all of these uses are hotel related uses.

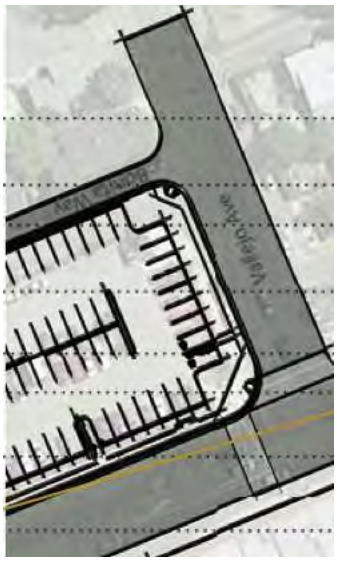
In the near term, SMI will be applying for a modification and potential expansion of their hotel facility. Various technical reports are underway to help direct the master planning process. Although all existing and proposed uses are/will be hotel related uses, the uses in the area identified above are likely to change.

In the draft Springs Specific Plan, the proposed Land Use designation for this area is Neighborhood Commercial, the Zoning, C-1. This is a change from its existing designation of General Commercial and C-2. Neither the proposed land use designation nor zoning district allow hotel uses. Hence, adoption of the Specific Plan, as proposed, would render a portion of the SMI legal non-conforming and potentially prevent the modernization and refurbishment envisioned by the SMI Master Plan.

It is believed that designating and rezoning a portion of SMI property Neighborhood Commercial/C-1 and thereby rendering that portion legal non-conforming was unintentional. We trust that this over-sight will be corrected prior to the plan going through the public hearing process. However, it is important for the draft proposed land use and zoning to be changed now. If not, the Environmental Impact Report must, at the very least, identify parcels and uses that have been rendered legal non-conforming in its land use analysis and examine any environmental consequence thereof.

We ask that the land use and zoning remain as it is currently designated, that is, General Commercial and C-2.

Surface Parking Lot: This site is 0.42- acres in size and consists of four Assessor parcels: APN 056-385-009; 011; 012 and 013. The site is developed with a surface parking lot that serves both the guests of the Inn and the employees.



Partial Site Plan

Assessors Parcels

The Springs Specific Plan is proposing a land use designation of Mixed-Use /Community Plaza Overlay and a zoning district of Mixed Use Community (CM) for this property. Although stand-alone parking is an allowed use, parking associated with a hotel use may not be and hotel uses are not. As mentioned, SMI is in the process of developing a Master Plan for their facilities. Uses discussed but by no means decided for this property include the continued use, a parking garage, a parking garage with limited retail, and parking combined with employee and/or affordable housing/retail.

Feasibility and Community Expectation: Unlike the discussion above regarding the Big 3/Parking Lot properties, allowed uses or uses allowed by use permit is not the principle concern for the Surface Parking Lot properties. Unless, of course, parking associated with a non-permitted use (hotel) is a prohibited use. Of major concern, is the designation of this privately-owned property, which is developed with a use essential to the operation of the Sonoma Mission Inn & Spa, for public use. It is insufficient to state, as was done during the scoping meeting held on the EIR, that this designation should be seen as long-range and a host of uses that are not public plaza uses are allowed. A Community Plaza designation creates a public expectation. It immediately puts any applicant at odds with the public when a use is proposed that is not a community serving plaza use. Furthermore, in the absence of redevelopment monies and the non-availability of replacement land, proposing a use that is not achievable is questionable public policy. Also, such a designation immediately devalues the property and could give rise to constitutional taking issues at time of project application.

As regards the environmental consequences of the proposed change, the issue would be similar to that stated above, if parking associated with a non-permitted use would be a prohibited use.

Our request is that the Community Plaza over-lay designation be removed for reasons stated above.

Thank you for your consideration of these comments. I and my clients are available to discuss any questions you may have at your convenience. Please feel free to contact me at jkapolchok@sbcglobal.net or 707-526-8939. I look forward to working with you.

Sincerely,
Jean A. Kapolchok

Jean A. Kapolchok

LAW OFFICE
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SONOMA, CALIFORNIA 95476-7013
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Email: mwoods@mrwlawcorp.com

July 30, 2018

Yolanda Solano
Permit and Resource Management Department
2550 Ventura Avenue
Santa Rosa, CA 95403

Re: Notice of Preparation of EIR for
The Springs Specific Plan

Dear Ms. Solano:

This letter is submitted on behalf of my client, Sonoma Valley Health and Recreation Association, a non-profit California corporation ("SVHRA", also called Sonoma Splash), in response to the County of Sonoma's request for written comments as to the scope and content of the EIR ("EIR") being prepared for The Springs Specific Plan ("Plan"). SVHRA owns the properties located at 135, 155 and 175 West Verano Avenue, Sonoma (APNs: 127-071-002, 127-071-003 and 127-071-005) (the "Property").

SVHRA is a volunteer, donor-supported community based non-profit which has long sought to establish a community pool in the Sonoma Valley. It acquired the Property in 2014. After many efforts to find a suitable partner to co-locate on the Property with the pool, SVHRA ultimately decided earlier this year to put the Property on the market. SVHRA has now entered into two letters of intent to sell portions of the Property. All parties anticipate executing purchase and sale agreements very soon. SVHRA intends to use the net proceeds of these sales to establish the long-sought and much needed community pool at another location in the Valley. Negotiations to locate the pool at the campus of Sonoma Valley High School are proceeding and are very encouraging.

Attached is a preliminary site plan showing the anticipated configuration of the three parcels on the Property (after a lot line adjustment which is currently being prepared and subject to refinement after survey work is completed). SVHRA intends to sell the 2.5 acre portion at the southwesterly corner of the Property to Krug Investments ("Krug"), which plans to develop that site for a 120-unit mid-priced hotel. SVHRA intends to sell the remainder of the Property to MidPen Housing ("MidPen"), which plans to develop an approximate 82 unit, 100% affordable housing project on its site. We understand that Krug and MidPen are submitting their own comments on the scope of the EIR, and SVHRA supports and encourages the County to incorporate those comments in its planning process for the Plan.

Most of the Property (APNs -002 and -003) is already zoned K (which allows a hotel with a conditional use permit); the balance (APN -005) is zoned R2. Consistent with the preliminary site plan, SVHRA requests that the Krug site retain the existing K designation, and that the MidPen

site be designated as R3.[1] SVHRA also requests that the EIR for the Plan address the full extent of environmental impacts from both the Krug and MidPen projects.

There is a small, triangular portion of property that lies between the Property and West Verano Avenue. That portion is owned and/or controlled by the County. Over the past several years, we have had numerous discussions with County representatives about incorporating that portion into development plans for the Property in some way, most likely through vacation proceedings or a long-term ground lease for nominal consideration. Doing such would allow a far more pleasing visual aspect from the public road and the recently installed bike path. That portion could be used for landscaping, parking, ingress/egress, all as may be requested by the developer(s) of the Property. SVHRA requests that the Plan recognize and authorize that potential purpose (from a land use and environmental perspective) in such a manner as to give the County the requisite flexibility to take the necessary actions, in its discretion, at a future time.

SVHRA is pleased to point to considerable community benefits that are present here. The development of the two projects will be undertaken in a way that allows a trail and public access to the creek on the northerly boundary of the Property. That access will also be available to guests of the hotel. MidPen was the successful developer of the Fetters apartment project, and will be providing additional, critically needed affordable housing. The hotel proposed by Krug is projected to provide approximately $1 million annually in transient occupancy taxes, and will help alleviate pressure for more vacation rentals. While relocation of the ballfield is proceeding on an independent track in cooperation with County Parks and others, we anticipate that its relocation will benefit financially from financial contributions resulting from Splash's work and the County's efforts to expedite consideration of these two projects. Last, but certainly not least, the successful conclusion of these sales and corresponding projects on the Property will allow SVHRA to accomplish the long-sought community pool to the benefit of everyone in the Sonoma Valley.

Thank you for the opportunity to provide comments, and please let me know if there are any questions.

Very truly yours,

Michael R. Woods
A Professional Corporation

By: Michael R. Woods

MRW:ng

Cc: Paul Favaro, President, SVHRA

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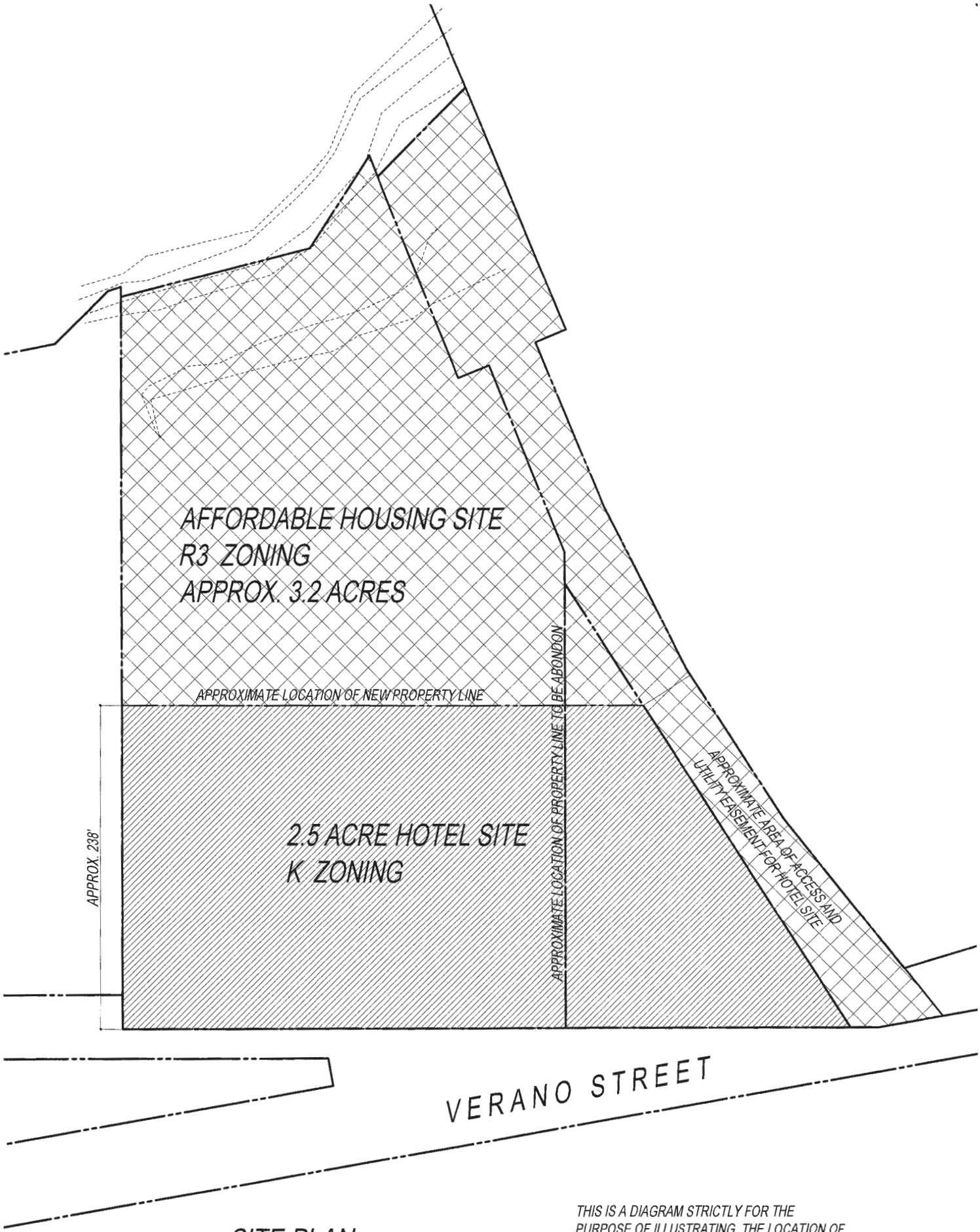
[1] We understand that the current draft Plan shows the K designation being reduced to the footprint of Paul's Field. The Little League, which uses that field, is relocating to Maxwell Farms Regional Park, and Paul's Field will no longer be used for baseball. Regardless of the outcome of our pending transactions, SVHRA would not support reducing the portion of its Property zoned K to fit only a small portion that will not be used for the purpose that reduction would seek to accommodate.



SITE PLAN

0 20' 60' 120'

THIS IS A DIAGRAM STRICTLY FOR THE PURPOSE OF ILLUSTRATING THE LOCATION OF A PROPOSED LOT LINE ADJUSTMENT. A BOUNDARY SURVEY HAS NOT YET BEEN COMPLETED. THE SCALE AND DIMENSIONS ARE NOT EXACT.

Scoping Meeting
July 10, 2018
16 attendees

Comments related to Scope of EIR

1. Michael Woods, representing Splash. Splash is selling property and plans to construct pool at another location (high school). A 120 room Best Western hotel and 82 unit housing development (100% affordable – Mid Penn). Hotel developer is Norman Krug. Michael Woods requested that EIR include an analysis of the hotel/housing project.
2. Sonoma Mission Inn representatives. Concern about plaza designation over their parking lot. Change from C2 to C1 (Big Three site) creates nonconforming issue for SMI. Plan must be feasible. Conversion of the parking area to a plaza is not necessarily feasible. Requested that EIR analyze land uses that are feasible for SMI.
3. Gina Cuclis. Suggested that the traffic section of the EIR differentiate between pass-through and local traffic. Concerned about cultural resources and historic preservation. Praised Fetter's project for saving palm trees that were part of the historic resort that existed previously.
4. Member of public. Asked if EIR would address ratio of parks/open space in relation to community health. Also asked about feasibility of recreation use adjacent Larson Park.

Elise Carroll

From: Beth Thompson <bthompson@denovoplanning.com>
Sent: Tuesday, July 24, 2018 9:04 AM
To: Elise Carroll
Subject: Fwd: FW: Spring EIR Plan

FYI - Springs Scoping comment

Beth Thompson | Principal
De Novo Planning Group | www.denovoplanning.com
bthompson@denovoplanning.com | 916.812.7927
Northern California | 1020 Suncast Lane #106 | El Dorado Hills, CA 95762
Southern California | 180 East Main Street #108 | Tustin, CA 92780

---------- Forwarded message ----------
From: **Yolanda Solano** <Yolanda.Solano@sonoma-county.org>
Date: Mon, Jul 16, 2018 at 9:42 AM
Subject: FW: Spring EIR Plan
To: Beth Thompson <bthompson@denovoplanning.com>
Cc: "Ben Ritchie <britchie@denovoplanning.com>" <britchie@denovoplanning.com>

FYI

From: Shel Leader [mailto:shel@sleader.com]
Sent: July 13, 2018 10:53 AM
To: Yolanda Solano <Yolanda.Solano@sonoma-county.org>
Subject: RE: Spring EIR Plan

Yolanda,

Appreciate your response and will look forward to following the EIR process. If you are creating a notification list, please add my name. During the past few years, we have had significant Community public debates in Social Media about various issues concerning the development of Highway 12 through the Springs Area. There was the “appearance” of decisions being made concerning the re-development plan by County officials without consulting with local constituency. That is why you are seeing “sudden” interest in the EIR. Many individuals were not aware of the EIR plan development.

Best Wishes,

Shel Leader

DVBE/SBE – California #2002324

shel@sleader.com | Office: 707.996.5079 | Mobile: 707.815.4188 | 261 E Agua Caliente Rd, Sonoma, CA 95476

From: Yolanda Solano <Yolanda.Solano@sonoma-county.org>
Sent: Friday, July 13, 2018 10:38 AM
To: Shel Leader <shel@sleader.com>
Subject: RE: Spring EIR Plan

Hello Shel,

I agree with you! It is important to hold meetings locally. We've held eight meetings in the springs so far (4 community workshops and 4 community advisory team meetings). Two other community meetings will be held in the Springs later this year.

We are just starting work on the environmental impact report. The EIR will cover a variety of environmental issues (Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gases and Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Population, Noise, Public Services and Recreation, Transportation and Circulation, Utilities). Under CEQA, scoping is designed to examine a proposed project early in the EIR environmental analysis process, and is intended to identify the range of issues that should be identified in the EIR. The scoping process stresses early consultation with resource agencies, other state and local agencies, tribal governments, and federal agencies whose approval or funding of the proposed project will be required. The public is also invited to submit comments at any time throughout the Scoping period, which continues through July 30th.

Attendance at Tuesday's meeting was only one way that members of the public could provide comment during the scoping period.

Because Tuesday's scoping meeting didn't cover the content of the Specific Plan or the EIR (since it they haven't been prepared yet), we didn't anticipate much interest from the public. Had we correctly anticipated the level of public interest, we certainly would have held the meeting at a location more convenient for Springs residents.

As always, we appreciate your involvement in/commitment to this project. If you have any comments on the scope of the EIR please email, fax or mail them to me by July 30th.

Please let me know if you have any other concerns.

Thank you!

Yolanda

From: Shel Leader [mailto:shel@sleader.com]
Sent: July 11, 2018 1:24 PM
To: Yolanda Solano <Yolanda.Solano@sonoma-county.org>
Subject: Spring EIR Plan

Why are you scheduling meeting for the Spring EIR anywhere but in the Springs? The cities of Santa Rosa and Sonoma are not local to the Springs community.

Shel Leader

DVBE/SBE – California #2002324

shel@sleader.com | Office: 707.996.5079 | Mobile: 707.815.4188 | 261 E Agua Caliente Rd, Sonoma, CA 95476

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Appendix B

Special-Status Species Within 9-Quadrangle Region for Specific Plan Area

TABLE 1: SPECIAL-STATUS PLANTS WITHIN 9-QUADRANGLE REGION FOR SPECIFIC PLAN AREA

PLANT	*STATUS (FED/CA/ CNPS)*	*HABITAT ASSOCIATION*	*BLOOMING PERIOD*	*POTENTIAL FOR OCCURRENCE*
alkali milk-vetch *Astragalus tener var. tener*	--/--/1B.2	Alkali playa, valley and foothill grassland, vernal pools. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 0-168 m.	Mar-Jun	**Low Potential**: Specific Plan area does not provide suitable habitat.
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	--/--/1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils. 3-1680 m.	Apr-Jul	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
bent-flowered fiddleneck *Amsinckia lunaris*	--/--/1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 3-795 m.	Mar-Jun	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
big-scale balsamroot *Balsamorhiza macrolepis*	--/--/1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Sometimes on serpentine. 35-1465 m.	Mar-Jun	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Calistoga ceanothus *Ceanothus divergens*	--/--/1B.2	Chaparral. Rocky, serpentine or volcanic sites. 100-950 m.	Feb-Apr	**Low Potential**: Specific Plan area does not provide suitable habitat.
Clara Hunt's milk-vetch *Astragalus claranus*	FE/CT/1B.1	Cismontane woodland, valley and foothill grassland, chaparral. Open grassy hillsides, especially on exposed shoulders in thin, volcanic clay soil moist in spring. 95-235 m.	Mar-May	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Cobb Mountain lupine *Lupinus sericatus*	--/--/1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, broadleafed upland forest. In stands of knobcone pine-oak woodland, on open wooded slopes in gravelly soils; sometimes on serpentine. 120-1390 m.	Mar-Jun	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Colusa layia *Layia septentrionalis*	--/--/1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 15-1100 m.	Apr-May	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
congested-headed hayfield tarplant *Hemizonia congesta ssp. congesta*	--/--/1B.2	Valley and foothill grassland. Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 5-520 m.	Apr-Nov	**Low Potential:** Specific Plan area does not provide suitable habitat.
Contra Costa goldfields *Lasthenia conjugens*	FE/--/1B.1	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 1-450 m.	Mar-Jun	**Low Potential:** Specific Plan area does not provide suitable habitat.
Delta tule pea *Lathyrus jepsonii var. jepsonii*	--/--/1B.2	Marshes and swamps. In freshwater and brackish marshes. Often found with *Typha*, *Aster lentus*, *Rosa californica*, *Juncus* spp., *Scirpus*, etc. Usually on marsh and slough edges. 0-5 m.	May-Jul (Aug-Sep)	**Low Potential:** Specific Plan area does not provide suitable habitat.

Plant	*Status (Fed/CA/ CNPS)*	*Habitat Association*	*Blooming Period*	*Potential for Occurrence*
dwarf downingia *Downingia pusilla*	--/--/2B.2	Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 1-490 m.	Mar-May	**Low Potential:** Specific Plan area does not provide suitable habitat.
few-flowered navarretia *Navarretia leucocephala ssp. pauciflora*	FE/CT/1B.1	Vernal pools. Volcanic ash flow, and volcanic substrate vernal pools. 425-855 m.	May-Jun	**Low Potential:** Specific Plan area does not provide suitable habitat.
fragrant fritillary *Fritillaria liliacea*	--/--/1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-400 m.	Feb-Apr	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Franciscan onion *Allium peninsulare var. franciscanum*	--/--/1B.2	Cismontane woodland, valley and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 5-320 m.	(Apr) May-Jun	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
green jewelflower *Streptanthus hesperidis*	--/--/1B.2	Chaparral, cismontane woodland. Openings in chaparral or woodland; serpentine, rocky sites. 240-765 m.	May-Jul	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Greene's narrow-leaved daisy *Erigeron greenei*	--/--/1B.2	Chaparral. Serpentine and volcanic substrates, generally in shrubby vegetation. 90-835 m.	May-Sep	**Low Potential:** Specific Plan area does not provide suitable habitat.
holly-leaved ceanothus *Ceanothus purpureus*	--/--/1B.2	Chaparral, cismontane woodland. Rocky, volcanic slopes. 145-780 m.	Feb-Jun	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Jepson's coyote-thistle *Eryngium jepsonii*	--/--/1B.2	Vernal pools, valley and foothill grassland. Clay. 3-305 m.	Apr-Aug	**Moderate Potential:** Limited mesic habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Jepson's leptosiphon *Leptosiphon jepsonii*	--/--/1B.2	Chaparral, cismontane woodland. Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. 55-855 m.	Mar-May	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Kenwood Marsh checkerbloom *Sidalcea oregana ssp. valida*	FE/CE/1B.1	Marshes and swamps. Edges of freshwater marshes. 115-125 m.	Jun-Sep	**Low Potential:** Specific Plan area does not provide suitable habitat.
legenere *Legenere limosa*	--/--/1B.1	Vernal pools. In beds of vernal pools. 1-1005 m.	Apr-Jun	**Low Potential:** Specific Plan area does not provide suitable habitat.

Plant	*Status (Fed/CA/ CNPS)*	*Habitat Association*	*Blooming Period*	*Potential for Occurrence*
Lyngbye's sedge *Carex lyngbyei*	--/--/2B.2	Marshes and swamps (brackish or freshwater). 0-200 m.	Apr-Aug	**Low Potential:** Specific Plan area does not provide suitable habitat.
Marin knotweed *Polygonum marinense*	--/--/3.1	Marshes and swamps. Coastal salt marshes and brackish marshes. 0-10 m.	(Apr) May-Aug (Oct)	**Low Potential:** Specific Plan area does not provide suitable habitat.
Marin western flax *Hesperolinon congestum*	FT/CT/1B.1	Chaparral, valley and foothill grassland. In serpentine barrens and in serpentine grassland and chaparral. 60-400 m.	Apr-Jul	**Low Potential:** Specific Plan area does not provide suitable habitat.
Mason's lilaeopsis *Lilaeopsis masonii*	--/CR/1B.1	Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. In brackish or freshwater. 0-10 m.	Apr-Nov	**Low Potential:** Specific Plan area does not provide suitable habitat.
Mead's owls-clover *Castilleja ambigua var. meadii*	--/--/1B.1	Vernal pools, meadows and seeps. Soils of volcanic origin and tend to have high clay content and be gravelly. 450-475 m.	Apr-May	**Low Potential:** Specific Plan area does not provide suitable habitat.
Napa bluecurls *Trichostema ruygtii*	--/--/1B.2	Cismontane woodland, chaparral, valley and foothill grassland, vernal pools, lower montane coniferous forest. Often in open, sunny areas. Also has been found in vernal pools. 30-680 m.	Jun-Oct	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Napa false indigo *Amorpha californica var. napensis*	--/--/1B.2	Broadleafed upland forest, chaparral, cismontane woodland. Openings in forest or woodland or in chaparral. 30-735 m	Apr-Jun	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
narrow-anthered brodiaea *Brodiaea leptandra*	--/--/1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Volcanic substrates. 30-590 m.	May-Jul	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Northern California black walnut *Juglans hindsii*	--/--/1B.1	Riparian forest, riparian woodland. Few extant native stands remain; widely naturalized. Deep alluvial soil, associated with a creek or stream. 0-640 m.	Apr-May	**Moderate Potential:** Limited riparian habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
oval-leaved viburnum *Viburnum ellipticum*	--/--/2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. 215-1400 m.	May-Jun	**Moderate Potential:** Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
papoose tarplant *Centromadia parryi ssp. parryi*	--/--/1B.2	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland. Vernally mesic, often alkaline sites. 1-500 m.	May-Nov	**Low Potential:** Specific Plan area does not provide suitable habitat.

Plant	*Status (Fed/CA/ CNPS)*	*Habitat Association*	*Blooming Period*	*Potential for Occurrence*
Petaluma popcornflower *Plagiobothrys mollis var. vestitus*	--/--/1A	Valley and foothill grassland, marshes and swamps. Wet sites in grassland, possibly coastal marsh margins. 10-50 m.	Jun-Jul	**Low Potential:** Specific Plan area does not provide suitable habitat.
Point Reyes checkerbloom *Sidalcea calycosa ssp. rhizomata*	--/--/1B.2	Marshes and swamps. Freshwater marshes near the coast.5-95 m.	Apr-Sep	**Low Potential:** Specific Plan area does not provide suitable habitat.
Point Reyes salty bird's-beak *Chloropyron maritimum ssp. palustre*	--/--/1B.2	Coastal salt marsh. Usually in coastal salt marsh with Salicornia, Distichlis, Jaumea, Spartina, etc. 0-115 m.	Jun-Oct	**Low Potential:** Specific Plan area does not provide suitable habitat.
Rincon Ridge ceanothus *Ceanothus confusus*	--/--/1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland. Known from volcanic or serpentine soils, dry shrubby slopes. 150-1280 m.	Feb-June	**Low Potential:** Specific Plan area does not provide suitable habitat.
Rincon Ridge manzanita *Arctostaphylos stanfordiana ssp. decumbens*	--/--/1B.1	Chaparral, cismontane woodland. Highly restricted endemic to red rhyolites in Sonoma County. 90-375 m.	Feb-Apr (May)	**Low Potential:** Specific Plan area does not provide suitable habitat.
saline clover *Trifolium hydrophilum*	--/--/1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 1-335 m.	Apr-Jun	**Low Potential:** Specific Plan area does not provide suitable habitat.
San Joaquin spearscale *Extriplex joaquinana*	--/--/1B.2	Chenopod scrub, alkali meadow, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata*, *Frankenia*, etc. 0-840 m.	Apr-Oct	**Low Potential:** Specific Plan area does not provide suitable habitat.
Sanford's arrowhead *Sagittaria sanfordii*	--/--/1B.2	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m.	May-Oct (Nov)	**Low Potential:** Specific Plan area does not provide suitable habitat.
Sebastopol meadowfoam *Limnanthes vinculans*	FE/CE/1B.1	Meadows and seeps, vernal pools, valley and foothill grassland. Swales, wet meadows and marshy areas in valley oak savanna; on poorly drained soils of clays and sandy loam. 15-115 m.	Apr-May	**Moderate Potential:** Limited mesic habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Sharsmith's western flax *Hesperolinon sharsmithiae*	--/--/1B.2	Chaparral. Serpentine substrates. 180-670 m.	May-Jul	**Low Potential:** Specific Plan area does not provide suitable habitat.
soft salty bird's-beak *Chloropyron molle ssp. molle*	FE/CR/1B.1	Coastal salt marsh. In coastal salt marsh with Distichlis, Salicornia, Frankenia, etc. 0-5 m.	Jun-Nov	**Low Potential:** Specific Plan area does not provide suitable habitat.
Sonoma Alopecurus *Alopecurus aequalis var. sonomensis*	FE/--/1B.1	Freshwater marshes and swamps, riparian scrub. Wet areas, marshes, and riparian banks, with other wetland species. 5-360 m.	May-Jul	**Moderate Potential:** Limited riparian habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.

Plant	*Status (Fed/CA/ CNPS)*	*Habitat Association*	*Blooming Period*	*Potential for Occurrence*
Sonoma beardtongue *Penstemon newberryi var. sonomensis*	--/--/1B.3	Chaparral. Crevices in rock outcrops and talus slopes. 180-1405 m.	Apr-Aug	**Low Potential:** Specific Plan area does not provide suitable habitat.
Sonoma ceanothus *Ceanothus sonomensis*	--/--/1B.2	Chaparral. Sandy, serpentine or volcanic soils. 140-795 m.	Feb-Apr	**Low Potential:** Specific Plan area does not provide suitable habitat.
Sonoma spineflower *Chorizanthe valida*	FE/CE/1B.1	Coastal prairie. Sandy soil. 5-50 m.	Jun-Aug	**Low Potential:** Specific Plan area does not provide suitable habitat.
Sonoma sunshine *Blennosperma bakeri*	FE/CE/1B.1	Vernal pools, valley and foothill grassland. Vernal pools and swales. 10-290 m.	Mar-May	**Low Potential:** Specific Plan area does not provide suitable habitat.
Suisun Marsh aster *Symphyotrichum lentum*	--/--/1B.2	Marshes and swamps (brackish and freshwater). Most often seen along sloughs with Phragmites, Scirpus, blackberry, Typha, etc. 0-15 m.	(Apr) May-Nov	**Low Potential:** Specific Plan area does not provide suitable habitat.
thin-lobed horkelia *Horkelia tenuiloba*	--/--/1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland. Sandy soils; mesic openings. 45-640 m.	May-Jul (Aug)	**Moderate Potential:** Limited habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
Tiburon buckwheat *Eriogonum luteolum var. caninum*	--/--/1B.2	Chaparral, valley and foothill grassland, cismontane woodland, coastal prairie. Serpentine soils; sandy to gravelly sites. 60-640 m.	May-Sep	**Moderate Potential:** Limited habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
two-fork clover *Trifolium amoenum*	FE/--/1B.1	Valley and foothill grassland, coastal bluff scrub. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 5-310 m.	Apr-Jun	**Low Potential:** Specific Plan area does not provide suitable habitat.

Source: CDFW CNDDB 2018.

Abbreviations:

Federal

FE *Federal Endangered*

State

CE *California Endangered Species*

CR *California Rare*

California Rare Plant Ranks (formerly CNPS Lists)

1A *CNPS - Presumed Extirpated in California and Either Rare or Extinct Elsewhere*

1B *CNPS - Rare, Threatened, or Endangered*

2B *CNPS - Plants rare, threatened, or endangered in California but more common elsewhere*

3 *Review List: Plants which more information is needed*

California Threat Ranks

0.1 *Seriously threatened in California*

0.2 *Moderately threatened in California*

0.3 *Not very threatened in California*

TABLE 2: SPECIAL-STATUS ANIMALS WITHIN 9-QUADRANGLE REGION FOR SPECIFIC PLAN AREA

ANIMAL	*STATUS (FED/CA)*	*HABITAT ASSOCIATION*	*POTENTIAL FOR OCCURRENCE*
MAMMALS			
American badger *Taxidea taxus*	--/SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Low Potential**: The nearest previously documented occurrence is located approximately 3.3 miles to the northwest. Limited habitat is available in Specific Plan area. Agua Caliente Creek and Pequeno Creek provide some habitat for movement, foraging, and denning. No potential within the existing developed areas.
pallid bat *Antrozous pallidus*	--/SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**High Potential:** The nearest previously documented occurrence is located approximately 0.65 miles to the south. Potential roosting habitat in existing structures and trees. Site could provide foraging opportunities.
salt-marsh harvest mouse *Reithrodontomys raviventris*	FE/CE	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape.	**Not Present**: The nearest previously documented occurrence is located approximately 8.8 miles to the south. Specific Plan area does not provide suitable habitat.
Suisun shrew *Sorex ornatus sinuosus*	--/SSC	Tidal marshes of the northern shores of San Pablo and Suisun bays. Require dense low-lying cover and driftweed and other litter above the mean hightide line for nesting and foraging.	**Not Present**: The nearest previously documented occurrence is located approximately 9.2 miles to the southeast. Specific Plan area does not provide suitable habitat.
Townsend's big-eared bat *Corynorhinus townsendii*	--/SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Moderate Potential:** The nearest previously documented occurrence is located approximately 9.7 miles to the southwest. Potential roosting habitat in existing structures and trees. Site could provide foraging opportunities.
BIRDS			
bald eagle *Haliaeetus leucocephalus*	FD/CE (FP)	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	**Not Present**: There is only one previously documented occurrence within the 9-quad region for the Specific Plan area, which is located approximately 12.8 miles to the northeast. Specific Plan area does not provide suitable habitat.
bank swallow *Riparia riparia*	--/CT	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**High Potential**: This species is documented regionally, including in the Specific Plan area. Habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.

Animal	*Status (Fed/CA)*	*Habitat Association*	*Potential for Occurrence*
black swift *Cypseloides niger*	--/SSC	Coastal belt of Santa Cruz and Monterey counties; central & southern Sierra Nevada; San Bernardino & San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	**Low Potential:** The nearest previously documented occurrence is located approximately 3.3 miles to the northeast. Limited habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
black-crowned night heron *Nycticorax nycticorax*	MBTA/--	Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	**Not Present**: The nearest previously documented occurrence is located approximately 7.8 miles to the east. Specific Plan area does not provide suitable habitat.
burrowing owl *Athene cuniculari*	--/SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**Low Potential**: The nearest previously documented occurrence is located approximately 3.4 miles to the northwest. Specific Plan area lacks open grasslands used for nesting and foraging habitat.
California black rail *Laterallus jamaicensis coturniculus*	--/CT	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**Not Present**: The nearest previously documented occurrence is located approximately 8.3 miles to the southwest. Specific Plan area does not provide suitable habitat.
California horned lark *Eremophila alpestris actia*	--/WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	**Low Potential:** The nearest previously documented occurrence is located approximately 3.4 miles to the northwest. Specific Plan area lacks habitat.
California Ridgway's rail *Rallus obsoletus obsoletus*	FE/CE (FP)	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	**Not Present**: The nearest previously documented occurrence is located approximately 8.7 miles to the southwest. Specific Plan area does not provide suitable habitat.
double-crested cormorant *Phalacrocorax auritus*	--/WL	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	**Not Present**: The nearest previously documented occurrence is located approximately 13.2 miles to the northeast. Specific Plan area does not provide suitable habitat.
ferruginous hawk *Buteo regalis*	--/WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	**Low Potential:** The nearest previously documented occurrence is located approximately 3.2 miles to the northwest. Limited nesting habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area. Nesting is also possible in other larger trees throughout the Specific Plan area. Foraging habitat is limited, to not existent in the Specific Plan area.
golden eagle *Aquila chrysaetos*	--/FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Not Present**: The nearest previously documented occurrence is located approximately 3.0 miles to the west. Specific Plan area does not provide suitable habitat.

Animal	*Status (Fed/CA)*	*Habitat Association*	*Potential for Occurrence*
grasshopper sparrow *Ammodramus savannarum*	--/SSC	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	**Low Potential:** The nearest previously documented occurrence is located approximately 3.3 miles to the northwest. Specific Plan area lacks habitat.
great blue heron *Ardea herodias*	--/--	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	**Low Potential:** The nearest previously documented occurrence is located approximately 13.3 miles to the northeast. Limited habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
great egret *Ardea alba*	MBTA/--	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	**Low Potential:** The nearest previously documented occurrence is located approximately 13.3 miles to the northeast. Limited habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
northern harrier *Circus cyaneus*	--/SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	**Low Potential:** The nearest previously documented occurrence is located approximately 11.7 miles to the southeast. Limited habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
San Pablo song sparrow *Melospiza melodia samuelis*	--/SSC	Resident of salt marshes along the north side of San Francisco and San Pablo bays. Inhabits tidal sloughs in the Salicornia marshes; nests in Grindelia bordering slough channels.	**Not Present**: The nearest previously documented occurrence is located approximately 3.9 miles to the southeast. Specific Plan area does not provide suitable habitat.
saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	--/SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Not Present**: The nearest previously documented occurrence is located approximately 6.2 miles to the south. Specific Plan area does not provide suitable habitat.
Swainson's hawk *Buteo swainsoni*	--/CT	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Low Potential:** The nearest previously documented occurrence is located approximately 4.1 miles to the south. Limited nesting habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area. Nesting is also possible in other larger trees throughout the Specific Plan area. Foraging habitat is limited, to not existent in the Specific Plan area.
tricolored blackbird *Agelaius tricolor*	--/CC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers (km) of the colony.	**Not Present**: The nearest previously documented occurrence is located approximately 9.1 miles to the southeast. Specific Plan area does not provide suitable habitat.

Animal	*Status (Fed/CA)*	*Habitat Association*	*Potential for Occurrence*
western snowy plover *Charadrius alexandrinus nivosus*	FT/SSC	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	**Not Present**: The nearest previously documented occurrence is located approximately 8.4 miles to the southeast. Specific Plan area does not provide suitable habitat.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/CE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**Low Potential:** There is only one previously documented occurrence within the 9-quad region for the Specific Plan area, which is located approximately 6.8 miles to the west. Limited nesting habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
white-tailed kite *Elanus leucurus*	--/FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Low Potential:** The nearest previously documented occurrence is located approximately 3.5 miles to the northwest. Limited nesting and foraging habitat associated with Agua Caliente Creek and Pequeno Creek is available in Specific Plan area.
yellow rail *Coturnicops noveboracensis*	--/SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	**Not Present:** There is only one previously documented occurrence within the 9-quad region, which is to the southeast of the Specific Plan area. Specific Plan area does not provide suitable habitat.
Amphibians & Reptiles			
California giant salamander *Dicamptodon ensatus*	--/SSC	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	**High Potential:** There is one previously documented occurrence within the Specific Plan area. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat for adult breeding form and larval development of this species within the Specific Plan area. There is very limited habitat for the terrestrial adult form of this species.
California red-legged frog *Rana draytonii*	FT/SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Moderate Potential**: The nearest previously documented occurrence is located approximately 3.6 miles to the west. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat, however, there is very limited upland habitat within the Specific Plan area.
foothill yellow-legged frog *Rana boylii*	--/CC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	**Moderate Potential**: The nearest previously documented occurrence is located approximately 1.8 miles to the southwest. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat, however, there is very limited upland habitat within the Specific Plan area.

Animal	*Status (Fed/CA)*	*Habitat Association*	*Potential for Occurrence*
red-bellied newt *Taricha rivularis*	--/SSC	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	**Moderate Potential:** The nearest previously documented occurrence is located approximately 3.9 miles to the north. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat for adult breeding form and larval development of this species within the Specific Plan area. There is very limited habitat for the terrestrial adult form of this species.
western pond turtle *Emys marmorata*	--/SSC	Needs mammal burrows for refuge and oviposition sites. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**Moderate Potential:** The nearest previously documented occurrence is located approximately 1.3 miles to the southeast. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat for this species within the Specific Plan area. Upland habitat for egg-laying is limited, to not existent, in the Specific Plan area.
Fish			
Delta smelt *Hypomesus transpacificus*	FT/CE	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities greater than 10 parts per thousand (ppt). Most often at salinities less than two ppt.	**Not Present:** The nearest previously documented occurrence is located approximately 14.1 miles to the southeast. Specific Plan area does not provide suitable habitat.
longfin smelt *Spirinchus thaleichthys*	FC/CT	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt but can be found in completely freshwater to almost pure seawater.	**Not Present:** The nearest previously documented occurrence is located approximately 11.9 miles to the south. Specific Plan area does not provide suitable habitat.
Sacramento splittail *Pogonichthys macrolepidotus*	--/SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	**Not Present:** The nearest previously documented occurrence is located approximately 15.0 miles to the southeast. Specific Plan area does not provide suitable habitat.
steelhead - Central Valley DPS *Oncorhynchus mykiss irideus pop. 11*	FT/--	From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.	**High Potential:** The nearest previously documented occurrence is located approximately 1.9 miles to the southwest in Sonoma Creek. The Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek and provide habitat for this species within the Specific Plan area.
Invertebrates			
California freshwater shrimp *Syncaris pacifica*	FE/CE	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main streamflow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	**Not Present:** There is one previously documented occurrence near Maxwell Farms Regional Park near the southern boundary of the Specific Plan area. Specific Plan area does not provide suitable habitat.

Animal	*Status (Fed/CA)*	*Habitat Association*	*Potential for Occurrence*
vernal pool fairy shrimp *Branchinecta lynchi*	FT/--	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**Not Present:** There is only one previously documented occurrence within the 9-quad region for the Specific Plan area, which is located 12.6 miles to the southeast. Specific Plan area does not provide suitable habitat.

Source: CDFW CNDDB 2018.

Abbreviations:

Federal

FE *Federal Endangered*
FT *Federal Threatened*
FC *Federal Candidate*
FD *Federal Delisted*
MBTA *Migratory Bird Treaty Act*

State

CE *California Endangered Species*

Appendix C

Air Quality, Greenhouse Gas, and Energy Modeling

Appendix C.1

CalEEMod Modeling

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Springs Specific Plan - 2040 Operational Year

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	82.23	1000sqft	18.35	82,226.00	0
Hotel	120.00	Room	4.00	174,240.00	0
Recreational Swimming Pool	26.65	1000sqft	5.80	26,648.00	0
Apartments Low Rise	157.00	Dwelling Unit	15.21	157,000.00	440
Apartments Mid Rise	461.00	Dwelling Unit	68.85	461,000.00	1291
Single Family Housing	88.00	Dwelling Unit	28.57	158,400.00	246
Strip Mall	168.03	1000sqft	38.03	168,029.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land Use - Proxies selected for each land use based on the Specific Plan land uses (multifamily = apartments mid rise. mixed use = apartments low rise). Population estimated based on 2.8 persons/dwelling unit. Acreages estimated.

Construction Phase - Construction Phase - Construction schedule simplified for the purposes of modeling.

Grading - Assume 178 acres is graded.

Vehicle Trips - VMT - VMT adjusted based on the VMT provided by W-Trans (November 2021) - 18,782,433 VMT per year

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - Woodstoves - BAAQMD Rule: "Effective November 1, 2016 - No wood-burning devices of any kind may be installed in new homes or buildings being
constructed in the Bay Area". This is consistent with BAAQMD's ban on woodburning fireplaces and stoves.

Area Mitigation - VOC

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	23.55	0.00
tblFireplaces	NumberGas	69.15	0.00
tblFireplaces	NumberGas	22.00	0.00
tblFireplaces	NumberNoFireplace	6.28	0.00
tblFireplaces	NumberNoFireplace	18.44	0.00
tblFireplaces	NumberNoFireplace	7.04	0.00
tblFireplaces	NumberWood	26.69	0.00
tblFireplaces	NumberWood	78.37	0.00
tblFireplaces	NumberWood	37.84	0.00
tblGrading	AcresOfGrading	930.00	178.00
tblGrading	AcresOfGrading	180.00	0.00
tblLandUse	LandUseSquareFeet	82,230.00	82,226.00
tblLandUse	LandUseSquareFeet	26,650.00	26,648.00
tblLandUse	LandUseSquareFeet	168,030.00	168,029.00
tblLandUse	LotAcreage	1.89	18.35

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LotAcreage	0.61	5.80
tblLandUse	LotAcreage	9.81	15.21
tblLandUse	LotAcreage	12.13	68.85
tblLandUse	LotAcreage	3.86	38.03
tblLandUse	Population	449.00	440.00
tblLandUse	Population	1,318.00	1,291.00
tblLandUse	Population	252.00	246.00
tblVehicleTrips	ST_TR	8.14	9.20
tblVehicleTrips	ST_TR	4.91	5.56
tblVehicleTrips	ST_TR	2.21	2.50
tblVehicleTrips	ST_TR	8.19	9.26
tblVehicleTrips	ST_TR	9.10	10.29
tblVehicleTrips	ST_TR	9.54	10.80
tblVehicleTrips	ST_TR	42.04	47.55
tblVehicleTrips	SU_TR	6.28	7.10
tblVehicleTrips	SU_TR	4.09	4.63
tblVehicleTrips	SU_TR	0.70	0.78
tblVehicleTrips	SU_TR	5.95	6.74
tblVehicleTrips	SU_TR	13.60	15.40
tblVehicleTrips	SU_TR	8.55	9.68
tblVehicleTrips	SU_TR	20.43	23.13
tblVehicleTrips	WD_TR	7.32	8.27
tblVehicleTrips	WD_TR	5.44	6.17
tblVehicleTrips	WD_TR	9.74	11.01
tblVehicleTrips	WD_TR	8.36	9.44
tblVehicleTrips	WD_TR	28.82	32.60
tblVehicleTrips	WD_TR	9.44	10.68
tblVehicleTrips	WD_TR	44.32	50.14
tblWoodstoves	NumberCatalytic	3.14	0.00

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWoodstoves	NumberCatalytic	9.22	0.00
tblWoodstoves	NumberCatalytic	3.52	0.00
tblWoodstoves	NumberNoncatalytic	3.14	0.00
tblWoodstoves	NumberNoncatalytic	9.22	0.00
tblWoodstoves	NumberNoncatalytic	3.52	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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					
2022	0.3668	3.5701	2.7118	5.1700e-003	0.5580	0.1728	0.7307	0.3022	0.1601	0.4623	0.0000	453.6851	453.6851	0.1284	4.6000e-004	457.0316
2023	0.4210	4.2835	3.4224	7.5300e-003	1.2585	0.1806	1.4391	0.6444	0.1661	0.8106	0.0000	662.0432	662.0432	0.2094	5.2000e-004	667.4338
2024	0.4647	3.4422	4.1638	0.0111	0.8901	0.1252	1.0152	0.3176	0.1162	0.4338	0.0000	1,008.3178	1,008.3178	0.1530	0.0427	1,024.8611
2025	0.4550	2.6931	4.3137	0.0128	0.7827	0.0773	0.8600	0.2112	0.0727	0.2839	0.0000	1,185.5192	1,185.5192	0.0939	0.0708	1,208.9617
2026	0.4381	2.6657	4.1780	0.0125	0.7827	0.0770	0.8597	0.2112	0.0724	0.2837	0.0000	1,166.6607	1,166.6607	0.0927	0.0688	1,189.4828
2027	0.4225	2.6411	4.0623	0.0123	0.7827	0.0767	0.8594	0.2112	0.0722	0.2834	0.0000	1,148.3853	1,148.3853	0.0915	0.0669	1,170.6139
2028	0.4064	2.6107	3.9503	0.0120	0.7797	0.0761	0.8558	0.2104	0.0716	0.2821	0.0000	1,127.2843	1,127.2843	0.0903	0.0649	1,148.8941
2029	0.3937	2.6001	3.8797	0.0119	0.7827	0.0762	0.8588	0.2112	0.0717	0.2829	0.0000	1,115.5386	1,115.5386	0.0898	0.0635	1,136.7156
2030	0.3729	1.9928	3.8171	0.0122	0.7827	0.0264	0.8091	0.2112	0.0260	0.2372	0.0000	1,141.7952	1,141.7952	0.0317	0.0621	1,161.0946
2031	0.3589	1.9793	3.7515	0.0120	0.7827	0.0262	0.8089	0.2112	0.0258	0.2370	0.0000	1,129.1131	1,129.1131	0.0310	0.0608	1,148.0170
2032	0.3487	1.9762	3.7114	0.0119	0.7857	0.0261	0.8118	0.2120	0.0257	0.2378	0.0000	1,122.1963	1,122.1963	0.0306	0.0600	1,140.8345
2033	0.3356	1.9519	3.6362	0.0117	0.7797	0.0257	0.8054	0.2104	0.0254	0.2358	0.0000	1,103.6617	1,103.6617	0.0298	0.0586	1,121.8629
2034	0.3265	1.9435	3.5948	0.0116	0.7796	0.0256	0.8052	0.2104	0.0252	0.2356	0.0000	1,094.6214	1,094.6214	0.0294	0.0577	1,112.5572
2035	0.3074	1.8420	3.5678	0.0116	0.7826	0.0180	0.8006	0.2112	0.0176	0.2288	0.0000	1,090.7773	1,090.7773	0.0281	0.0572	1,108.5219
2036	0.1996	1.0049	2.5478	6.1300e-003	0.2477	0.0226	0.2703	0.0668	0.0225	0.0893	0.0000	557.7729	557.7729	0.0171	0.0175	563.4062
2037	7.7357	0.1861	0.7029	1.5800e-003	0.1127	4.8800e-003	0.1176	0.0300	4.8500e-003	0.0348	0.0000	146.9804	146.9804	3.9400e-003	1.6600e-003	147.5741
Maximum	**7.7357**	**4.2835**	**4.3137**	**0.0128**	**1.2585**	**0.1806**	**1.4391**	**0.6444**	**0.1661**	**0.8106**	**0.0000**	**1,185.5192**	**1,185.5192**	**0.2094**	**0.0708**	**1,208.9617**

2.1 Overall Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.3668	3.5701	2.7118	5.1700e-003	0.5580	0.1728	0.7307	0.3022	0.1601	0.4623	0.0000	453.6846	453.6846	0.1284	4.6000e-004	457.0311
2023	0.4210	4.2834	3.4224	7.5300e-003	1.2585	0.1806	1.4391	0.6444	0.1661	0.8106	0.0000	662.0425	662.0425	0.2094	5.2000e-004	667.4330
2024	0.4647	3.4422	4.1638	0.0111	0.8901	0.1252	1.0152	0.3176	0.1162	0.4338	0.0000	1,008.3172	1,008.3172	0.1530	0.0427	1,024.8605
2025	0.4550	2.6931	4.3137	0.0128	0.7827	0.0773	0.8600	0.2112	0.0727	0.2839	0.0000	1,185.5188	1,185.5188	0.0939	0.0708	1,208.9614
2026	0.4381	2.6657	4.1780	0.0125	0.7827	0.0770	0.8597	0.2112	0.0724	0.2837	0.0000	1,166.6604	1,166.6604	0.0927	0.0688	1,189.4824
2027	0.4225	2.6411	4.0623	0.0123	0.7827	0.0767	0.8594	0.2112	0.0722	0.2834	0.0000	1,148.3849	1,148.3849	0.0915	0.0669	1,170.6135
2028	0.4064	2.6107	3.9503	0.0120	0.7797	0.0761	0.8558	0.2104	0.0716	0.2820	0.0000	1,127.2839	1,127.2839	0.0903	0.0649	1,148.8938
2029	0.3937	2.6001	3.8797	0.0119	0.7827	0.0762	0.8588	0.2112	0.0717	0.2829	0.0000	1,115.5383	1,115.5383	0.0898	0.0635	1,136.7153
2030	0.3729	1.9928	3.8171	0.0122	0.7827	0.0264	0.8091	0.2112	0.0260	0.2372	0.0000	1,141.7948	1,141.7948	0.0317	0.0621	1,161.0942
2031	0.3589	1.9793	3.7515	0.0120	0.7827	0.0262	0.8089	0.2112	0.0258	0.2370	0.0000	1,129.1127	1,129.1127	0.0310	0.0608	1,148.0166
2032	0.3487	1.9762	3.7114	0.0119	0.7857	0.0261	0.8118	0.2120	0.0257	0.2378	0.0000	1,122.1959	1,122.1959	0.0306	0.0600	1,140.8340
2033	0.3356	1.9519	3.6362	0.0117	0.7797	0.0257	0.8054	0.2104	0.0254	0.2358	0.0000	1,103.6613	1,103.6613	0.0298	0.0586	1,121.8625
2034	0.3265	1.9435	3.5948	0.0116	0.7796	0.0256	0.8052	0.2104	0.0252	0.2356	0.0000	1,094.6210	1,094.6210	0.0294	0.0577	1,112.5568
2035	0.3074	1.8420	3.5678	0.0116	0.7826	0.0180	0.8006	0.2112	0.0176	0.2288	0.0000	1,090.7769	1,090.7769	0.0281	0.0572	1,108.5215
2036	0.1996	1.0049	2.5478	6.1300e-003	0.2477	0.0226	0.2703	0.0668	0.0225	0.0893	0.0000	557.7725	557.7725	0.0171	0.0175	563.4058
2037	7.7357	0.1861	0.7029	1.5800e-003	0.1127	4.8800e-003	0.1176	0.0300	4.8500e-003	0.0348	0.0000	146.9803	146.9803	3.9400e-003	1.6600e-003	147.5740
Maximum	**7.7357**	**4.2834**	**4.3137**	**0.0128**	**1.2585**	**0.1806**	**1.4391**	**0.6444**	**0.1661**	**0.8106**	**0.0000**	**1,185.5188**	**1,185.5188**	**0.2094**	**0.0708**	**1,208.9614**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	N20	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	**1-1-2022**	**3-31-2022**	0.9150	0.9150
2	**4-1-2022**	**6-30-2022**	0.9248	0.9248
3	**7-1-2022**	**9-30-2022**	0.9350	0.9350
4	**10-1-2022**	**12-31-2022**	1.1756	1.1756
5	**1-1-2023**	**3-31-2023**	0.9931	0.9931
6	**4-1-2023**	**6-30-2023**	1.2335	1.2335
7	**7-1-2023**	**9-30-2023**	1.2471	1.2471
8	**10-1-2023**	**12-31-2023**	1.2475	1.2475
9	**1-1-2024**	**3-31-2024**	1.1607	1.1607
10	**4-1-2024**	**6-30-2024**	1.0487	1.0487
11	**7-1-2024**	**9-30-2024**	0.8308	0.8308
12	**10-1-2024**	**12-31-2024**	0.8553	0.8553
13	**1-1-2025**	**3-31-2025**	0.7895	0.7895
14	**4-1-2025**	**6-30-2025**	0.7752	0.7752
15	**7-1-2025**	**9-30-2025**	0.7837	0.7837
16	**10-1-2025**	**12-31-2025**	0.8070	0.8070
17	**1-1-2026**	**3-31-2026**	0.7778	0.7778
18	**4-1-2026**	**6-30-2026**	0.7644	0.7644
19	**7-1-2026**	**9-30-2026**	0.7728	0.7728
20	**10-1-2026**	**12-31-2026**	0.7951	0.7951
21	**1-1-2027**	**3-31-2027**	0.7673	0.7673
22	**4-1-2027**	**6-30-2027**	0.7546	0.7546
23	**7-1-2027**	**9-30-2027**	0.7629	0.7629

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

24	**10-1-2027**	**12-31-2027**	0.7843	0.7843
25	**1-1-2028**	**3-31-2028**	0.7665	0.7665
26	**4-1-2028**	**6-30-2028**	0.7462	0.7462
27	**7-1-2028**	**9-30-2028**	0.7544	0.7544
28	**10-1-2028**	**12-31-2028**	0.7749	0.7749
29	**1-1-2029**	**3-31-2029**	0.7489	0.7489
30	**4-1-2029**	**6-30-2029**	0.7376	0.7376
31	**7-1-2029**	**9-30-2029**	0.7457	0.7457
32	**10-1-2029**	**12-31-2029**	0.7656	0.7656
33	**1-1-2030**	**3-31-2030**	0.5937	0.5937
34	**4-1-2030**	**6-30-2030**	0.5813	0.5813
35	**7-1-2030**	**9-30-2030**	0.5877	0.5877
36	**10-1-2030**	**12-31-2030**	0.6069	0.6069
37	**1-1-2031**	**3-31-2031**	0.5864	0.5864
38	**4-1-2031**	**6-30-2031**	0.5746	0.5746
39	**7-1-2031**	**9-30-2031**	0.5809	0.5809
40	**10-1-2031**	**12-31-2031**	0.5995	0.5995
41	**1-1-2032**	**3-31-2032**	0.5870	0.5870
42	**4-1-2032**	**6-30-2032**	0.5691	0.5691
43	**7-1-2032**	**9-30-2032**	0.5754	0.5754
44	**10-1-2032**	**12-31-2032**	0.5935	0.5935
45	**1-1-2033**	**3-31-2033**	0.5753	0.5753
46	**4-1-2033**	**6-30-2033**	0.5642	0.5642
47	**7-1-2033**	**9-30-2033**	0.5705	0.5705
48	**10-1-2033**	**12-31-2033**	0.5881	0.5881
49	**1-1-2034**	**3-31-2034**	0.5707	0.5707
50	**4-1-2034**	**6-30-2034**	0.5599	0.5599
51	**7-1-2034**	**9-30-2034**	0.5660	0.5660
52	**10-1-2034**	**12-31-2034**	0.5834	0.5834

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

53	**1-1-2035**	**3-31-2035**	0.5386	0.5386
54	**4-1-2035**	**6-30-2035**	0.5277	0.5277
55	**7-1-2035**	**9-30-2035**	0.5335	0.5335
56	**10-1-2035**	**12-31-2035**	0.5506	0.5506
57	**1-1-2036**	**3-31-2036**	0.5446	0.5446
58	**4-1-2036**	**6-30-2036**	0.2622	0.2622
59	**7-1-2036**	**9-30-2036**	0.1989	0.1989
60	**10-1-2036**	**12-31-2036**	0.1990	0.1990
61	**1-1-2037**	**3-31-2037**	1.0997	1.0997
62	**4-1-2037**	**6-30-2037**	2.3073	2.3073
63	**7-1-2037**	**9-30-2037**	2.3326	2.3326
		Highest	2.3326	2.3326

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	5.6144	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Energy	0.0924	0.8170	0.5382	5.0400e-003		0.0638	0.0638		0.0638	0.0638	0.0000	1,613.4089	1,613.4089	0.1306	0.0305	1,625.7552
Mobile	3.8454	4.3660	37.4313	0.0744	10.3596	0.0421	10.4017	2.7724	0.0393	2.8117	0.0000	7,503.4427	7,503.4427	0.4354	0.3728	7,625.4091
Waste						0.0000	0.0000		0.0000	0.0000	174.1886	0.0000	174.1886	10.2943	0.0000	431.5448
Water						0.0000	0.0000		0.0000	0.0000	24.6444	54.0748	78.7192	2.5400	0.0608	160.3450
Total	**9.5522**	**5.2433**	**43.1922**	**0.0797**	**10.3596**	**0.1350**	**10.4946**	**2.7724**	**0.1323**	**2.9047**	**198.8330**	**9,179.4964**	**9,378.3293**	**13.4084**	**0.4641**	**9,851.8283**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

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	5.6144	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Energy	0.0810	0.7160	0.4691	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	1,450.7914	1,450.7914	0.1204	0.0274	1,461.9741
Mobile	3.2070	3.3423	28.6782	0.0504	6.8891	0.0298	6.9189	1.8436	0.0278	1.8714	0.0000	5,082.4596	5,082.4596	0.3411	0.2840	5,175.6032
Waste						0.0000	0.0000		0.0000	0.0000	174.1886	0.0000	174.1886	10.2943	0.0000	431.5448
Water						0.0000	0.0000		0.0000	0.0000	19.7155	45.3704	65.0860	2.0323	0.0487	130.4075
Total	**8.9024**	**4.1186**	**34.3701**	**0.0551**	**6.8891**	**0.1148**	**7.0039**	**1.8436**	**0.1128**	**1.9565**	**193.9041**	**6,587.1915**	**6,781.0956**	**12.7962**	**0.3601**	**7,208.3039**

	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	N20	CO2e
Percent Reduction	**6.80**	**21.45**	**20.43**	**30.90**	**33.50**	**14.96**	**33.26**	**33.50**	**14.68**	**32.64**	**2.48**	**28.24**	**27.69**	**4.57**	**22.41**	**26.83**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	10/7/2022	5	200	
2	Site Preparation	Site Preparation	10/8/2022	3/24/2023	5	120	
3	Grading	Grading	3/25/2023	5/31/2024	5	310	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	6/1/2024	4/18/2036	5	3100	
5	Paving	Paving	4/19/2036	2/20/2037	5	220	
6	Architectural Coating	Architectural Coating	2/21/2037	12/25/2037	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 178

Acres of Paving: 0

Residential Indoor: 1,572,210; Residential Outdoor: 524,070; Non-Residential Indoor: 636,743; Non-Residential Outdoor: 212,248; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
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
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
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	641.00	149.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	128.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9023	339.9023	0.0955	0.0000	342.2892
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**		**0.1243**	**0.1243**		**0.1155**	**0.1155**	**0.0000**	**339.9023**	**339.9023**	**0.0955**	**0.0000**	**342.2892**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	5.7300e-003	4.1300e-003	0.0452	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1300e-003	7.0000e-005	3.2000e-003	0.0000	9.9005	9.9005	3.8000e-004	3.3000e-004	10.0097
Total	**5.7300e-003**	**4.1300e-003**	**0.0452**	**1.1000e-004**	**0.0118**	**8.0000e-005**	**0.0119**	**3.1300e-003**	**7.0000e-005**	**3.2000e-003**	**0.0000**	**9.9005**	**9.9005**	**3.8000e-004**	**3.3000e-004**	**10.0097**

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	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9019	339.9019	0.0955	0.0000	342.2887
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**		**0.1243**	**0.1243**		**0.1155**	**0.1155**	**0.0000**	**339.9019**	**339.9019**	**0.0955**	**0.0000**	**342.2887**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	5.7300e-003	4.1300e-003	0.0452	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1300e-003	7.0000e-005	3.2000e-003	0.0000	9.9005	9.9005	3.8000e-004	3.3000e-004	10.0097
Total	**5.7300e-003**	**4.1300e-003**	**0.0452**	**1.1000e-004**	**0.0118**	**8.0000e-005**	**0.0119**	**3.1300e-003**	**7.0000e-005**	**3.2000e-003**	**0.0000**	**9.9005**	**9.9005**	**3.8000e-004**	**3.3000e-004**	**10.0097**

3.3 Site Preparation - 2022

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3182	100.3182	0.0324	0.0000	101.1293
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.5420**	**0.0484**	**0.5904**	**0.2979**	**0.0445**	**0.3424**	**0.0000**	**100.3182**	**100.3182**	**0.0324**	**0.0000**	**101.1293**

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3.3 Site Preparation - 2022

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	2.0600e-003	1.4900e-003	0.0163	4.0000e-005	4.2400e-003	3.0000e-005	4.2700e-003	1.1300e-003	3.0000e-005	1.1500e-003	0.0000	3.5642	3.5642	1.4000e-004	1.2000e-004	3.6035
Total	**2.0600e-003**	**1.4900e-003**	**0.0163**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2700e-003**	**1.1300e-003**	**3.0000e-005**	**1.1500e-003**	**0.0000**	**3.5642**	**3.5642**	**1.4000e-004**	**1.2000e-004**	**3.6035**

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3181	100.3181	0.0324	0.0000	101.1292
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.5420**	**0.0484**	**0.5904**	**0.2979**	**0.0445**	**0.3424**	**0.0000**	**100.3181**	**100.3181**	**0.0324**	**0.0000**	**101.1292**

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3.3 Site Preparation - 2022

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	2.0600e-003	1.4900e-003	0.0163	4.0000e-005	4.2400e-003	3.0000e-005	4.2700e-003	1.1300e-003	3.0000e-005	1.1500e-003	0.0000	3.5642	3.5642	1.4000e-004	1.2000e-004	3.6035
Total	**2.0600e-003**	**1.4900e-003**	**0.0163**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2700e-003**	**1.1300e-003**	**3.0000e-005**	**1.1500e-003**	**0.0000**	**3.5642**	**3.5642**	**1.4000e-004**	**1.2000e-004**	**3.6035**

3.3 Site Preparation - 2023

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3521	100.3521	0.0325	0.0000	101.1635
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.5420**	**0.0380**	**0.5800**	**0.2979**	**0.0349**	**0.3329**	**0.0000**	**100.3521**	**100.3521**	**0.0325**	**0.0000**	**101.1635**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

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	1.9100e-003	1.3100e-003	0.0149	4.0000e-005	4.2400e-003	3.0000e-005	4.2600e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.4737	3.4737	1.2000e-004	1.1000e-004	3.5097
Total	**1.9100e-003**	**1.3100e-003**	**0.0149**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2600e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4737**	**3.4737**	**1.2000e-004**	**1.1000e-004**	**3.5097**

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3520	100.3520	0.0325	0.0000	101.1634
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.5420**	**0.0380**	**0.5800**	**0.2979**	**0.0349**	**0.3329**	**0.0000**	**100.3520**	**100.3520**	**0.0325**	**0.0000**	**101.1634**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

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	1.9100e-003	1.3100e-003	0.0149	4.0000e-005	4.2400e-003	3.0000e-005	4.2600e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.4737	3.4737	1.2000e-004	1.1000e-004	3.5097
Total	**1.9100e-003**	**1.3100e-003**	**0.0149**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2600e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4737**	**3.4737**	**1.2000e-004**	**1.1000e-004**	**3.5097**

3.4 Grading - 2023

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					0.6966	0.0000	0.6966	0.3412	0.0000	0.3412	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3322	3.4516	2.8051	6.2100e-003		0.1425	0.1425		0.1311	0.1311	0.0000	545.3521	545.3521	0.1764	0.0000	549.7615
Total	**0.3322**	**3.4516**	**2.8051**	**6.2100e-003**	**0.6966**	**0.1425**	**0.8390**	**0.3412**	**0.1311**	**0.4723**	**0.0000**	**545.3521**	**545.3521**	**0.1764**	**0.0000**	**549.7615**

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3.4 Grading - 2023

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	7.0800e-003	4.8500e-003	0.0551	1.4000e-004	0.0157	1.0000e-004	0.0158	4.1800e-003	9.0000e-005	4.2700e-003	0.0000	12.8654	12.8654	4.5000e-004	4.1000e-004	12.9990
Total	**7.0800e-003**	**4.8500e-003**	**0.0551**	**1.4000e-004**	**0.0157**	**1.0000e-004**	**0.0158**	**4.1800e-003**	**9.0000e-005**	**4.2700e-003**	**0.0000**	**12.8654**	**12.8654**	**4.5000e-004**	**4.1000e-004**	**12.9990**

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					0.6966	0.0000	0.6966	0.3412	0.0000	0.3412	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3322	3.4516	2.8051	6.2100e-003		0.1425	0.1425		0.1311	0.1311	0.0000	545.3514	545.3514	0.1764	0.0000	549.7609
Total	**0.3322**	**3.4516**	**2.8051**	**6.2100e-003**	**0.6966**	**0.1425**	**0.8390**	**0.3412**	**0.1311**	**0.4723**	**0.0000**	**545.3514**	**545.3514**	**0.1764**	**0.0000**	**549.7609**

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3.4 Grading - 2023

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	7.0800e-003	4.8500e-003	0.0551	1.4000e-004	0.0157	1.0000e-004	0.0158	4.1800e-003	9.0000e-005	4.2700e-003	0.0000	12.8654	12.8654	4.5000e-004	4.1000e-004	12.9990
Total	**7.0800e-003**	**4.8500e-003**	**0.0551**	**1.4000e-004**	**0.0157**	**1.0000e-004**	**0.0158**	**4.1800e-003**	**9.0000e-005**	**4.2700e-003**	**0.0000**	**12.8654**	**12.8654**	**4.5000e-004**	**4.1000e-004**	**12.9990**

3.4 Grading - 2024

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					0.4256	0.0000	0.4256	0.1923	0.0000	0.1923	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1770	1.7807	1.5248	3.4100e-003		0.0735	0.0735		0.0676	0.0676	0.0000	299.8574	299.8574	0.0970	0.0000	302.2819
Total	**0.1770**	**1.7807**	**1.5248**	**3.4100e-003**	**0.4256**	**0.0735**	**0.4991**	**0.1923**	**0.0676**	**0.2598**	**0.0000**	**299.8574**	**299.8574**	**0.0970**	**0.0000**	**302.2819**

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3.4 Grading - 2024

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	3.6200e-003	2.3700e-003	0.0279	7.0000e-005	8.6300e-003	5.0000e-005	8.6800e-003	2.3000e-003	5.0000e-005	2.3400e-003	0.0000	6.9015	6.9015	2.3000e-004	2.1000e-004	6.9693
Total	**3.6200e-003**	**2.3700e-003**	**0.0279**	**7.0000e-005**	**8.6300e-003**	**5.0000e-005**	**8.6800e-003**	**2.3000e-003**	**5.0000e-005**	**2.3400e-003**	**0.0000**	**6.9015**	**6.9015**	**2.3000e-004**	**2.1000e-004**	**6.9693**

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					0.4256	0.0000	0.4256	0.1923	0.0000	0.1923	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1770	1.7807	1.5248	3.4100e-003		0.0735	0.0735		0.0676	0.0676	0.0000	299.8570	299.8570	0.0970	0.0000	302.2815
Total	**0.1770**	**1.7807**	**1.5248**	**3.4100e-003**	**0.4256**	**0.0735**	**0.4991**	**0.1923**	**0.0676**	**0.2598**	**0.0000**	**299.8570**	**299.8570**	**0.0970**	**0.0000**	**302.2815**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

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	3.6200e-003	2.3700e-003	0.0279	7.0000e-005	8.6300e-003	5.0000e-005	8.6800e-003	2.3000e-003	5.0000e-005	2.3400e-003	0.0000	6.9015	6.9015	2.3000e-004	2.1000e-004	6.9693
Total	**3.6200e-003**	**2.3700e-003**	**0.0279**	**7.0000e-005**	**8.6300e-003**	**5.0000e-005**	**8.6800e-003**	**2.3000e-003**	**5.0000e-005**	**2.3400e-003**	**0.0000**	**6.9015**	**6.9015**	**2.3000e-004**	**2.1000e-004**	**6.9693**

3.5 Building Construction - 2024

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	0.1118	1.0217	1.2287	2.0500e-003		0.0466	0.0466		0.0438	0.0438	0.0000	176.2053	176.2053	0.0417	0.0000	177.2470
Total	**0.1118**	**1.0217**	**1.2287**	**2.0500e-003**		**0.0466**	**0.0466**		**0.0438**	**0.0438**	**0.0000**	**176.2053**	**176.2053**	**0.0417**	**0.0000**	**177.2470**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0118	0.5326	0.1462	2.2600e-003	0.0735	2.8500e-003	0.0764	0.0213	2.7300e-003	0.0240	0.0000	219.7041	219.7041	4.1400e-003	0.0332	229.7121
Worker	0.1604	0.1048	1.2362	3.2700e-003	0.3823	2.2000e-003	0.3845	0.1018	2.0300e-003	0.1038	0.0000	305.6495	305.6495	9.9900e-003	9.2300e-003	308.6509
Total	**0.1722**	**0.6374**	**1.3824**	**5.5300e-003**	**0.4558**	**5.0500e-003**	**0.4609**	**0.1230**	**4.7600e-003**	**0.1278**	**0.0000**	**525.3536**	**525.3536**	**0.0141**	**0.0425**	**538.3629**

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	0.1118	1.0217	1.2287	2.0500e-003		0.0466	0.0466		0.0438	0.0438	0.0000	176.2051	176.2051	0.0417	0.0000	177.2468
Total	**0.1118**	**1.0217**	**1.2287**	**2.0500e-003**		**0.0466**	**0.0466**		**0.0438**	**0.0438**	**0.0000**	**176.2051**	**176.2051**	**0.0417**	**0.0000**	**177.2468**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0118	0.5326	0.1462	2.2600e-003	0.0735	2.8500e-003	0.0764	0.0213	2.7300e-003	0.0240	0.0000	219.7041	219.7041	4.1400e-003	0.0332	229.7121
Worker	0.1604	0.1048	1.2362	3.2700e-003	0.3823	2.2000e-003	0.3845	0.1018	2.0300e-003	0.1038	0.0000	305.6495	305.6495	9.9900e-003	9.2300e-003	308.6509
Total	**0.1722**	**0.6374**	**1.3824**	**5.5300e-003**	**0.4558**	**5.0500e-003**	**0.4609**	**0.1230**	**4.7600e-003**	**0.1278**	**0.0000**	**525.3536**	**525.3536**	**0.0141**	**0.0425**	**538.3629**

3.5 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0195	0.9050	0.2449	3.8100e-003	0.1262	4.8400e-003	0.1311	0.0365	4.6300e-003	0.0411	0.0000	370.5717	370.5717	7.2600e-003	0.0561	387.4554
Worker	0.2571	0.1608	1.9698	5.4200e-003	0.6565	3.5900e-003	0.6601	0.1747	3.3100e-003	0.1781	0.0000	512.2927	512.2927	0.0155	0.0147	517.0729
Total	**0.2766**	**1.0658**	**2.2147**	**9.2300e-003**	**0.7827**	**8.4300e-003**	**0.7911**	**0.2112**	**7.9400e-003**	**0.2192**	**0.0000**	**882.8643**	**882.8643**	**0.0228**	**0.0708**	**904.5282**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0195	0.9050	0.2449	3.8100e-003	0.1262	4.8400e-003	0.1311	0.0365	4.6300e-003	0.0411	0.0000	370.5717	370.5717	7.2600e-003	0.0561	387.4554
Worker	0.2571	0.1608	1.9698	5.4200e-003	0.6565	3.5900e-003	0.6601	0.1747	3.3100e-003	0.1781	0.0000	512.2927	512.2927	0.0155	0.0147	517.0729
Total	**0.2766**	**1.0658**	**2.2147**	**9.2300e-003**	**0.7827**	**8.4300e-003**	**0.7911**	**0.2112**	**7.9400e-003**	**0.2192**	**0.0000**	**882.8643**	**882.8643**	**0.0228**	**0.0708**	**904.5282**

3.5 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

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	0.0188	0.8935	0.2398	3.7400e-003	0.1262	4.7500e-003	0.1310	0.0365	4.5500e-003	0.0410	0.0000	363.8214	363.8214	7.4300e-003	0.0550	380.3994
Worker	0.2408	0.1449	1.8392	5.2500e-003	0.6565	3.4000e-003	0.6599	0.1747	3.1300e-003	0.1779	0.0000	500.1845	500.1845	0.0141	0.0138	504.6498
Total	**0.2596**	**1.0384**	**2.0790**	**8.9900e-003**	**0.7827**	**8.1500e-003**	**0.7909**	**0.2112**	**7.6800e-003**	**0.2189**	**0.0000**	**864.0058**	**864.0058**	**0.0215**	**0.0688**	**885.0492**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

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	0.0188	0.8935	0.2398	3.7400e-003	0.1262	4.7500e-003	0.1310	0.0365	4.5500e-003	0.0410	0.0000	363.8214	363.8214	7.4300e-003	0.0550	380.3994
Worker	0.2408	0.1449	1.8392	5.2500e-003	0.6565	3.4000e-003	0.6599	0.1747	3.1300e-003	0.1779	0.0000	500.1845	500.1845	0.0141	0.0138	504.6498
Total	**0.2596**	**1.0384**	**2.0790**	**8.9900e-003**	**0.7827**	**8.1500e-003**	**0.7909**	**0.2112**	**7.6800e-003**	**0.2189**	**0.0000**	**864.0058**	**864.0058**	**0.0215**	**0.0688**	**885.0492**

3.5 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

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	0.0182	0.8825	0.2356	3.6600e-003	0.1262	4.6800e-003	0.1309	0.0365	4.4700e-003	0.0410	0.0000	356.6205	356.6205	7.5600e-003	0.0539	372.8739
Worker	0.2259	0.1313	1.7277	5.0900e-003	0.6565	3.1800e-003	0.6597	0.1747	2.9300e-003	0.1777	0.0000	489.1099	489.1099	0.0128	0.0130	493.3065
Total	**0.2441**	**1.0138**	**1.9633**	**8.7500e-003**	**0.7827**	**7.8600e-003**	**0.7905**	**0.2112**	**7.4000e-003**	**0.2186**	**0.0000**	**845.7304**	**845.7304**	**0.0204**	**0.0669**	**866.1804**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

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	0.0182	0.8825	0.2356	3.6600e-003	0.1262	4.6800e-003	0.1309	0.0365	4.4700e-003	0.0410	0.0000	356.6205	356.6205	7.5600e-003	0.0539	372.8739
Worker	0.2259	0.1313	1.7277	5.0900e-003	0.6565	3.1800e-003	0.6597	0.1747	2.9300e-003	0.1777	0.0000	489.1099	489.1099	0.0128	0.0130	493.3065
Total	**0.2441**	**1.0138**	**1.9633**	**8.7500e-003**	**0.7827**	**7.8600e-003**	**0.7905**	**0.2112**	**7.4000e-003**	**0.2186**	**0.0000**	**845.7304**	**845.7304**	**0.0204**	**0.0669**	**866.1804**

3.5 Building Construction - 2028

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

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	0.0176	0.8704	0.2314	3.5700e-003	0.1257	4.5900e-003	0.1303	0.0363	4.3900e-003	0.0407	0.0000	348.5076	348.5076	7.6700e-003	0.0527	364.3930
Worker	0.2110	0.1192	1.6279	4.9300e-003	0.6540	2.9600e-003	0.6569	0.1741	2.7300e-003	0.1768	0.0000	477.2814	477.2814	0.0117	0.0123	481.2340
Total	**0.2286**	**0.9897**	**1.8593**	**8.5000e-003**	**0.7797**	**7.5500e-003**	**0.7872**	**0.2104**	**7.1200e-003**	**0.2175**	**0.0000**	**825.7890**	**825.7890**	**0.0194**	**0.0649**	**845.6270**

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

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	0.0176	0.8704	0.2314	3.5700e-003	0.1257	4.5900e-003	0.1303	0.0363	4.3900e-003	0.0407	0.0000	348.5076	348.5076	7.6700e-003	0.0527	364.3930
Worker	0.2110	0.1192	1.6279	4.9300e-003	0.6540	2.9600e-003	0.6569	0.1741	2.7300e-003	0.1768	0.0000	477.2814	477.2814	0.0117	0.0123	481.2340
Total	**0.2286**	**0.9897**	**1.8593**	**8.5000e-003**	**0.7797**	**7.5500e-003**	**0.7872**	**0.2104**	**7.1200e-003**	**0.2175**	**0.0000**	**825.7890**	**825.7890**	**0.0194**	**0.0649**	**845.6270**

3.5 Building Construction - 2029

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

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	0.0172	0.8632	0.2293	3.5100e-003	0.1262	4.5300e-003	0.1307	0.0365	4.3400e-003	0.0408	0.0000	342.8427	342.8427	7.8300e-003	0.0518	358.4720
Worker	0.1981	0.1096	1.5513	4.8200e-003	0.6565	2.7800e-003	0.6593	0.1747	2.5600e-003	0.1773	0.0000	470.0410	470.0410	0.0108	0.0117	473.8102
Total	**0.2153**	**0.9728**	**1.7807**	**8.3300e-003**	**0.7827**	**7.3100e-003**	**0.7900**	**0.2112**	**6.9000e-003**	**0.2181**	**0.0000**	**812.8837**	**812.8837**	**0.0186**	**0.0635**	**832.2821**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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3.5 Building Construction - 2029

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	0.0172	0.8632	0.2293	3.5100e-003	0.1262	4.5300e-003	0.1307	0.0365	4.3400e-003	0.0408	0.0000	342.8427	342.8427	7.8300e-003	0.0518	358.4720
Worker	0.1981	0.1096	1.5513	4.8200e-003	0.6565	2.7800e-003	0.6593	0.1747	2.5600e-003	0.1773	0.0000	470.0410	470.0410	0.0108	0.0117	473.8102
Total	**0.2153**	**0.9728**	**1.7807**	**8.3300e-003**	**0.7827**	**7.3100e-003**	**0.7900**	**0.2112**	**6.9000e-003**	**0.2181**	**0.0000**	**812.8837**	**812.8837**	**0.0186**	**0.0635**	**832.2821**

3.5 Building Construction - 2030

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

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	0.0168	0.8564	0.2274	3.4500e-003	0.1262	4.4800e-003	0.1307	0.0365	4.2900e-003	0.0408	0.0000	336.8073	336.8073	7.9500e-003	0.0509	352.1635
Worker	0.1852	0.1009	1.4812	4.7100e-003	0.6565	2.5900e-003	0.6591	0.1747	2.3900e-003	0.1771	0.0000	461.9543	461.9543	9.9500e-003	0.0112	465.5534
Total	**0.2020**	**0.9573**	**1.7086**	**8.1600e-003**	**0.7827**	**7.0700e-003**	**0.7897**	**0.2112**	**6.6800e-003**	**0.2179**	**0.0000**	**798.7616**	**798.7616**	**0.0179**	**0.0621**	**817.7169**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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3.5 Building Construction - 2030

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	0.0168	0.8564	0.2274	3.4500e-003	0.1262	4.4800e-003	0.1307	0.0365	4.2900e-003	0.0408	0.0000	336.8073	336.8073	7.9500e-003	0.0509	352.1635
Worker	0.1852	0.1009	1.4812	4.7100e-003	0.6565	2.5900e-003	0.6591	0.1747	2.3900e-003	0.1771	0.0000	461.9543	461.9543	9.9500e-003	0.0112	465.5534
Total	**0.2020**	**0.9573**	**1.7086**	**8.1600e-003**	**0.7827**	**7.0700e-003**	**0.7897**	**0.2112**	**6.6800e-003**	**0.2179**	**0.0000**	**798.7616**	**798.7616**	**0.0179**	**0.0621**	**817.7169**

3.5 Building Construction - 2031

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

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	0.0165	0.8510	0.2261	3.3900e-003	0.1262	4.4400e-003	0.1306	0.0365	4.2500e-003	0.0407	0.0000	331.4423	331.4423	8.0800e-003	0.0500	346.5566
Worker	0.1716	0.0928	1.4170	4.6100e-003	0.6565	2.4200e-003	0.6589	0.1747	2.2300e-003	0.1770	0.0000	454.6372	454.6372	9.1700e-003	0.0108	458.0827
Total	**0.1881**	**0.9438**	**1.6430**	**8.0000e-003**	**0.7827**	**6.8600e-003**	**0.7895**	**0.2112**	**6.4800e-003**	**0.2177**	**0.0000**	**786.0795**	**786.0795**	**0.0173**	**0.0608**	**804.6393**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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3.5 Building Construction - 2031

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	0.0165	0.8510	0.2261	3.3900e-003	0.1262	4.4400e-003	0.1306	0.0365	4.2500e-003	0.0407	0.0000	331.4423	331.4423	8.0800e-003	0.0500	346.5566
Worker	0.1716	0.0928	1.4170	4.6100e-003	0.6565	2.4200e-003	0.6589	0.1747	2.2300e-003	0.1770	0.0000	454.6372	454.6372	9.1700e-003	0.0108	458.0827
Total	**0.1881**	**0.9438**	**1.6430**	**8.0000e-003**	**0.7827**	**6.8600e-003**	**0.7895**	**0.2112**	**6.4800e-003**	**0.2177**	**0.0000**	**786.0795**	**786.0795**	**0.0173**	**0.0608**	**804.6393**

3.5 Building Construction - 2032

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

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	0.0163	0.8501	0.2262	3.3600e-003	0.1267	4.4300e-003	0.1311	0.0366	4.2300e-003	0.0408	0.0000	327.9605	327.9605	8.2100e-003	0.0495	342.9192
Worker	0.1609	0.0867	1.3687	4.5300e-003	0.6590	2.2700e-003	0.6613	0.1754	2.0900e-003	0.1775	0.0000	449.8879	449.8879	8.5300e-003	0.0105	453.2219
Total	**0.1772**	**0.9368**	**1.5949**	**7.8900e-003**	**0.7857**	**6.7000e-003**	**0.7924**	**0.2120**	**6.3200e-003**	**0.2183**	**0.0000**	**777.8484**	**777.8484**	**0.0167**	**0.0600**	**796.1411**

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

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3.5 Building Construction - 2032

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	0.0163	0.8501	0.2262	3.3600e-003	0.1267	4.4300e-003	0.1311	0.0366	4.2300e-003	0.0408	0.0000	327.9605	327.9605	8.2100e-003	0.0495	342.9192
Worker	0.1609	0.0867	1.3687	4.5300e-003	0.6590	2.2700e-003	0.6613	0.1754	2.0900e-003	0.1775	0.0000	449.8879	449.8879	8.5300e-003	0.0105	453.2219
Total	**0.1772**	**0.9368**	**1.5949**	**7.8900e-003**	**0.7857**	**6.7000e-003**	**0.7924**	**0.2120**	**6.3200e-003**	**0.2183**	**0.0000**	**777.8484**	**777.8484**	**0.0167**	**0.0600**	**796.1411**

3.5 Building Construction - 2033

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

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	0.0160	0.8397	0.2240	3.2900e-003	0.1257	4.3600e-003	0.1300	0.0363	4.1700e-003	0.0405	0.0000	321.2113	321.2113	8.2500e-003	0.0485	335.8657
Worker	0.1494	0.0807	1.3118	4.4100e-003	0.6540	2.1100e-003	0.6561	0.1741	1.9400e-003	0.1760	0.0000	440.7311	440.7311	7.8700e-003	0.0101	443.9351
Total	**0.1654**	**0.9204**	**1.5358**	**7.7000e-003**	**0.7796**	**6.4700e-003**	**0.7861**	**0.2104**	**6.1100e-003**	**0.2165**	**0.0000**	**761.9424**	**761.9424**	**0.0161**	**0.0586**	**779.8008**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

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	0.0160	0.8397	0.2240	3.2900e-003	0.1257	4.3600e-003	0.1300	0.0363	4.1700e-003	0.0405	0.0000	321.2113	321.2113	8.2500e-003	0.0485	335.8657
Worker	0.1494	0.0807	1.3118	4.4100e-003	0.6540	2.1100e-003	0.6561	0.1741	1.9400e-003	0.1760	0.0000	440.7311	440.7311	7.8700e-003	0.0101	443.9351
Total	**0.1654**	**0.9204**	**1.5358**	**7.7000e-003**	**0.7796**	**6.4700e-003**	**0.7861**	**0.2104**	**6.1100e-003**	**0.2165**	**0.0000**	**761.9424**	**761.9424**	**0.0161**	**0.0586**	**779.8008**

3.5 Building Construction - 2034

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

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	0.0159	0.8357	0.2238	3.2400e-003	0.1257	4.3300e-003	0.1300	0.0363	4.1400e-003	0.0405	0.0000	317.2286	317.2286	8.3400e-003	0.0479	331.7048
Worker	0.1404	0.0764	1.2707	4.3400e-003	0.6540	1.9800e-003	0.6560	0.1741	1.8200e-003	0.1759	0.0000	435.6734	435.6734	7.3400e-003	9.8400e-003	438.7904
Total	**0.1563**	**0.9120**	**1.4944**	**7.5800e-003**	**0.7796**	**6.3100e-003**	**0.7860**	**0.2104**	**5.9600e-003**	**0.2164**	**0.0000**	**752.9020**	**752.9020**	**0.0157**	**0.0577**	**770.4952**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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3.5 Building Construction - 2034

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	0.0159	0.8357	0.2238	3.2400e-003	0.1257	4.3300e-003	0.1300	0.0363	4.1400e-003	0.0405	0.0000	317.2286	317.2286	8.3400e-003	0.0479	331.7048
Worker	0.1404	0.0764	1.2707	4.3400e-003	0.6540	1.9800e-003	0.6560	0.1741	1.8200e-003	0.1759	0.0000	435.6734	435.6734	7.3400e-003	9.8400e-003	438.7904
Total	**0.1563**	**0.9120**	**1.4944**	**7.5800e-003**	**0.7796**	**6.3100e-003**	**0.7860**	**0.2104**	**5.9600e-003**	**0.2164**	**0.0000**	**752.9020**	**752.9020**	**0.0157**	**0.0577**	**770.4952**

3.5 Building Construction - 2035

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

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	0.0158	0.8343	0.2244	3.2200e-003	0.1262	4.3100e-003	0.1305	0.0365	4.1200e-003	0.0406	0.0000	314.7916	314.7916	8.4300e-003	0.0475	329.1589
Worker	0.1328	0.0732	1.2400	4.3000e-003	0.6565	1.8600e-003	0.6584	0.1747	1.7100e-003	0.1765	0.0000	432.9521	432.9521	6.9100e-003	9.6800e-003	436.0100
Total	**0.1486**	**0.9075**	**1.4645**	**7.5200e-003**	**0.7826**	**6.1700e-003**	**0.7888**	**0.2112**	**5.8300e-003**	**0.2170**	**0.0000**	**747.7437**	**747.7437**	**0.0153**	**0.0572**	**765.1689**

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

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	0.0158	0.8343	0.2244	3.2200e-003	0.1262	4.3100e-003	0.1305	0.0365	4.1200e-003	0.0406	0.0000	314.7916	314.7916	8.4300e-003	0.0475	329.1589
Worker	0.1328	0.0732	1.2400	4.3000e-003	0.6565	1.8600e-003	0.6584	0.1747	1.7100e-003	0.1765	0.0000	432.9521	432.9521	6.9100e-003	9.6800e-003	436.0100
Total	**0.1486**	**0.9075**	**1.4645**	**7.5200e-003**	**0.7826**	**6.1700e-003**	**0.7888**	**0.2112**	**5.8300e-003**	**0.2170**	**0.0000**	**747.7437**	**747.7437**	**0.0153**	**0.0572**	**765.1689**

3.5 Building Construction - 2036

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	0.0481	0.2829	0.6367	1.2200e-003		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	103.8301	103.8301	3.8700e-003	0.0000	103.9268
Total	**0.0481**	**0.2829**	**0.6367**	**1.2200e-003**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**103.8301**	**103.8301**	**3.8700e-003**	**0.0000**	**103.9268**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

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	4.7700e-003	0.2525	0.0679	9.7000e-004	0.0382	1.3000e-003	0.0395	0.0110	1.2500e-003	0.0123	0.0000	95.2818	95.2818	2.5500e-003	0.0144	99.6305
Worker	0.0402	0.0222	0.3753	1.3000e-003	0.1987	5.6000e-004	0.1993	0.0529	5.2000e-004	0.0534	0.0000	131.0468	131.0468	2.0900e-003	2.9300e-003	131.9724
Total	**0.0450**	**0.2747**	**0.4433**	**2.2700e-003**	**0.2369**	**1.8600e-003**	**0.2388**	**0.0639**	**1.7700e-003**	**0.0657**	**0.0000**	**226.3286**	**226.3286**	**4.6400e-003**	**0.0173**	**231.6029**

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	0.0481	0.2829	0.6367	1.2200e-003		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	103.8300	103.8300	3.8700e-003	0.0000	103.9267
Total	**0.0481**	**0.2829**	**0.6367**	**1.2200e-003**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**103.8300**	**103.8300**	**3.8700e-003**	**0.0000**	**103.9267**

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3.5 Building Construction - 2036

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	4.7700e-003	0.2525	0.0679	9.7000e-004	0.0382	1.3000e-003	0.0395	0.0110	1.2500e-003	0.0123	0.0000	95.2818	95.2818	2.5500e-003	0.0144	99.6305
Worker	0.0402	0.0222	0.3753	1.3000e-003	0.1987	5.6000e-004	0.1993	0.0529	5.2000e-004	0.0534	0.0000	131.0468	131.0468	2.0900e-003	2.9300e-003	131.9724
Total	**0.0450**	**0.2747**	**0.4433**	**2.2700e-003**	**0.2369**	**1.8600e-003**	**0.2388**	**0.0639**	**1.7700e-003**	**0.0657**	**0.0000**	**226.3286**	**226.3286**	**4.6400e-003**	**0.0173**	**231.6029**

3.6 Paving - 2036

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	0.1044	0.4462	1.4476	2.5700e-003		0.0172	0.0172		0.0172	0.0172	0.0000	220.5106	220.5106	8.4900e-003	0.0000	220.7227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**0.4462**	**1.4476**	**2.5700e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**220.5106**	**220.5106**	**8.4900e-003**	**0.0000**	**220.7227**

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3.6 Paving - 2036

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	2.1800e-003	1.2000e-003	0.0204	7.0000e-005	0.0108	3.0000e-005	0.0108	2.8700e-003	3.0000e-005	2.9000e-003	0.0000	7.1037	7.1037	1.1000e-004	1.6000e-004	7.1539
Total	**2.1800e-003**	**1.2000e-003**	**0.0204**	**7.0000e-005**	**0.0108**	**3.0000e-005**	**0.0108**	**2.8700e-003**	**3.0000e-005**	**2.9000e-003**	**0.0000**	**7.1037**	**7.1037**	**1.1000e-004**	**1.6000e-004**	**7.1539**

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	0.1044	0.4462	1.4476	2.5700e-003		0.0172	0.0172		0.0172	0.0172	0.0000	220.5103	220.5103	8.4900e-003	0.0000	220.7225
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**0.4462**	**1.4476**	**2.5700e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**220.5103**	**220.5103**	**8.4900e-003**	**0.0000**	**220.7225**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

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	2.1800e-003	1.2000e-003	0.0204	7.0000e-005	0.0108	3.0000e-005	0.0108	2.8700e-003	3.0000e-005	2.9000e-003	0.0000	7.1037	7.1037	1.1000e-004	1.6000e-004	7.1539
Total	**2.1800e-003**	**1.2000e-003**	**0.0204**	**7.0000e-005**	**0.0108**	**3.0000e-005**	**0.0108**	**2.8700e-003**	**3.0000e-005**	**2.9000e-003**	**0.0000**	**7.1037**	**7.1037**	**1.1000e-004**	**1.6000e-004**	**7.1539**

3.6 Paving - 2037

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	0.0211	0.0902	0.2927	5.2000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6270
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0211**	**0.0902**	**0.2927**	**5.2000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6270**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2037

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	4.4000e-004	2.4000e-004	4.1100e-003	1.0000e-005	2.1800e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4363	1.4363	2.0000e-005	3.0000e-005	1.4464
Total	**4.4000e-004**	**2.4000e-004**	**4.1100e-003**	**1.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.4363**	**1.4363**	**2.0000e-005**	**3.0000e-005**	**1.4464**

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	0.0211	0.0902	0.2927	5.2000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6269
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0211**	**0.0902**	**0.2927**	**5.2000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6269**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2037

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	4.4000e-004	2.4000e-004	4.1100e-003	1.0000e-005	2.1800e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4363	1.4363	2.0000e-005	3.0000e-005	1.4464
Total	**4.4000e-004**	**2.4000e-004**	**4.1100e-003**	**1.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.4363**	**1.4363**	**2.0000e-005**	**3.0000e-005**	**1.4464**

3.7 Architectural Coating - 2037

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	7.6789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0834	0.1974	3.3000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total	**7.6918**	**0.0834**	**0.1974**	**3.3000e-004**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

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3.7 Architectural Coating - 2037

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	0.0224	0.0123	0.2087	7.2000e-004	0.1105	3.1000e-004	0.1108	0.0294	2.9000e-004	0.0297	0.0000	72.8742	72.8742	1.1600e-003	1.6300e-003	73.3889
Total	**0.0224**	**0.0123**	**0.2087**	**7.2000e-004**	**0.1105**	**3.1000e-004**	**0.1108**	**0.0294**	**2.9000e-004**	**0.0297**	**0.0000**	**72.8742**	**72.8742**	**1.1600e-003**	**1.6300e-003**	**73.3889**

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	7.6789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0834	0.1974	3.3000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total	**7.6918**	**0.0834**	**0.1974**	**3.3000e-004**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

3.7 Architectural Coating - 2037

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	0.0224	0.0123	0.2087	7.2000e-004	0.1105	3.1000e-004	0.1108	0.0294	2.9000e-004	0.0297	0.0000	72.8742	72.8742	1.1600e-003	1.6300e-003	73.3889
Total	**0.0224**	**0.0123**	**0.2087**	**7.2000e-004**	**0.1105**	**3.1000e-004**	**0.1108**	**0.0294**	**2.9000e-004**	**0.0297**	**0.0000**	**72.8742**	**72.8742**	**1.1600e-003**	**1.6300e-003**	**73.3889**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	3.2070	3.3423	28.6782	0.0504	6.8891	0.0298	6.9189	1.8436	0.0278	1.8714	0.0000	5,082.4596	5,082.4596	0.3411	0.2840	5,175.6032
Unmitigated	3.8454	4.3660	37.4313	0.0744	10.3596	0.0421	10.4017	2.7724	0.0393	2.8117	0.0000	7,503.4427	7,503.4427	0.4354	0.3728	7,625.4091

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,298.51	1,444.89	1114.36	2,986,595	1,986,086
Apartments Mid Rise	2,842.30	2,565.00	2135.19	6,239,788	4,149,459
General Office Building	905.16	205.27	64.30	1,637,109	1,088,677
Hotel	1,133.25	1,111.59	808.43	2,059,056	1,369,272
Recreational Swimming Pool	868.84	274.12	410.38	1,298,325	863,386
Single Family Housing	939.56	950.15	852.22	2,144,695	1,426,222
Strip Mall	8,424.36	7,989.75	3886.22	11,879,763	7,900,043
Total	16,411.98	14,540.77	9,271.10	28,245,331	18,783,145

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Apartments Mid Rise	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
General Office Building	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Hotel	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Recreational Swimming Pool	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Single Family Housing	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Strip Mall	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	649.1700	649.1700	0.1050	0.0127	655.5892
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	699.1414	699.1414	0.1131	0.0137	706.0547
NaturalGas Mitigated	0.0810	0.7160	0.4691	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	801.6213	801.6213	0.0154	0.0147	806.3850
NaturalGas Unmitigated	0.0924	0.8170	0.5382	5.0400e-003		0.0638	0.0638		0.0638	0.0638	0.0000	914.2674	914.2674	0.0175	0.0168	919.7005

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	1.54924e+006	8.3500e-003	0.0714	0.0304	4.6000e-004		5.7700e-003	5.7700e-003		5.7700e-003	5.7700e-003	0.0000	82.6735	82.6735	1.5800e-003	1.5200e-003	83.1648
Apartments Mid Rise	3.86395e+006	0.0208	0.1780	0.0758	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.1953	206.1953	3.9500e-003	3.7800e-003	207.4206
General Office Building	1.33206e+006	7.1800e-003	0.0653	0.0549	3.9000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	71.0839	71.0839	1.3600e-003	1.3000e-003	71.5063
Hotel	7.65088e+006	0.0413	0.3750	0.3150	2.2500e-003		0.0285	0.0285		0.0285	0.0285	0.0000	408.2800	408.2800	7.8300e-003	7.4900e-003	410.7062
Recreational Swimming Pool	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
Single Family Housing	2.3434e+006	0.0126	0.1080	0.0460	6.9000e-004		8.7300e-003	8.7300e-003		8.7300e-003	8.7300e-003	0.0000	125.0527	125.0527	2.4000e-003	2.2900e-003	125.7959
Strip Mall	393188	2.1200e-003	0.0193	0.0162	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003	0.0000	20.9820	20.9820	4.0000e-004	3.8000e-004	21.1067
Total		**0.0924**	**0.8170**	**0.5382**	**5.0500e-003**		**0.0638**	**0.0638**		**0.0638**	**0.0638**	**0.0000**	**914.2674**	**914.2674**	**0.0175**	**0.0168**	**919.7005**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

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
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.39116e+006	7.5000e-003	0.0641	0.0273	4.1000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	74.2374	74.2374	1.4200e-003	1.3600e-003	74.6786
Apartments Mid Rise	3.50253e+006	0.0189	0.1614	0.0687	1.0300e-003		0.0131	0.0131		0.0131	0.0131	0.0000	186.9083	186.9083	3.5800e-003	3.4300e-003	188.0190
General Office Building	1.13299e+006	6.1100e-003	0.0555	0.0467	3.3000e-004		4.2200e-003	4.2200e-003		4.2200e-003	4.2200e-003	0.0000	60.4608	60.4608	1.1600e-003	1.1100e-003	60.8201
Hotel	6.62739e+006	0.0357	0.3249	0.2729	1.9500e-003		0.0247	0.0247		0.0247	0.0247	0.0000	353.6629	353.6629	6.7800e-003	6.4800e-003	355.7646
Recreational Swimming Pool	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
Single Family Housing	2.03354e+006	0.0110	0.0937	0.0399	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003	0.0000	108.5172	108.5172	2.0800e-003	1.9900e-003	109.1621
Strip Mall	334210	1.8000e-003	0.0164	0.0138	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.8347	17.8347	3.4000e-004	3.3000e-004	17.9407
Total		**0.0810**	**0.7160**	**0.4691**	**4.4200e-003**		**0.0560**	**0.0560**		**0.0560**	**0.0560**	**0.0000**	**801.6213**	**801.6213**	**0.0154**	**0.0147**	**806.3850**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	637579	58.9912	9.5400e-003	1.1600e-003	59.5745
Apartments Mid Rise	1.78242e+006	164.9166	0.0267	3.2300e-003	166.5473
General Office Building	1.41182e+006	130.6270	0.0211	2.5600e-003	131.9186
Hotel	1.28938e+006	119.2979	0.0193	2.3400e-003	120.4776
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	689323	63.7788	0.0103	1.2500e-003	64.4095
Strip Mall	1.74582e+006	161.5300	0.0261	3.1700e-003	163.1272
Total		**699.1414**	**0.1131**	**0.0137**	**706.0547**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	615388	56.9380	9.2100e-003	1.1200e-003	57.5010
Apartments Mid Rise	1.72283e+006	159.4031	0.0258	3.1300e-003	160.9793
General Office Building	1.29355e+006	119.6846	0.0194	2.3500e-003	120.8680
Hotel	1.17603e+006	108.8110	0.0176	2.1300e-003	109.8870
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	665768	61.5994	9.9700e-003	1.2100e-003	62.2085
Strip Mall	1.54267e+006	142.7340	0.0231	2.8000e-003	144.1454
Total		**649.1701**	**0.1050**	**0.0127**	**655.5892**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	5.6144	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Unmitigated	5.6144	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742

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	0.7679					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.6901					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.1564	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Total	**5.6144**	**0.0603**	**5.2227**	**2.8000e-004**		**0.0291**	**0.0291**		**0.0291**	**0.0291**	**0.0000**	**8.5700**	**8.5700**	**8.1700e-003**	**0.0000**	**8.7742**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

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	0.7679					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.6901					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.1564	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Total	**5.6144**	**0.0603**	**5.2227**	**2.8000e-004**		**0.0291**	**0.0291**		**0.0291**	**0.0291**	**0.0000**	**8.5700**	**8.5700**	**8.1700e-003**	**0.0000**	**8.7742**

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	65.0860	2.0323	0.0487	130.4075
Unmitigated	78.7192	2.5400	0.0608	160.3450

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	10.2292 / 6.44883	10.4548	0.3345	8.0100e-003	21.2044
Apartments Mid Rise	30.036 / 18.9357	30.6985	0.9822	0.0235	62.2626
General Office Building	14.615 / 8.95761	14.8544	0.4779	0.0115	30.2122
Hotel	3.04401 / 0.338224	2.5992	0.0995	2.3700e-003	5.7931
Recreational Swimming Pool	1.57616 / 0.966036	1.6020	0.0515	1.2300e-003	3.2583
Single Family Housing	5.73355 / 3.61463	5.8600	0.1875	4.4900e-003	11.8853
Strip Mall	12.4464 / 7.62844	12.6503	0.4070	9.7500e-003	25.7292
Total		**78.7192**	**2.5400**	**0.0608**	**160.3450**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	8.18335 / 6.05545	8.6541	0.2676	6.4200e-003	17.2567
Apartments Mid Rise	24.0288 / 17.7807	25.4111	0.7859	0.0188	50.6709
General Office Building	11.692 / 8.41119	12.2867	0.3824	9.1600e-003	24.5770
Hotel	2.43521 / 0.317592	2.0946	0.0796	1.9000e-003	4.6498
Recreational Swimming Pool	1.26093 / 0.907108	1.3251	0.0412	9.9000e-004	2.6505
Single Family Housing	4.58684 / 3.39414	4.8507	0.1500	3.6000e-003	9.6725
Strip Mall	9.95712 / 7.16311	10.4636	0.3256	7.8000e-003	20.9301
Total		**65.0860**	**2.0323**	**0.0487**	**130.4075**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	174.1886	10.2943	0.0000	431.5448
Unmitigated	174.1886	10.2943	0.0000	431.5448

Springs Specific Plan - 2040 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	72.22	14.6600	0.8664	0.0000	36.3196
Apartments Mid Rise	212.06	43.0463	2.5440	0.0000	106.6453
General Office Building	76.47	15.5227	0.9174	0.0000	38.4569
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Recreational Swimming Pool	151.91	30.8364	1.8224	0.0000	76.3958
Single Family Housing	103.32	20.9730	1.2395	0.0000	51.9598
Strip Mall	176.43	35.8137	2.1165	0.0000	88.7269
Total		**174.1886**	**10.2943**	**0.0000**	**431.5448**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	72.22	14.6600	0.8664	0.0000	36.3196
Apartments Mid Rise	212.06	43.0463	2.5440	0.0000	106.6453
General Office Building	76.47	15.5227	0.9174	0.0000	38.4569
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Recreational Swimming Pool	151.91	30.8364	1.8224	0.0000	76.3958
Single Family Housing	103.32	20.9730	1.2395	0.0000	51.9598
Strip Mall	176.43	35.8137	2.1165	0.0000	88.7269
Total		**174.1886**	**10.2943**	**0.0000**	**431.5448**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Springs Specific Plan - 2050 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Springs Specific Plan - 2050 Operational Year

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	82.23	1000sqft	18.35	82,226.00	0
Hotel	120.00	Room	4.00	174,240.00	0
Recreational Swimming Pool	26.65	1000sqft	5.80	26,648.00	0
Apartments Low Rise	157.00	Dwelling Unit	15.21	157,000.00	440
Apartments Mid Rise	461.00	Dwelling Unit	68.85	461,000.00	1291
Single Family Housing	88.00	Dwelling Unit	28.57	158,400.00	246
Strip Mall	168.03	1000sqft	38.03	168,029.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2050
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land Use - Proxies selected for each land use based on the Specific Plan land uses (multifamily = apartments mid rise. mixed use = apartments low rise). Population estimated based on 2.8 persons/dwelling unit.

Construction Phase - Construction Phase - Construction schedule simplified for the purposes of modeling.

Grading - Assume 178 acres is graded.

Vehicle Trips - VMT - VMT adjusted based on the VMT provided by W-Trans (November 2021).

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - Woodstoves - BAAQMD Rule: "Effective November 1, 2016 - No wood-burning devices of any kind may be installed in new homes or buildings being constructed in the Bay Area".

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	23.55	0.00
tblFireplaces	NumberGas	69.15	0.00
tblFireplaces	NumberGas	22.00	0.00
tblFireplaces	NumberNoFireplace	6.28	0.00
tblFireplaces	NumberNoFireplace	18.44	0.00
tblFireplaces	NumberNoFireplace	7.04	0.00
tblFireplaces	NumberWood	26.69	0.00
tblFireplaces	NumberWood	78.37	0.00
tblFireplaces	NumberWood	37.84	0.00
tblGrading	AcresOfGrading	930.00	178.00
tblGrading	AcresOfGrading	180.00	0.00
tblLandUse	LandUseSquareFeet	82,230.00	82,226.00
tblLandUse	LandUseSquareFeet	26,650.00	26,648.00
tblLandUse	LandUseSquareFeet	168,030.00	168,029.00
tblLandUse	LotAcreage	1.89	18.35
tblLandUse	LotAcreage	0.61	5.80
tblLandUse	LotAcreage	9.81	15.21

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LotAcreage	12.13	68.85
tblLandUse	LotAcreage	3.86	38.03
tblLandUse	Population	449.00	440.00
tblLandUse	Population	1,318.00	1,291.00
tblLandUse	Population	252.00	246.00
tblVehicleTrips	ST_TR	8.14	9.20
tblVehicleTrips	ST_TR	4.91	5.56
tblVehicleTrips	ST_TR	2.21	2.50
tblVehicleTrips	ST_TR	8.19	9.26
tblVehicleTrips	ST_TR	9.10	10.29
tblVehicleTrips	ST_TR	9.54	10.80
tblVehicleTrips	ST_TR	42.04	47.55
tblVehicleTrips	SU_TR	6.28	7.10
tblVehicleTrips	SU_TR	4.09	4.63
tblVehicleTrips	SU_TR	0.70	0.78
tblVehicleTrips	SU_TR	5.95	6.74
tblVehicleTrips	SU_TR	13.60	15.40
tblVehicleTrips	SU_TR	8.55	9.68
tblVehicleTrips	SU_TR	20.43	23.13
tblVehicleTrips	WD_TR	7.32	8.27
tblVehicleTrips	WD_TR	5.44	6.17
tblVehicleTrips	WD_TR	9.74	11.01
tblVehicleTrips	WD_TR	8.36	9.44
tblVehicleTrips	WD_TR	28.82	32.60
tblVehicleTrips	WD_TR	9.44	10.68
tblVehicleTrips	WD_TR	44.32	50.14
tblWoodstoves	NumberCatalytic	3.14	0.00
tblWoodstoves	NumberCatalytic	9.22	0.00
tblWoodstoves	NumberCatalytic	3.52	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWoodstoves	NumberNoncatalytic	3.14	0.00
tblWoodstoves	NumberNoncatalytic	9.22	0.00
tblWoodstoves	NumberNoncatalytic	3.52	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Springs Specific Plan - 2050 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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					
2022	0.3668	3.5701	2.7118	5.1700e-003	0.5580	0.1728	0.7307	0.3022	0.1601	0.4623	0.0000	453.6851	453.6851	0.1284	4.6000e-004	457.0316
2023	0.4210	4.2835	3.4224	7.5300e-003	1.2585	0.1806	1.4391	0.6444	0.1661	0.8106	0.0000	662.0432	662.0432	0.2094	5.2000e-004	667.4338
2024	0.4647	3.4422	4.1638	0.0111	0.8901	0.1252	1.0152	0.3176	0.1162	0.4338	0.0000	1,008.3178	1,008.3178	0.1530	0.0427	1,024.8611
2025	0.4550	2.6931	4.3137	0.0128	0.7827	0.0773	0.8600	0.2112	0.0727	0.2839	0.0000	1,185.5192	1,185.5192	0.0939	0.0708	1,208.9617
2026	0.4381	2.6657	4.1780	0.0125	0.7827	0.0770	0.8597	0.2112	0.0724	0.2837	0.0000	1,166.6607	1,166.6607	0.0927	0.0688	1,189.4828
2027	0.4225	2.6411	4.0623	0.0123	0.7827	0.0767	0.8594	0.2112	0.0722	0.2834	0.0000	1,148.3853	1,148.3853	0.0915	0.0669	1,170.6139
2028	0.4064	2.6107	3.9503	0.0120	0.7797	0.0761	0.8558	0.2104	0.0716	0.2821	0.0000	1,127.2843	1,127.2843	0.0903	0.0649	1,148.8941
2029	0.3937	2.6001	3.8797	0.0119	0.7827	0.0762	0.8588	0.2112	0.0717	0.2829	0.0000	1,115.5386	1,115.5386	0.0898	0.0635	1,136.7156
2030	0.3729	1.9928	3.8171	0.0122	0.7827	0.0264	0.8091	0.2112	0.0260	0.2372	0.0000	1,141.7952	1,141.7952	0.0317	0.0621	1,161.0946
2031	0.3589	1.9793	3.7515	0.0120	0.7827	0.0262	0.8089	0.2112	0.0258	0.2370	0.0000	1,129.1131	1,129.1131	0.0310	0.0608	1,148.0170
2032	0.3487	1.9762	3.7114	0.0119	0.7857	0.0261	0.8118	0.2120	0.0257	0.2378	0.0000	1,122.1963	1,122.1963	0.0306	0.0600	1,140.8345
2033	0.3356	1.9519	3.6362	0.0117	0.7797	0.0257	0.8054	0.2104	0.0254	0.2358	0.0000	1,103.6617	1,103.6617	0.0298	0.0586	1,121.8629
2034	0.3265	1.9435	3.5948	0.0116	0.7796	0.0256	0.8052	0.2104	0.0252	0.2356	0.0000	1,094.6214	1,094.6214	0.0294	0.0577	1,112.5572
2035	0.3074	1.8420	3.5678	0.0116	0.7826	0.0180	0.8006	0.2112	0.0176	0.2288	0.0000	1,090.7773	1,090.7773	0.0281	0.0572	1,108.5219
2036	0.1996	1.0049	2.5478	6.1300e-003	0.2477	0.0226	0.2703	0.0668	0.0225	0.0893	0.0000	557.7729	557.7729	0.0171	0.0175	563.4062
2037	7.7357	0.1861	0.7029	1.5800e-003	0.1127	4.8800e-003	0.1176	0.0300	4.8500e-003	0.0348	0.0000	146.9804	146.9804	3.9400e-003	1.6600e-003	147.5741
Maximum	**7.7357**	**4.2835**	**4.3137**	**0.0128**	**1.2585**	**0.1806**	**1.4391**	**0.6444**	**0.1661**	**0.8106**	**0.0000**	**1,185.5192**	**1,185.5192**	**0.2094**	**0.0708**	**1,208.9617**

2.1 Overall Construction

Springs Specific Plan - 2050 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.3668	3.5701	2.7118	5.1700e-003	0.5580	0.1728	0.7307	0.3022	0.1601	0.4623	0.0000	453.6846	453.6846	0.1284	4.6000e-004	457.0311
2023	0.4210	4.2834	3.4224	7.5300e-003	1.2585	0.1806	1.4391	0.6444	0.1661	0.8106	0.0000	662.0425	662.0425	0.2094	5.2000e-004	667.4330
2024	0.4647	3.4422	4.1638	0.0111	0.8901	0.1252	1.0152	0.3176	0.1162	0.4338	0.0000	1,008.3172	1,008.3172	0.1530	0.0427	1,024.8605
2025	0.4550	2.6931	4.3137	0.0128	0.7827	0.0773	0.8600	0.2112	0.0727	0.2839	0.0000	1,185.5188	1,185.5188	0.0939	0.0708	1,208.9614
2026	0.4381	2.6657	4.1780	0.0125	0.7827	0.0770	0.8597	0.2112	0.0724	0.2837	0.0000	1,166.6604	1,166.6604	0.0927	0.0688	1,189.4824
2027	0.4225	2.6411	4.0623	0.0123	0.7827	0.0767	0.8594	0.2112	0.0722	0.2834	0.0000	1,148.3849	1,148.3849	0.0915	0.0669	1,170.6135
2028	0.4064	2.6107	3.9503	0.0120	0.7797	0.0761	0.8558	0.2104	0.0716	0.2820	0.0000	1,127.2839	1,127.2839	0.0903	0.0649	1,148.8938
2029	0.3937	2.6001	3.8797	0.0119	0.7827	0.0762	0.8588	0.2112	0.0717	0.2829	0.0000	1,115.5383	1,115.5383	0.0898	0.0635	1,136.7153
2030	0.3729	1.9928	3.8171	0.0122	0.7827	0.0264	0.8091	0.2112	0.0260	0.2372	0.0000	1,141.7948	1,141.7948	0.0317	0.0621	1,161.0942
2031	0.3589	1.9793	3.7515	0.0120	0.7827	0.0262	0.8089	0.2112	0.0258	0.2370	0.0000	1,129.1127	1,129.1127	0.0310	0.0608	1,148.0166
2032	0.3487	1.9762	3.7114	0.0119	0.7857	0.0261	0.8118	0.2120	0.0257	0.2378	0.0000	1,122.1959	1,122.1959	0.0306	0.0600	1,140.8340
2033	0.3356	1.9519	3.6362	0.0117	0.7797	0.0257	0.8054	0.2104	0.0254	0.2358	0.0000	1,103.6613	1,103.6613	0.0298	0.0586	1,121.8625
2034	0.3265	1.9435	3.5948	0.0116	0.7796	0.0256	0.8052	0.2104	0.0252	0.2356	0.0000	1,094.6210	1,094.6210	0.0294	0.0577	1,112.5568
2035	0.3074	1.8420	3.5678	0.0116	0.7826	0.0180	0.8006	0.2112	0.0176	0.2288	0.0000	1,090.7769	1,090.7769	0.0281	0.0572	1,108.5215
2036	0.1996	1.0049	2.5478	6.1300e-003	0.2477	0.0226	0.2703	0.0668	0.0225	0.0893	0.0000	557.7725	557.7725	0.0171	0.0175	563.4058
2037	7.7357	0.1861	0.7029	1.5800e-003	0.1127	4.8800e-003	0.1176	0.0300	4.8500e-003	0.0348	0.0000	146.9803	146.9803	3.9400e-003	1.6600e-003	147.5740
Maximum	**7.7357**	**4.2834**	**4.3137**	**0.0128**	**1.2585**	**0.1806**	**1.4391**	**0.6444**	**0.1661**	**0.8106**	**0.0000**	**1,185.5188**	**1,185.5188**	**0.2094**	**0.0708**	**1,208.9614**

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	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	N20	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	**1-1-2022**	**3-31-2022**	0.9150	0.9150
2	**4-1-2022**	**6-30-2022**	0.9248	0.9248
3	**7-1-2022**	**9-30-2022**	0.9350	0.9350
4	**10-1-2022**	**12-31-2022**	1.1756	1.1756
5	**1-1-2023**	**3-31-2023**	0.9931	0.9931
6	**4-1-2023**	**6-30-2023**	1.2335	1.2335
7	**7-1-2023**	**9-30-2023**	1.2471	1.2471
8	**10-1-2023**	**12-31-2023**	1.2475	1.2475
9	**1-1-2024**	**3-31-2024**	1.1607	1.1607
10	**4-1-2024**	**6-30-2024**	1.0487	1.0487
11	**7-1-2024**	**9-30-2024**	0.8308	0.8308
12	**10-1-2024**	**12-31-2024**	0.8553	0.8553
13	**1-1-2025**	**3-31-2025**	0.7895	0.7895
14	**4-1-2025**	**6-30-2025**	0.7752	0.7752
15	**7-1-2025**	**9-30-2025**	0.7837	0.7837
16	**10-1-2025**	**12-31-2025**	0.8070	0.8070
17	**1-1-2026**	**3-31-2026**	0.7778	0.7778
18	**4-1-2026**	**6-30-2026**	0.7644	0.7644
19	**7-1-2026**	**9-30-2026**	0.7728	0.7728
20	**10-1-2026**	**12-31-2026**	0.7951	0.7951
21	**1-1-2027**	**3-31-2027**	0.7673	0.7673
22	**4-1-2027**	**6-30-2027**	0.7546	0.7546
23	**7-1-2027**	**9-30-2027**	0.7629	0.7629

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24	**10-1-2027**	**12-31-2027**	0.7843	0.7843
25	**1-1-2028**	**3-31-2028**	0.7665	0.7665
26	**4-1-2028**	**6-30-2028**	0.7462	0.7462
27	**7-1-2028**	**9-30-2028**	0.7544	0.7544
28	**10-1-2028**	**12-31-2028**	0.7749	0.7749
29	**1-1-2029**	**3-31-2029**	0.7489	0.7489
30	**4-1-2029**	**6-30-2029**	0.7376	0.7376
31	**7-1-2029**	**9-30-2029**	0.7457	0.7457
32	**10-1-2029**	**12-31-2029**	0.7656	0.7656
33	**1-1-2030**	**3-31-2030**	0.5937	0.5937
34	**4-1-2030**	**6-30-2030**	0.5813	0.5813
35	**7-1-2030**	**9-30-2030**	0.5877	0.5877
36	**10-1-2030**	**12-31-2030**	0.6069	0.6069
37	**1-1-2031**	**3-31-2031**	0.5864	0.5864
38	**4-1-2031**	**6-30-2031**	0.5746	0.5746
39	**7-1-2031**	**9-30-2031**	0.5809	0.5809
40	**10-1-2031**	**12-31-2031**	0.5995	0.5995
41	**1-1-2032**	**3-31-2032**	0.5870	0.5870
42	**4-1-2032**	**6-30-2032**	0.5691	0.5691
43	**7-1-2032**	**9-30-2032**	0.5754	0.5754
44	**10-1-2032**	**12-31-2032**	0.5935	0.5935
45	**1-1-2033**	**3-31-2033**	0.5753	0.5753
46	**4-1-2033**	**6-30-2033**	0.5642	0.5642
47	**7-1-2033**	**9-30-2033**	0.5705	0.5705
48	**10-1-2033**	**12-31-2033**	0.5881	0.5881
49	**1-1-2034**	**3-31-2034**	0.5707	0.5707
50	**4-1-2034**	**6-30-2034**	0.5599	0.5599
51	**7-1-2034**	**9-30-2034**	0.5660	0.5660
52	**10-1-2034**	**12-31-2034**	0.5834	0.5834

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53	**1-1-2035**	**3-31-2035**	0.5386	0.5386
54	**4-1-2035**	**6-30-2035**	0.5277	0.5277
55	**7-1-2035**	**9-30-2035**	0.5335	0.5335
56	**10-1-2035**	**12-31-2035**	0.5506	0.5506
57	**1-1-2036**	**3-31-2036**	0.5446	0.5446
58	**4-1-2036**	**6-30-2036**	0.2622	0.2622
59	**7-1-2036**	**9-30-2036**	0.1989	0.1989
60	**10-1-2036**	**12-31-2036**	0.1990	0.1990
61	**1-1-2037**	**3-31-2037**	1.0997	1.0997
62	**4-1-2037**	**6-30-2037**	2.3073	2.3073
63	**7-1-2037**	**9-30-2037**	2.3326	2.3326
		Highest	2.3326	2.3326

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	5.6144	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Energy	0.0924	0.8170	0.5382	5.0400e-003		0.0638	0.0638		0.0638	0.0638	0.0000	1,613.4089	1,613.4089	0.1306	0.0305	1,625.7552
Mobile	3.3353	4.0437	34.8400	0.0716	10.3502	0.0347	10.3849	2.7684	0.0324	2.8008	0.0000	7,282.5898	7,282.5898	0.3908	0.3576	7,398.9349
Waste						0.0000	0.0000		0.0000	0.0000	174.1886	0.0000	174.1886	10.2943	0.0000	431.5448
Water						0.0000	0.0000		0.0000	0.0000	24.6444	54.0748	78.7192	2.5400	0.0608	160.3450
Total	**9.0420**	**4.9210**	**40.6009**	**0.0770**	**10.3502**	**0.1276**	**10.4778**	**2.7684**	**0.1253**	**2.8937**	**198.8330**	**8,958.6435**	**9,157.4764**	**13.3638**	**0.4489**	**9,625.3541**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

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	5.6144	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Energy	0.0810	0.7160	0.4691	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	1,450.7914	1,450.7914	0.1204	0.0274	1,461.9741
Mobile	2.7522	3.1162	26.7112	0.0485	6.8829	0.0245	6.9074	1.8410	0.0229	1.8638	0.0000	4,932.2489	4,932.2489	0.3040	0.2733	5,021.2894
Waste						0.0000	0.0000		0.0000	0.0000	174.1886	0.0000	174.1886	10.2943	0.0000	431.5448
Water						0.0000	0.0000		0.0000	0.0000	19.7155	45.3704	65.0860	2.0323	0.0487	130.4075
Total	**8.4476**	**3.8924**	**32.4031**	**0.0532**	**6.8829**	**0.1095**	**6.9924**	**1.8410**	**0.1079**	**1.9489**	**193.9041**	**6,436.9807**	**6,630.8848**	**12.7591**	**0.3494**	**7,053.9901**

	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	N20	CO2e
Percent Reduction	**6.57**	**20.90**	**20.19**	**30.85**	**33.50**	**14.15**	**33.26**	**33.50**	**13.89**	**32.65**	**2.48**	**28.15**	**27.59**	**4.53**	**22.17**	**26.71**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	10/7/2022	5	200	
2	Site Preparation	Site Preparation	10/8/2022	3/24/2023	5	120	
3	Grading	Grading	3/25/2023	5/31/2024	5	310	

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4	Building Construction	Building Construction	6/1/2024	4/18/2036	5	3100	
5	Paving	Paving	4/19/2036	2/20/2037	5	220	
6	Architectural Coating	Architectural Coating	2/21/2037	12/25/2037	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 178

Acres of Paving: 0

Residential Indoor: 1,572,210; Residential Outdoor: 524,070; Non-Residential Indoor: 636,743; Non-Residential Outdoor: 212,248; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
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
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
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	641.00	149.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	128.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9023	339.9023	0.0955	0.0000	342.2892
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**		**0.1243**	**0.1243**		**0.1155**	**0.1155**	**0.0000**	**339.9023**	**339.9023**	**0.0955**	**0.0000**	**342.2892**

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3.2 Demolition - 2022

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	5.7300e-003	4.1300e-003	0.0452	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1300e-003	7.0000e-005	3.2000e-003	0.0000	9.9005	9.9005	3.8000e-004	3.3000e-004	10.0097
Total	**5.7300e-003**	**4.1300e-003**	**0.0452**	**1.1000e-004**	**0.0118**	**8.0000e-005**	**0.0119**	**3.1300e-003**	**7.0000e-005**	**3.2000e-003**	**0.0000**	**9.9005**	**9.9005**	**3.8000e-004**	**3.3000e-004**	**10.0097**

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	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9019	339.9019	0.0955	0.0000	342.2887
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**		**0.1243**	**0.1243**		**0.1155**	**0.1155**	**0.0000**	**339.9019**	**339.9019**	**0.0955**	**0.0000**	**342.2887**

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3.2 Demolition - 2022

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	5.7300e-003	4.1300e-003	0.0452	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1300e-003	7.0000e-005	3.2000e-003	0.0000	9.9005	9.9005	3.8000e-004	3.3000e-004	10.0097
Total	**5.7300e-003**	**4.1300e-003**	**0.0452**	**1.1000e-004**	**0.0118**	**8.0000e-005**	**0.0119**	**3.1300e-003**	**7.0000e-005**	**3.2000e-003**	**0.0000**	**9.9005**	**9.9005**	**3.8000e-004**	**3.3000e-004**	**10.0097**

3.3 Site Preparation - 2022

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3182	100.3182	0.0324	0.0000	101.1293
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.5420**	**0.0484**	**0.5904**	**0.2979**	**0.0445**	**0.3424**	**0.0000**	**100.3182**	**100.3182**	**0.0324**	**0.0000**	**101.1293**

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3.3 Site Preparation - 2022

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	2.0600e-003	1.4900e-003	0.0163	4.0000e-005	4.2400e-003	3.0000e-005	4.2700e-003	1.1300e-003	3.0000e-005	1.1500e-003	0.0000	3.5642	3.5642	1.4000e-004	1.2000e-004	3.6035
Total	**2.0600e-003**	**1.4900e-003**	**0.0163**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2700e-003**	**1.1300e-003**	**3.0000e-005**	**1.1500e-003**	**0.0000**	**3.5642**	**3.5642**	**1.4000e-004**	**1.2000e-004**	**3.6035**

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3181	100.3181	0.0324	0.0000	101.1292
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.5420**	**0.0484**	**0.5904**	**0.2979**	**0.0445**	**0.3424**	**0.0000**	**100.3181**	**100.3181**	**0.0324**	**0.0000**	**101.1292**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	2.0600e-003	1.4900e-003	0.0163	4.0000e-005	4.2400e-003	3.0000e-005	4.2700e-003	1.1300e-003	3.0000e-005	1.1500e-003	0.0000	3.5642	3.5642	1.4000e-004	1.2000e-004	3.6035
Total	**2.0600e-003**	**1.4900e-003**	**0.0163**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2700e-003**	**1.1300e-003**	**3.0000e-005**	**1.1500e-003**	**0.0000**	**3.5642**	**3.5642**	**1.4000e-004**	**1.2000e-004**	**3.6035**

3.3 Site Preparation - 2023

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3521	100.3521	0.0325	0.0000	101.1635
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.5420**	**0.0380**	**0.5800**	**0.2979**	**0.0349**	**0.3329**	**0.0000**	**100.3521**	**100.3521**	**0.0325**	**0.0000**	**101.1635**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

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	1.9100e-003	1.3100e-003	0.0149	4.0000e-005	4.2400e-003	3.0000e-005	4.2600e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.4737	3.4737	1.2000e-004	1.1000e-004	3.5097
Total	**1.9100e-003**	**1.3100e-003**	**0.0149**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2600e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4737**	**3.4737**	**1.2000e-004**	**1.1000e-004**	**3.5097**

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3520	100.3520	0.0325	0.0000	101.1634
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.5420**	**0.0380**	**0.5800**	**0.2979**	**0.0349**	**0.3329**	**0.0000**	**100.3520**	**100.3520**	**0.0325**	**0.0000**	**101.1634**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

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	1.9100e-003	1.3100e-003	0.0149	4.0000e-005	4.2400e-003	3.0000e-005	4.2600e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.4737	3.4737	1.2000e-004	1.1000e-004	3.5097
Total	**1.9100e-003**	**1.3100e-003**	**0.0149**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2600e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4737**	**3.4737**	**1.2000e-004**	**1.1000e-004**	**3.5097**

3.4 Grading - 2023

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					0.6966	0.0000	0.6966	0.3412	0.0000	0.3412	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3322	3.4516	2.8051	6.2100e-003		0.1425	0.1425		0.1311	0.1311	0.0000	545.3521	545.3521	0.1764	0.0000	549.7615
Total	**0.3322**	**3.4516**	**2.8051**	**6.2100e-003**	**0.6966**	**0.1425**	**0.8390**	**0.3412**	**0.1311**	**0.4723**	**0.0000**	**545.3521**	**545.3521**	**0.1764**	**0.0000**	**549.7615**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	7.0800e-003	4.8500e-003	0.0551	1.4000e-004	0.0157	1.0000e-004	0.0158	4.1800e-003	9.0000e-005	4.2700e-003	0.0000	12.8654	12.8654	4.5000e-004	4.1000e-004	12.9990
Total	**7.0800e-003**	**4.8500e-003**	**0.0551**	**1.4000e-004**	**0.0157**	**1.0000e-004**	**0.0158**	**4.1800e-003**	**9.0000e-005**	**4.2700e-003**	**0.0000**	**12.8654**	**12.8654**	**4.5000e-004**	**4.1000e-004**	**12.9990**

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					0.6966	0.0000	0.6966	0.3412	0.0000	0.3412	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3322	3.4516	2.8051	6.2100e-003		0.1425	0.1425		0.1311	0.1311	0.0000	545.3514	545.3514	0.1764	0.0000	549.7609
Total	**0.3322**	**3.4516**	**2.8051**	**6.2100e-003**	**0.6966**	**0.1425**	**0.8390**	**0.3412**	**0.1311**	**0.4723**	**0.0000**	**545.3514**	**545.3514**	**0.1764**	**0.0000**	**549.7609**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	7.0800e-003	4.8500e-003	0.0551	1.4000e-004	0.0157	1.0000e-004	0.0158	4.1800e-003	9.0000e-005	4.2700e-003	0.0000	12.8654	12.8654	4.5000e-004	4.1000e-004	12.9990
Total	**7.0800e-003**	**4.8500e-003**	**0.0551**	**1.4000e-004**	**0.0157**	**1.0000e-004**	**0.0158**	**4.1800e-003**	**9.0000e-005**	**4.2700e-003**	**0.0000**	**12.8654**	**12.8654**	**4.5000e-004**	**4.1000e-004**	**12.9990**

3.4 Grading - 2024

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					0.4256	0.0000	0.4256	0.1923	0.0000	0.1923	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1770	1.7807	1.5248	3.4100e-003		0.0735	0.0735		0.0676	0.0676	0.0000	299.8574	299.8574	0.0970	0.0000	302.2819
Total	**0.1770**	**1.7807**	**1.5248**	**3.4100e-003**	**0.4256**	**0.0735**	**0.4991**	**0.1923**	**0.0676**	**0.2598**	**0.0000**	**299.8574**	**299.8574**	**0.0970**	**0.0000**	**302.2819**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

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	3.6200e-003	2.3700e-003	0.0279	7.0000e-005	8.6300e-003	5.0000e-005	8.6800e-003	2.3000e-003	5.0000e-005	2.3400e-003	0.0000	6.9015	6.9015	2.3000e-004	2.1000e-004	6.9693
Total	**3.6200e-003**	**2.3700e-003**	**0.0279**	**7.0000e-005**	**8.6300e-003**	**5.0000e-005**	**8.6800e-003**	**2.3000e-003**	**5.0000e-005**	**2.3400e-003**	**0.0000**	**6.9015**	**6.9015**	**2.3000e-004**	**2.1000e-004**	**6.9693**

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					0.4256	0.0000	0.4256	0.1923	0.0000	0.1923	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1770	1.7807	1.5248	3.4100e-003		0.0735	0.0735		0.0676	0.0676	0.0000	299.8570	299.8570	0.0970	0.0000	302.2815
Total	**0.1770**	**1.7807**	**1.5248**	**3.4100e-003**	**0.4256**	**0.0735**	**0.4991**	**0.1923**	**0.0676**	**0.2598**	**0.0000**	**299.8570**	**299.8570**	**0.0970**	**0.0000**	**302.2815**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

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	3.6200e-003	2.3700e-003	0.0279	7.0000e-005	8.6300e-003	5.0000e-005	8.6800e-003	2.3000e-003	5.0000e-005	2.3400e-003	0.0000	6.9015	6.9015	2.3000e-004	2.1000e-004	6.9693
Total	**3.6200e-003**	**2.3700e-003**	**0.0279**	**7.0000e-005**	**8.6300e-003**	**5.0000e-005**	**8.6800e-003**	**2.3000e-003**	**5.0000e-005**	**2.3400e-003**	**0.0000**	**6.9015**	**6.9015**	**2.3000e-004**	**2.1000e-004**	**6.9693**

3.5 Building Construction - 2024

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	0.1118	1.0217	1.2287	2.0500e-003		0.0466	0.0466		0.0438	0.0438	0.0000	176.2053	176.2053	0.0417	0.0000	177.2470
Total	**0.1118**	**1.0217**	**1.2287**	**2.0500e-003**		**0.0466**	**0.0466**		**0.0438**	**0.0438**	**0.0000**	**176.2053**	**176.2053**	**0.0417**	**0.0000**	**177.2470**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0118	0.5326	0.1462	2.2600e-003	0.0735	2.8500e-003	0.0764	0.0213	2.7300e-003	0.0240	0.0000	219.7041	219.7041	4.1400e-003	0.0332	229.7121
Worker	0.1604	0.1048	1.2362	3.2700e-003	0.3823	2.2000e-003	0.3845	0.1018	2.0300e-003	0.1038	0.0000	305.6495	305.6495	9.9900e-003	9.2300e-003	308.6509
Total	**0.1722**	**0.6374**	**1.3824**	**5.5300e-003**	**0.4558**	**5.0500e-003**	**0.4609**	**0.1230**	**4.7600e-003**	**0.1278**	**0.0000**	**525.3536**	**525.3536**	**0.0141**	**0.0425**	**538.3629**

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	0.1118	1.0217	1.2287	2.0500e-003		0.0466	0.0466		0.0438	0.0438	0.0000	176.2051	176.2051	0.0417	0.0000	177.2468
Total	**0.1118**	**1.0217**	**1.2287**	**2.0500e-003**		**0.0466**	**0.0466**		**0.0438**	**0.0438**	**0.0000**	**176.2051**	**176.2051**	**0.0417**	**0.0000**	**177.2468**

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3.5 Building Construction - 2024

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	0.0118	0.5326	0.1462	2.2600e-003	0.0735	2.8500e-003	0.0764	0.0213	2.7300e-003	0.0240	0.0000	219.7041	219.7041	4.1400e-003	0.0332	229.7121
Worker	0.1604	0.1048	1.2362	3.2700e-003	0.3823	2.2000e-003	0.3845	0.1018	2.0300e-003	0.1038	0.0000	305.6495	305.6495	9.9900e-003	9.2300e-003	308.6509
Total	**0.1722**	**0.6374**	**1.3824**	**5.5300e-003**	**0.4558**	**5.0500e-003**	**0.4609**	**0.1230**	**4.7600e-003**	**0.1278**	**0.0000**	**525.3536**	**525.3536**	**0.0141**	**0.0425**	**538.3629**

3.5 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0195	0.9050	0.2449	3.8100e-003	0.1262	4.8400e-003	0.1311	0.0365	4.6300e-003	0.0411	0.0000	370.5717	370.5717	7.2600e-003	0.0561	387.4554
Worker	0.2571	0.1608	1.9698	5.4200e-003	0.6565	3.5900e-003	0.6601	0.1747	3.3100e-003	0.1781	0.0000	512.2927	512.2927	0.0155	0.0147	517.0729
Total	**0.2766**	**1.0658**	**2.2147**	**9.2300e-003**	**0.7827**	**8.4300e-003**	**0.7911**	**0.2112**	**7.9400e-003**	**0.2192**	**0.0000**	**882.8643**	**882.8643**	**0.0228**	**0.0708**	**904.5282**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0195	0.9050	0.2449	3.8100e-003	0.1262	4.8400e-003	0.1311	0.0365	4.6300e-003	0.0411	0.0000	370.5717	370.5717	7.2600e-003	0.0561	387.4554
Worker	0.2571	0.1608	1.9698	5.4200e-003	0.6565	3.5900e-003	0.6601	0.1747	3.3100e-003	0.1781	0.0000	512.2927	512.2927	0.0155	0.0147	517.0729
Total	**0.2766**	**1.0658**	**2.2147**	**9.2300e-003**	**0.7827**	**8.4300e-003**	**0.7911**	**0.2112**	**7.9400e-003**	**0.2192**	**0.0000**	**882.8643**	**882.8643**	**0.0228**	**0.0708**	**904.5282**

3.5 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

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	0.0188	0.8935	0.2398	3.7400e-003	0.1262	4.7500e-003	0.1310	0.0365	4.5500e-003	0.0410	0.0000	363.8214	363.8214	7.4300e-003	0.0550	380.3994
Worker	0.2408	0.1449	1.8392	5.2500e-003	0.6565	3.4000e-003	0.6599	0.1747	3.1300e-003	0.1779	0.0000	500.1845	500.1845	0.0141	0.0138	504.6498
Total	**0.2596**	**1.0384**	**2.0790**	**8.9900e-003**	**0.7827**	**8.1500e-003**	**0.7909**	**0.2112**	**7.6800e-003**	**0.2189**	**0.0000**	**864.0058**	**864.0058**	**0.0215**	**0.0688**	**885.0492**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

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	0.0188	0.8935	0.2398	3.7400e-003	0.1262	4.7500e-003	0.1310	0.0365	4.5500e-003	0.0410	0.0000	363.8214	363.8214	7.4300e-003	0.0550	380.3994
Worker	0.2408	0.1449	1.8392	5.2500e-003	0.6565	3.4000e-003	0.6599	0.1747	3.1300e-003	0.1779	0.0000	500.1845	500.1845	0.0141	0.0138	504.6498
Total	**0.2596**	**1.0384**	**2.0790**	**8.9900e-003**	**0.7827**	**8.1500e-003**	**0.7909**	**0.2112**	**7.6800e-003**	**0.2189**	**0.0000**	**864.0058**	**864.0058**	**0.0215**	**0.0688**	**885.0492**

3.5 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

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	0.0182	0.8825	0.2356	3.6600e-003	0.1262	4.6800e-003	0.1309	0.0365	4.4700e-003	0.0410	0.0000	356.6205	356.6205	7.5600e-003	0.0539	372.8739
Worker	0.2259	0.1313	1.7277	5.0900e-003	0.6565	3.1800e-003	0.6597	0.1747	2.9300e-003	0.1777	0.0000	489.1099	489.1099	0.0128	0.0130	493.3065
Total	**0.2441**	**1.0138**	**1.9633**	**8.7500e-003**	**0.7827**	**7.8600e-003**	**0.7905**	**0.2112**	**7.4000e-003**	**0.2186**	**0.0000**	**845.7304**	**845.7304**	**0.0204**	**0.0669**	**866.1804**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

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	0.0182	0.8825	0.2356	3.6600e-003	0.1262	4.6800e-003	0.1309	0.0365	4.4700e-003	0.0410	0.0000	356.6205	356.6205	7.5600e-003	0.0539	372.8739
Worker	0.2259	0.1313	1.7277	5.0900e-003	0.6565	3.1800e-003	0.6597	0.1747	2.9300e-003	0.1777	0.0000	489.1099	489.1099	0.0128	0.0130	493.3065
Total	**0.2441**	**1.0138**	**1.9633**	**8.7500e-003**	**0.7827**	**7.8600e-003**	**0.7905**	**0.2112**	**7.4000e-003**	**0.2186**	**0.0000**	**845.7304**	**845.7304**	**0.0204**	**0.0669**	**866.1804**

3.5 Building Construction - 2028

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

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	0.0176	0.8704	0.2314	3.5700e-003	0.1257	4.5900e-003	0.1303	0.0363	4.3900e-003	0.0407	0.0000	348.5076	348.5076	7.6700e-003	0.0527	364.3930
Worker	0.2110	0.1192	1.6279	4.9300e-003	0.6540	2.9600e-003	0.6569	0.1741	2.7300e-003	0.1768	0.0000	477.2814	477.2814	0.0117	0.0123	481.2340
Total	**0.2286**	**0.9897**	**1.8593**	**8.5000e-003**	**0.7797**	**7.5500e-003**	**0.7872**	**0.2104**	**7.1200e-003**	**0.2175**	**0.0000**	**825.7890**	**825.7890**	**0.0194**	**0.0649**	**845.6270**

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

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	0.0176	0.8704	0.2314	3.5700e-003	0.1257	4.5900e-003	0.1303	0.0363	4.3900e-003	0.0407	0.0000	348.5076	348.5076	7.6700e-003	0.0527	364.3930
Worker	0.2110	0.1192	1.6279	4.9300e-003	0.6540	2.9600e-003	0.6569	0.1741	2.7300e-003	0.1768	0.0000	477.2814	477.2814	0.0117	0.0123	481.2340
Total	**0.2286**	**0.9897**	**1.8593**	**8.5000e-003**	**0.7797**	**7.5500e-003**	**0.7872**	**0.2104**	**7.1200e-003**	**0.2175**	**0.0000**	**825.7890**	**825.7890**	**0.0194**	**0.0649**	**845.6270**

3.5 Building Construction - 2029

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

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	0.0172	0.8632	0.2293	3.5100e-003	0.1262	4.5300e-003	0.1307	0.0365	4.3400e-003	0.0408	0.0000	342.8427	342.8427	7.8300e-003	0.0518	358.4720
Worker	0.1981	0.1096	1.5513	4.8200e-003	0.6565	2.7800e-003	0.6593	0.1747	2.5600e-003	0.1773	0.0000	470.0410	470.0410	0.0108	0.0117	473.8102
Total	**0.2153**	**0.9728**	**1.7807**	**8.3300e-003**	**0.7827**	**7.3100e-003**	**0.7900**	**0.2112**	**6.9000e-003**	**0.2181**	**0.0000**	**812.8837**	**812.8837**	**0.0186**	**0.0635**	**832.2821**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

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	0.0172	0.8632	0.2293	3.5100e-003	0.1262	4.5300e-003	0.1307	0.0365	4.3400e-003	0.0408	0.0000	342.8427	342.8427	7.8300e-003	0.0518	358.4720
Worker	0.1981	0.1096	1.5513	4.8200e-003	0.6565	2.7800e-003	0.6593	0.1747	2.5600e-003	0.1773	0.0000	470.0410	470.0410	0.0108	0.0117	473.8102
Total	**0.2153**	**0.9728**	**1.7807**	**8.3300e-003**	**0.7827**	**7.3100e-003**	**0.7900**	**0.2112**	**6.9000e-003**	**0.2181**	**0.0000**	**812.8837**	**812.8837**	**0.0186**	**0.0635**	**832.2821**

3.5 Building Construction - 2030

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

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	0.0168	0.8564	0.2274	3.4500e-003	0.1262	4.4800e-003	0.1307	0.0365	4.2900e-003	0.0408	0.0000	336.8073	336.8073	7.9500e-003	0.0509	352.1635
Worker	0.1852	0.1009	1.4812	4.7100e-003	0.6565	2.5900e-003	0.6591	0.1747	2.3900e-003	0.1771	0.0000	461.9543	461.9543	9.9500e-003	0.0112	465.5534
Total	**0.2020**	**0.9573**	**1.7086**	**8.1600e-003**	**0.7827**	**7.0700e-003**	**0.7897**	**0.2112**	**6.6800e-003**	**0.2179**	**0.0000**	**798.7616**	**798.7616**	**0.0179**	**0.0621**	**817.7169**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

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	0.0168	0.8564	0.2274	3.4500e-003	0.1262	4.4800e-003	0.1307	0.0365	4.2900e-003	0.0408	0.0000	336.8073	336.8073	7.9500e-003	0.0509	352.1635
Worker	0.1852	0.1009	1.4812	4.7100e-003	0.6565	2.5900e-003	0.6591	0.1747	2.3900e-003	0.1771	0.0000	461.9543	461.9543	9.9500e-003	0.0112	465.5534
Total	**0.2020**	**0.9573**	**1.7086**	**8.1600e-003**	**0.7827**	**7.0700e-003**	**0.7897**	**0.2112**	**6.6800e-003**	**0.2179**	**0.0000**	**798.7616**	**798.7616**	**0.0179**	**0.0621**	**817.7169**

3.5 Building Construction - 2031

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

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	0.0165	0.8510	0.2261	3.3900e-003	0.1262	4.4400e-003	0.1306	0.0365	4.2500e-003	0.0407	0.0000	331.4423	331.4423	8.0800e-003	0.0500	346.5566
Worker	0.1716	0.0928	1.4170	4.6100e-003	0.6565	2.4200e-003	0.6589	0.1747	2.2300e-003	0.1770	0.0000	454.6372	454.6372	9.1700e-003	0.0108	458.0827
Total	**0.1881**	**0.9438**	**1.6430**	**8.0000e-003**	**0.7827**	**6.8600e-003**	**0.7895**	**0.2112**	**6.4800e-003**	**0.2177**	**0.0000**	**786.0795**	**786.0795**	**0.0173**	**0.0608**	**804.6393**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

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	0.0165	0.8510	0.2261	3.3900e-003	0.1262	4.4400e-003	0.1306	0.0365	4.2500e-003	0.0407	0.0000	331.4423	331.4423	8.0800e-003	0.0500	346.5566
Worker	0.1716	0.0928	1.4170	4.6100e-003	0.6565	2.4200e-003	0.6589	0.1747	2.2300e-003	0.1770	0.0000	454.6372	454.6372	9.1700e-003	0.0108	458.0827
Total	**0.1881**	**0.9438**	**1.6430**	**8.0000e-003**	**0.7827**	**6.8600e-003**	**0.7895**	**0.2112**	**6.4800e-003**	**0.2177**	**0.0000**	**786.0795**	**786.0795**	**0.0173**	**0.0608**	**804.6393**

3.5 Building Construction - 2032

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

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	0.0163	0.8501	0.2262	3.3600e-003	0.1267	4.4300e-003	0.1311	0.0366	4.2300e-003	0.0408	0.0000	327.9605	327.9605	8.2100e-003	0.0495	342.9192
Worker	0.1609	0.0867	1.3687	4.5300e-003	0.6590	2.2700e-003	0.6613	0.1754	2.0900e-003	0.1775	0.0000	449.8879	449.8879	8.5300e-003	0.0105	453.2219
Total	**0.1772**	**0.9368**	**1.5949**	**7.8900e-003**	**0.7857**	**6.7000e-003**	**0.7924**	**0.2120**	**6.3200e-003**	**0.2183**	**0.0000**	**777.8484**	**777.8484**	**0.0167**	**0.0600**	**796.1411**

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

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	0.0163	0.8501	0.2262	3.3600e-003	0.1267	4.4300e-003	0.1311	0.0366	4.2300e-003	0.0408	0.0000	327.9605	327.9605	8.2100e-003	0.0495	342.9192
Worker	0.1609	0.0867	1.3687	4.5300e-003	0.6590	2.2700e-003	0.6613	0.1754	2.0900e-003	0.1775	0.0000	449.8879	449.8879	8.5300e-003	0.0105	453.2219
Total	**0.1772**	**0.9368**	**1.5949**	**7.8900e-003**	**0.7857**	**6.7000e-003**	**0.7924**	**0.2120**	**6.3200e-003**	**0.2183**	**0.0000**	**777.8484**	**777.8484**	**0.0167**	**0.0600**	**796.1411**

3.5 Building Construction - 2033

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

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	0.0160	0.8397	0.2240	3.2900e-003	0.1257	4.3600e-003	0.1300	0.0363	4.1700e-003	0.0405	0.0000	321.2113	321.2113	8.2500e-003	0.0485	335.8657
Worker	0.1494	0.0807	1.3118	4.4100e-003	0.6540	2.1100e-003	0.6561	0.1741	1.9400e-003	0.1760	0.0000	440.7311	440.7311	7.8700e-003	0.0101	443.9351
Total	**0.1654**	**0.9204**	**1.5358**	**7.7000e-003**	**0.7796**	**6.4700e-003**	**0.7861**	**0.2104**	**6.1100e-003**	**0.2165**	**0.0000**	**761.9424**	**761.9424**	**0.0161**	**0.0586**	**779.8008**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

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	0.0160	0.8397	0.2240	3.2900e-003	0.1257	4.3600e-003	0.1300	0.0363	4.1700e-003	0.0405	0.0000	321.2113	321.2113	8.2500e-003	0.0485	335.8657
Worker	0.1494	0.0807	1.3118	4.4100e-003	0.6540	2.1100e-003	0.6561	0.1741	1.9400e-003	0.1760	0.0000	440.7311	440.7311	7.8700e-003	0.0101	443.9351
Total	**0.1654**	**0.9204**	**1.5358**	**7.7000e-003**	**0.7796**	**6.4700e-003**	**0.7861**	**0.2104**	**6.1100e-003**	**0.2165**	**0.0000**	**761.9424**	**761.9424**	**0.0161**	**0.0586**	**779.8008**

3.5 Building Construction - 2034

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

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	0.0159	0.8357	0.2238	3.2400e-003	0.1257	4.3300e-003	0.1300	0.0363	4.1400e-003	0.0405	0.0000	317.2286	317.2286	8.3400e-003	0.0479	331.7048
Worker	0.1404	0.0764	1.2707	4.3400e-003	0.6540	1.9800e-003	0.6560	0.1741	1.8200e-003	0.1759	0.0000	435.6734	435.6734	7.3400e-003	9.8400e-003	438.7904
Total	**0.1563**	**0.9120**	**1.4944**	**7.5800e-003**	**0.7796**	**6.3100e-003**	**0.7860**	**0.2104**	**5.9600e-003**	**0.2164**	**0.0000**	**752.9020**	**752.9020**	**0.0157**	**0.0577**	**770.4952**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

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	0.0159	0.8357	0.2238	3.2400e-003	0.1257	4.3300e-003	0.1300	0.0363	4.1400e-003	0.0405	0.0000	317.2286	317.2286	8.3400e-003	0.0479	331.7048
Worker	0.1404	0.0764	1.2707	4.3400e-003	0.6540	1.9800e-003	0.6560	0.1741	1.8200e-003	0.1759	0.0000	435.6734	435.6734	7.3400e-003	9.8400e-003	438.7904
Total	**0.1563**	**0.9120**	**1.4944**	**7.5800e-003**	**0.7796**	**6.3100e-003**	**0.7860**	**0.2104**	**5.9600e-003**	**0.2164**	**0.0000**	**752.9020**	**752.9020**	**0.0157**	**0.0577**	**770.4952**

3.5 Building Construction - 2035

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

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	0.0158	0.8343	0.2244	3.2200e-003	0.1262	4.3100e-003	0.1305	0.0365	4.1200e-003	0.0406	0.0000	314.7916	314.7916	8.4300e-003	0.0475	329.1589
Worker	0.1328	0.0732	1.2400	4.3000e-003	0.6565	1.8600e-003	0.6584	0.1747	1.7100e-003	0.1765	0.0000	432.9521	432.9521	6.9100e-003	9.6800e-003	436.0100
Total	**0.1486**	**0.9075**	**1.4645**	**7.5200e-003**	**0.7826**	**6.1700e-003**	**0.7888**	**0.2112**	**5.8300e-003**	**0.2170**	**0.0000**	**747.7437**	**747.7437**	**0.0153**	**0.0572**	**765.1689**

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

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	0.0158	0.8343	0.2244	3.2200e-003	0.1262	4.3100e-003	0.1305	0.0365	4.1200e-003	0.0406	0.0000	314.7916	314.7916	8.4300e-003	0.0475	329.1589
Worker	0.1328	0.0732	1.2400	4.3000e-003	0.6565	1.8600e-003	0.6584	0.1747	1.7100e-003	0.1765	0.0000	432.9521	432.9521	6.9100e-003	9.6800e-003	436.0100
Total	**0.1486**	**0.9075**	**1.4645**	**7.5200e-003**	**0.7826**	**6.1700e-003**	**0.7888**	**0.2112**	**5.8300e-003**	**0.2170**	**0.0000**	**747.7437**	**747.7437**	**0.0153**	**0.0572**	**765.1689**

3.5 Building Construction - 2036

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	0.0481	0.2829	0.6367	1.2200e-003		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	103.8301	103.8301	3.8700e-003	0.0000	103.9268
Total	**0.0481**	**0.2829**	**0.6367**	**1.2200e-003**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**103.8301**	**103.8301**	**3.8700e-003**	**0.0000**	**103.9268**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

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	4.7700e-003	0.2525	0.0679	9.7000e-004	0.0382	1.3000e-003	0.0395	0.0110	1.2500e-003	0.0123	0.0000	95.2818	95.2818	2.5500e-003	0.0144	99.6305
Worker	0.0402	0.0222	0.3753	1.3000e-003	0.1987	5.6000e-004	0.1993	0.0529	5.2000e-004	0.0534	0.0000	131.0468	131.0468	2.0900e-003	2.9300e-003	131.9724
Total	**0.0450**	**0.2747**	**0.4433**	**2.2700e-003**	**0.2369**	**1.8600e-003**	**0.2388**	**0.0639**	**1.7700e-003**	**0.0657**	**0.0000**	**226.3286**	**226.3286**	**4.6400e-003**	**0.0173**	**231.6029**

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	0.0481	0.2829	0.6367	1.2200e-003		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	103.8300	103.8300	3.8700e-003	0.0000	103.9267
Total	**0.0481**	**0.2829**	**0.6367**	**1.2200e-003**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**103.8300**	**103.8300**	**3.8700e-003**	**0.0000**	**103.9267**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

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	4.7700e-003	0.2525	0.0679	9.7000e-004	0.0382	1.3000e-003	0.0395	0.0110	1.2500e-003	0.0123	0.0000	95.2818	95.2818	2.5500e-003	0.0144	99.6305
Worker	0.0402	0.0222	0.3753	1.3000e-003	0.1987	5.6000e-004	0.1993	0.0529	5.2000e-004	0.0534	0.0000	131.0468	131.0468	2.0900e-003	2.9300e-003	131.9724
Total	**0.0450**	**0.2747**	**0.4433**	**2.2700e-003**	**0.2369**	**1.8600e-003**	**0.2388**	**0.0639**	**1.7700e-003**	**0.0657**	**0.0000**	**226.3286**	**226.3286**	**4.6400e-003**	**0.0173**	**231.6029**

3.6 Paving - 2036

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	0.1044	0.4462	1.4476	2.5700e-003		0.0172	0.0172		0.0172	0.0172	0.0000	220.5106	220.5106	8.4900e-003	0.0000	220.7227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**0.4462**	**1.4476**	**2.5700e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**220.5106**	**220.5106**	**8.4900e-003**	**0.0000**	**220.7227**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

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	2.1800e-003	1.2000e-003	0.0204	7.0000e-005	0.0108	3.0000e-005	0.0108	2.8700e-003	3.0000e-005	2.9000e-003	0.0000	7.1037	7.1037	1.1000e-004	1.6000e-004	7.1539
Total	**2.1800e-003**	**1.2000e-003**	**0.0204**	**7.0000e-005**	**0.0108**	**3.0000e-005**	**0.0108**	**2.8700e-003**	**3.0000e-005**	**2.9000e-003**	**0.0000**	**7.1037**	**7.1037**	**1.1000e-004**	**1.6000e-004**	**7.1539**

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	0.1044	0.4462	1.4476	2.5700e-003		0.0172	0.0172		0.0172	0.0172	0.0000	220.5103	220.5103	8.4900e-003	0.0000	220.7225
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**0.4462**	**1.4476**	**2.5700e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**220.5103**	**220.5103**	**8.4900e-003**	**0.0000**	**220.7225**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

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	2.1800e-003	1.2000e-003	0.0204	7.0000e-005	0.0108	3.0000e-005	0.0108	2.8700e-003	3.0000e-005	2.9000e-003	0.0000	7.1037	7.1037	1.1000e-004	1.6000e-004	7.1539
Total	**2.1800e-003**	**1.2000e-003**	**0.0204**	**7.0000e-005**	**0.0108**	**3.0000e-005**	**0.0108**	**2.8700e-003**	**3.0000e-005**	**2.9000e-003**	**0.0000**	**7.1037**	**7.1037**	**1.1000e-004**	**1.6000e-004**	**7.1539**

3.6 Paving - 2037

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	0.0211	0.0902	0.2927	5.2000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6270
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0211**	**0.0902**	**0.2927**	**5.2000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6270**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2037

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	4.4000e-004	2.4000e-004	4.1100e-003	1.0000e-005	2.1800e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4363	1.4363	2.0000e-005	3.0000e-005	1.4464
Total	**4.4000e-004**	**2.4000e-004**	**4.1100e-003**	**1.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.4363**	**1.4363**	**2.0000e-005**	**3.0000e-005**	**1.4464**

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	0.0211	0.0902	0.2927	5.2000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6269
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0211**	**0.0902**	**0.2927**	**5.2000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6269**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2037

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	4.4000e-004	2.4000e-004	4.1100e-003	1.0000e-005	2.1800e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4363	1.4363	2.0000e-005	3.0000e-005	1.4464
Total	**4.4000e-004**	**2.4000e-004**	**4.1100e-003**	**1.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.4363**	**1.4363**	**2.0000e-005**	**3.0000e-005**	**1.4464**

3.7 Architectural Coating - 2037

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	7.6789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0834	0.1974	3.3000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total	**7.6918**	**0.0834**	**0.1974**	**3.3000e-004**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

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	0.0224	0.0123	0.2087	7.2000e-004	0.1105	3.1000e-004	0.1108	0.0294	2.9000e-004	0.0297	0.0000	72.8742	72.8742	1.1600e-003	1.6300e-003	73.3889
Total	**0.0224**	**0.0123**	**0.2087**	**7.2000e-004**	**0.1105**	**3.1000e-004**	**0.1108**	**0.0294**	**2.9000e-004**	**0.0297**	**0.0000**	**72.8742**	**72.8742**	**1.1600e-003**	**1.6300e-003**	**73.3889**

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	7.6789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0834	0.1974	3.3000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total	**7.6918**	**0.0834**	**0.1974**	**3.3000e-004**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

3.7 Architectural Coating - 2037

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	0.0224	0.0123	0.2087	7.2000e-004	0.1105	3.1000e-004	0.1108	0.0294	2.9000e-004	0.0297	0.0000	72.8742	72.8742	1.1600e-003	1.6300e-003	73.3889
Total	**0.0224**	**0.0123**	**0.2087**	**7.2000e-004**	**0.1105**	**3.1000e-004**	**0.1108**	**0.0294**	**2.9000e-004**	**0.0297**	**0.0000**	**72.8742**	**72.8742**	**1.1600e-003**	**1.6300e-003**	**73.3889**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	2.7522	3.1162	26.7112	0.0485	6.8829	0.0245	6.9074	1.8410	0.0229	1.8638	0.0000	4,932.2489	4,932.2489	0.3040	0.2733	5,021.2894
Unmitigated	3.3353	4.0437	34.8400	0.0716	10.3502	0.0347	10.3849	2.7684	0.0324	2.8008	0.0000	7,282.5898	7,282.5898	0.3908	0.3576	7,398.9349

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,298.51	1,444.89	1114.36	2,986,595	1,986,086
Apartments Mid Rise	2,842.30	2,565.00	2135.19	6,239,788	4,149,459
General Office Building	905.16	205.27	64.30	1,637,109	1,088,677
Hotel	1,133.25	1,111.59	808.43	2,059,056	1,369,272
Recreational Swimming Pool	868.84	274.12	410.38	1,298,325	863,386
Single Family Housing	939.56	950.15	852.22	2,144,695	1,426,222
Strip Mall	8,424.36	7,989.75	3886.22	11,879,763	7,900,043
Total	16,411.98	14,540.77	9,271.10	28,245,331	18,783,145

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Apartments Mid Rise	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
General Office Building	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Hotel	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Recreational Swimming Pool	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Single Family Housing	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Strip Mall	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	649.1700	649.1700	0.1050	0.0127	655.5892
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	699.1414	699.1414	0.1131	0.0137	706.0547
NaturalGas Mitigated	0.0810	0.7160	0.4691	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	801.6213	801.6213	0.0154	0.0147	806.3850
NaturalGas Unmitigated	0.0924	0.8170	0.5382	5.0400e-003		0.0638	0.0638		0.0638	0.0638	0.0000	914.2674	914.2674	0.0175	0.0168	919.7005

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	1.54924e+006	8.3500e-003	0.0714	0.0304	4.6000e-004		5.7700e-003	5.7700e-003		5.7700e-003	5.7700e-003	0.0000	82.6735	82.6735	1.5800e-003	1.5200e-003	83.1648
Apartments Mid Rise	3.86395e+006	0.0208	0.1780	0.0758	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.1953	206.1953	3.9500e-003	3.7800e-003	207.4206
General Office Building	1.33206e+006	7.1800e-003	0.0653	0.0549	3.9000e-004		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	71.0839	71.0839	1.3600e-003	1.3000e-003	71.5063
Hotel	7.65088e+006	0.0413	0.3750	0.3150	2.2500e-003		0.0285	0.0285		0.0285	0.0285	0.0000	408.2800	408.2800	7.8300e-003	7.4900e-003	410.7062
Recreational Swimming Pool	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
Single Family Housing	2.3434e+006	0.0126	0.1080	0.0460	6.9000e-004		8.7300e-003	8.7300e-003		8.7300e-003	8.7300e-003	0.0000	125.0527	125.0527	2.4000e-003	2.2900e-003	125.7959
Strip Mall	393188	2.1200e-003	0.0193	0.0162	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003	0.0000	20.9820	20.9820	4.0000e-004	3.8000e-004	21.1067
Total		**0.0924**	**0.8170**	**0.5382**	**5.0500e-003**		**0.0638**	**0.0638**		**0.0638**	**0.0638**	**0.0000**	**914.2674**	**914.2674**	**0.0175**	**0.0168**	**919.7005**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

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
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.39116e+006	7.5000e-003	0.0641	0.0273	4.1000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	74.2374	74.2374	1.4200e-003	1.3600e-003	74.6786
Apartments Mid Rise	3.50253e+006	0.0189	0.1614	0.0687	1.0300e-003		0.0131	0.0131		0.0131	0.0131	0.0000	186.9083	186.9083	3.5800e-003	3.4300e-003	188.0190
General Office Building	1.13299e+006	6.1100e-003	0.0555	0.0467	3.3000e-004		4.2200e-003	4.2200e-003		4.2200e-003	4.2200e-003	0.0000	60.4608	60.4608	1.1600e-003	1.1100e-003	60.8201
Hotel	6.62739e+006	0.0357	0.3249	0.2729	1.9500e-003		0.0247	0.0247		0.0247	0.0247	0.0000	353.6629	353.6629	6.7800e-003	6.4800e-003	355.7646
Recreational Swimming Pool	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
Single Family Housing	2.03354e+006	0.0110	0.0937	0.0399	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003	0.0000	108.5172	108.5172	2.0800e-003	1.9900e-003	109.1621
Strip Mall	334210	1.8000e-003	0.0164	0.0138	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.8347	17.8347	3.4000e-004	3.3000e-004	17.9407
Total		**0.0810**	**0.7160**	**0.4691**	**4.4200e-003**		**0.0560**	**0.0560**		**0.0560**	**0.0560**	**0.0000**	**801.6213**	**801.6213**	**0.0154**	**0.0147**	**806.3850**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	637579	58.9912	9.5400e-003	1.1600e-003	59.5745
Apartments Mid Rise	1.78242e+006	164.9166	0.0267	3.2300e-003	166.5473
General Office Building	1.41182e+006	130.6270	0.0211	2.5600e-003	131.9186
Hotel	1.28938e+006	119.2979	0.0193	2.3400e-003	120.4776
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	689323	63.7788	0.0103	1.2500e-003	64.4095
Strip Mall	1.74582e+006	161.5300	0.0261	3.1700e-003	163.1272
Total		**699.1414**	**0.1131**	**0.0137**	**706.0547**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	615388	56.9380	9.2100e-003	1.1200e-003	57.5010
Apartments Mid Rise	1.72283e+006	159.4031	0.0258	3.1300e-003	160.9793
General Office Building	1.29355e+006	119.6846	0.0194	2.3500e-003	120.8680
Hotel	1.17603e+006	108.8110	0.0176	2.1300e-003	109.8870
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	665768	61.5994	9.9700e-003	1.2100e-003	62.2085
Strip Mall	1.54267e+006	142.7340	0.0231	2.8000e-003	144.1454
Total		**649.1701**	**0.1050**	**0.0127**	**655.5892**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	5.6144	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Unmitigated	5.6144	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742

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	0.7679					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.6901					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.1564	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Total	**5.6144**	**0.0603**	**5.2227**	**2.8000e-004**		**0.0291**	**0.0291**		**0.0291**	**0.0291**	**0.0000**	**8.5700**	**8.5700**	**8.1700e-003**	**0.0000**	**8.7742**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

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	0.7679					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.6901					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.1564	0.0603	5.2227	2.8000e-004		0.0291	0.0291		0.0291	0.0291	0.0000	8.5700	8.5700	8.1700e-003	0.0000	8.7742
Total	**5.6144**	**0.0603**	**5.2227**	**2.8000e-004**		**0.0291**	**0.0291**		**0.0291**	**0.0291**	**0.0000**	**8.5700**	**8.5700**	**8.1700e-003**	**0.0000**	**8.7742**

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	65.0860	2.0323	0.0487	130.4075
Unmitigated	78.7192	2.5400	0.0608	160.3450

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	10.2292 / 6.44883	10.4548	0.3345	8.0100e-003	21.2044
Apartments Mid Rise	30.036 / 18.9357	30.6985	0.9822	0.0235	62.2626
General Office Building	14.615 / 8.95761	14.8544	0.4779	0.0115	30.2122
Hotel	3.04401 / 0.338224	2.5992	0.0995	2.3700e-003	5.7931
Recreational Swimming Pool	1.57616 / 0.966036	1.6020	0.0515	1.2300e-003	3.2583
Single Family Housing	5.73355 / 3.61463	5.8600	0.1875	4.4900e-003	11.8853
Strip Mall	12.4464 / 7.62844	12.6503	0.4070	9.7500e-003	25.7292
Total		**78.7192**	**2.5400**	**0.0608**	**160.3450**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	8.18335 / 6.05545	8.6541	0.2676	6.4200e-003	17.2567
Apartments Mid Rise	24.0288 / 17.7807	25.4111	0.7859	0.0188	50.6709
General Office Building	11.692 / 8.41119	12.2867	0.3824	9.1600e-003	24.5770
Hotel	2.43521 / 0.317592	2.0946	0.0796	1.9000e-003	4.6498
Recreational Swimming Pool	1.26093 / 0.907108	1.3251	0.0412	9.9000e-004	2.6505
Single Family Housing	4.58684 / 3.39414	4.8507	0.1500	3.6000e-003	9.6725
Strip Mall	9.95712 / 7.16311	10.4636	0.3256	7.8000e-003	20.9301
Total		**65.0860**	**2.0323**	**0.0487**	**130.4075**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	174.1886	10.2943	0.0000	431.5448
Unmitigated	174.1886	10.2943	0.0000	431.5448

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	72.22	14.6600	0.8664	0.0000	36.3196
Apartments Mid Rise	212.06	43.0463	2.5440	0.0000	106.6453
General Office Building	76.47	15.5227	0.9174	0.0000	38.4569
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Recreational Swimming Pool	151.91	30.8364	1.8224	0.0000	76.3958
Single Family Housing	103.32	20.9730	1.2395	0.0000	51.9598
Strip Mall	176.43	35.8137	2.1165	0.0000	88.7269
Total		**174.1886**	**10.2943**	**0.0000**	**431.5448**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	72.22	14.6600	0.8664	0.0000	36.3196
Apartments Mid Rise	212.06	43.0463	2.5440	0.0000	106.6453
General Office Building	76.47	15.5227	0.9174	0.0000	38.4569
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Recreational Swimming Pool	151.91	30.8364	1.8224	0.0000	76.3958
Single Family Housing	103.32	20.9730	1.2395	0.0000	51.9598
Strip Mall	176.43	35.8137	2.1165	0.0000	88.7269
Total		**174.1886**	**10.2943**	**0.0000**	**431.5448**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Springs Specific Plan - 2050 Operational Year - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Springs Specific Plan - Alternative 3 - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Springs Specific Plan - Alternative 3

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	53.95	1000sqft	18.35	53,948.00	0
Hotel	120.00	Room	4.00	174,240.00	0
Recreational Swimming Pool	18.45	1000sqft	5.80	18,450.00	0
Apartments Low Rise	80.00	Dwelling Unit	15.21	80,000.00	224
Apartments Mid Rise	270.00	Dwelling Unit	68.85	270,000.00	756
Single Family Housing	63.00	Dwelling Unit	28.57	113,400.00	176
Strip Mall	125.62	1000sqft	38.03	125,617.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land Use - Proxies selected for each land use based on the Specific Plan land uses (multifamily = apartments mid rise. mixed use = apartments low rise). Population estimated based on 2.8 persons/dwelling unit. Acreages estimated.

Construction Phase - Construction Phase - Construction schedule simplified for the purposes of modeling.

Grading - Assume 178 acres is graded.

Vehicle Trips - VMT - VMT adjusted based on the VMT provided by W-Trans (November 2021) - 14,984,162 VMT per year

Springs Specific Plan - Alternative 3 - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - Woodstoves - BAAQMD Rule: "Effective November 1, 2016 - No wood-burning devices of any kind may be installed in new homes or buildings being
constructed in the Bay Area". This is consistent with BAAQMD's ban on woodburning fireplaces and stoves.

Area Mitigation - VOC

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	1.24	18.35
tblLandUse	LotAcreage	0.42	5.80
tblLandUse	LotAcreage	5.00	15.21
tblLandUse	LotAcreage	7.11	68.85
tblLandUse	LotAcreage	20.45	28.57
tblLandUse	LotAcreage	2.88	38.03
tblLandUse	Population	229.00	224.00
tblLandUse	Population	772.00	756.00
tblLandUse	Population	180.00	176.00
tblVehicleTrips	ST_TR	8.14	10.57
tblVehicleTrips	ST_TR	4.91	6.38
tblVehicleTrips	ST_TR	2.21	2.87
tblVehicleTrips	ST_TR	8.19	10.64
tblVehicleTrips	ST_TR	9.10	11.82
tblVehicleTrips	ST_TR	9.54	12.39
tblVehicleTrips	ST_TR	42.04	54.61
tblVehicleTrips	SU_TR	6.28	8.16
tblVehicleTrips	SU_TR	4.09	5.31
tblVehicleTrips	SU_TR	0.70	0.91
tblVehicleTrips	SU_TR	5.95	7.73
tblVehicleTrips	SU_TR	13.60	17.67
tblVehicleTrips	SU_TR	8.55	11.11
tblVehicleTrips	SU_TR	20.43	26.54
tblVehicleTrips	WD_TR	7.32	9.51

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	5.44	7.07
tblVehicleTrips	WD_TR	9.74	12.65
tblVehicleTrips	WD_TR	8.36	10.86
tblVehicleTrips	WD_TR	28.82	37.44
tblVehicleTrips	WD_TR	9.44	12.26
tblVehicleTrips	WD_TR	44.32	57.57

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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					
2022	0.3668	3.5701	2.7118	5.1700e-003	0.6534	0.1728	0.8262	0.3125	0.1601	0.4726	0.0000	453.6851	453.6851	0.1284	4.6000e-004	457.0316
2023	0.4210	4.2835	3.4224	7.5300e-003	1.7527	0.1806	1.9333	0.6978	0.1661	0.8639	0.0000	662.0432	662.0432	0.2094	5.2000e-004	667.4338
2024	0.4041	3.2477	3.6809	9.2300e-003	1.1311	0.1235	1.2547	0.3182	0.1147	0.4329	0.0000	834.7210	834.7210	0.1482	0.0296	847.2413
2025	0.3578	2.3687	3.5408	9.7000e-003	0.5119	0.0746	0.5865	0.1383	0.0702	0.2085	0.0000	893.8691	893.8691	0.0863	0.0490	910.6255
2026	0.3468	2.3503	3.4530	9.5300e-003	0.5119	0.0744	0.5863	0.1383	0.0700	0.2083	0.0000	881.3108	881.3108	0.0855	0.0477	897.6490
2027	0.3368	2.3338	3.3782	9.3800e-003	0.5119	0.0742	0.5861	0.1383	0.0698	0.2081	0.0000	869.1010	869.1010	0.0847	0.0464	885.0372
2028	0.3261	2.3113	3.3030	9.2000e-003	0.5099	0.0737	0.5837	0.1378	0.0694	0.2071	0.0000	854.6030	854.6030	0.0838	0.0450	870.1160
2029	0.3182	2.3062	3.2602	9.1000e-003	0.5119	0.0738	0.5857	0.1383	0.0695	0.2078	0.0000	847.1056	847.1056	0.0836	0.0441	862.3266
2030	0.3020	1.7040	3.2231	9.5100e-003	0.5119	0.0242	0.5361	0.1383	0.0239	0.1622	0.0000	878.0209	878.0209	0.0258	0.0431	891.5054
2031	0.2930	1.6950	3.1807	9.4000e-003	0.5119	0.0240	0.5359	0.1383	0.0238	0.1621	0.0000	869.5257	869.5257	0.0254	0.0422	882.7408
2032	0.2867	1.6944	3.1578	9.3400e-003	0.5139	0.0240	0.5378	0.1388	0.0237	0.1626	0.0000	865.3264	865.3264	0.0251	0.0416	878.3613
2033	0.2777	1.6753	3.1035	9.1800e-003	0.5099	0.0237	0.5336	0.1378	0.0235	0.1612	0.0000	852.0419	852.0419	0.0246	0.0407	864.7759
2034	0.2718	1.6696	3.0768	9.1100e-003	0.5099	0.0236	0.5335	0.1378	0.0234	0.1611	0.0000	845.9766	845.9766	0.0243	0.0401	858.5289
2035	0.2555	1.5696	3.0605	9.0800e-003	0.5119	0.0160	0.5279	0.1383	0.0158	0.1541	0.0000	843.8202	843.8202	0.0232	0.0397	856.2344
2036	0.1839	0.9225	2.3943	5.3800e-003	0.1657	0.0220	0.1877	0.0447	0.0220	0.0667	0.0000	483.0234	483.0234	0.0156	0.0122	487.0433
2037	5.1559	0.1818	0.6295	1.3300e-003	0.0738	4.7700e-003	0.0786	0.0197	4.7500e-003	0.0244	0.0000	121.3605	121.3605	3.5300e-003	1.0900e-003	121.7733
Maximum	**5.1559**	**4.2835**	**3.6809**	**9.7000e-003**	**1.7527**	**0.1806**	**1.9333**	**0.6978**	**0.1661**	**0.8639**	**0.0000**	**893.8691**	**893.8691**	**0.2094**	**0.0490**	**910.6255**

2.1 Overall Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.3668	3.5701	2.7118	5.1700e-003	0.6534	0.1728	0.8262	0.3125	0.1601	0.4726	0.0000	453.6846	453.6846	0.1284	4.6000e-004	457.0311
2023	0.4210	4.2834	3.4224	7.5300e-003	1.7527	0.1806	1.9333	0.6978	0.1661	0.8639	0.0000	662.0425	662.0425	0.2094	5.2000e-004	667.4330
2024	0.4041	3.2477	3.6809	9.2300e-003	1.1311	0.1235	1.2547	0.3182	0.1147	0.4329	0.0000	834.7204	834.7204	0.1482	0.0296	847.2408
2025	0.3578	2.3687	3.5408	9.7000e-003	0.5119	0.0746	0.5865	0.1383	0.0702	0.2085	0.0000	893.8688	893.8688	0.0863	0.0490	910.6252
2026	0.3468	2.3503	3.4530	9.5300e-003	0.5119	0.0744	0.5863	0.1383	0.0700	0.2083	0.0000	881.3105	881.3105	0.0855	0.0477	897.6486
2027	0.3368	2.3338	3.3782	9.3800e-003	0.5119	0.0742	0.5861	0.1383	0.0698	0.2081	0.0000	869.1006	869.1006	0.0847	0.0464	885.0368
2028	0.3261	2.3113	3.3030	9.2000e-003	0.5099	0.0737	0.5837	0.1378	0.0694	0.2071	0.0000	854.6027	854.6027	0.0838	0.0450	870.1156
2029	0.3182	2.3062	3.2602	9.1000e-003	0.5119	0.0738	0.5857	0.1383	0.0695	0.2078	0.0000	847.1052	847.1052	0.0836	0.0441	862.3262
2030	0.3020	1.7040	3.2231	9.5100e-003	0.5119	0.0242	0.5361	0.1383	0.0239	0.1622	0.0000	878.0205	878.0205	0.0258	0.0431	891.5049
2031	0.2930	1.6950	3.1807	9.4000e-003	0.5119	0.0240	0.5359	0.1383	0.0238	0.1621	0.0000	869.5253	869.5253	0.0254	0.0422	882.7404
2032	0.2867	1.6944	3.1578	9.3400e-003	0.5139	0.0240	0.5378	0.1388	0.0237	0.1626	0.0000	865.3260	865.3260	0.0251	0.0416	878.3609
2033	0.2777	1.6753	3.1035	9.1800e-003	0.5099	0.0237	0.5336	0.1378	0.0235	0.1612	0.0000	852.0415	852.0415	0.0246	0.0407	864.7755
2034	0.2718	1.6696	3.0768	9.1100e-003	0.5099	0.0236	0.5335	0.1378	0.0234	0.1611	0.0000	845.9762	845.9762	0.0243	0.0401	858.5285
2035	0.2555	1.5696	3.0605	9.0800e-003	0.5119	0.0160	0.5279	0.1383	0.0158	0.1541	0.0000	843.8198	843.8198	0.0232	0.0397	856.2340
2036	0.1839	0.9225	2.3943	5.3800e-003	0.1657	0.0220	0.1877	0.0447	0.0220	0.0667	0.0000	483.0230	483.0230	0.0156	0.0122	487.0429
2037	5.1559	0.1818	0.6295	1.3300e-003	0.0738	4.7700e-003	0.0786	0.0197	4.7500e-003	0.0244	0.0000	121.3605	121.3605	3.5300e-003	1.0900e-003	121.7732
Maximum	**5.1559**	**4.2834**	**3.6809**	**9.7000e-003**	**1.7527**	**0.1806**	**1.9333**	**0.6978**	**0.1661**	**0.8639**	**0.0000**	**893.8688**	**893.8688**	**0.2094**	**0.0490**	**910.6252**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	N20	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	1-1-2022	3-31-2022	0.9150	0.9150
2	4-1-2022	6-30-2022	0.9248	0.9248
3	7-1-2022	9-30-2022	0.9350	0.9350
4	10-1-2022	12-31-2022	1.1756	1.1756
5	1-1-2023	3-31-2023	0.9931	0.9931
6	4-1-2023	6-30-2023	1.2335	1.2335
7	7-1-2023	9-30-2023	1.2471	1.2471
8	10-1-2023	12-31-2023	1.2475	1.2475
9	1-1-2024	3-31-2024	1.1607	1.1607
10	4-1-2024	6-30-2024	1.0137	1.0137
11	7-1-2024	9-30-2024	0.7234	0.7234
12	10-1-2024	12-31-2024	0.7399	0.7399
13	1-1-2025	3-31-2025	0.6809	0.6809
14	4-1-2025	6-30-2025	0.6729	0.6729
15	7-1-2025	9-30-2025	0.6803	0.6803
16	10-1-2025	12-31-2025	0.6960	0.6960
17	1-1-2026	3-31-2026	0.6732	0.6732
18	4-1-2026	6-30-2026	0.6658	0.6658
19	7-1-2026	9-30-2026	0.6731	0.6731
20	10-1-2026	12-31-2026	0.6881	0.6881
21	1-1-2027	3-31-2027	0.6662	0.6662
22	4-1-2027	6-30-2027	0.6593	0.6593
23	7-1-2027	9-30-2027	0.6665	0.6665

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

24	**10-1-2027**	**12-31-2027**	0.6810	0.6810
25	**1-1-2028**	**3-31-2028**	0.6675	0.6675
26	**4-1-2028**	**6-30-2028**	0.6537	0.6537
27	**7-1-2028**	**9-30-2028**	0.6609	0.6609
28	**10-1-2028**	**12-31-2028**	0.6748	0.6748
29	**1-1-2029**	**3-31-2029**	0.6541	0.6541
30	**4-1-2029**	**6-30-2029**	0.6481	0.6481
31	**7-1-2029**	**9-30-2029**	0.6552	0.6552
32	**10-1-2029**	**12-31-2029**	0.6686	0.6686
33	**1-1-2030**	**3-31-2030**	0.5015	0.5015
34	**4-1-2030**	**6-30-2030**	0.4941	0.4941
35	**7-1-2030**	**9-30-2030**	0.4996	0.4996
36	**10-1-2030**	**12-31-2030**	0.5126	0.5126
37	**1-1-2031**	**3-31-2031**	0.4967	0.4967
38	**4-1-2031**	**6-30-2031**	0.4897	0.4897
39	**7-1-2031**	**9-30-2031**	0.4951	0.4951
40	**10-1-2031**	**12-31-2031**	0.5077	0.5077
41	**1-1-2032**	**3-31-2032**	0.4983	0.4983
42	**4-1-2032**	**6-30-2032**	0.4861	0.4861
43	**7-1-2032**	**9-30-2032**	0.4915	0.4915
44	**10-1-2032**	**12-31-2032**	0.5038	0.5038
45	**1-1-2033**	**3-31-2033**	0.4894	0.4894
46	**4-1-2033**	**6-30-2033**	0.4829	0.4829
47	**7-1-2033**	**9-30-2033**	0.4882	0.4882
48	**10-1-2033**	**12-31-2033**	0.5003	0.5003
49	**1-1-2034**	**3-31-2034**	0.4864	0.4864
50	**4-1-2034**	**6-30-2034**	0.4800	0.4800
51	**7-1-2034**	**9-30-2034**	0.4853	0.4853
52	**10-1-2034**	**12-31-2034**	0.4972	0.4972

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

53	**1-1-2035**	**3-31-2035**	0.4557	0.4557
54	**4-1-2035**	**6-30-2035**	0.4492	0.4492
55	**7-1-2035**	**9-30-2035**	0.4542	0.4542
56	**10-1-2035**	**12-31-2035**	0.4658	0.4658
57	**1-1-2036**	**3-31-2036**	0.4608	0.4608
58	**4-1-2036**	**6-30-2036**	0.2467	0.2467
59	**7-1-2036**	**9-30-2036**	0.1989	0.1989
60	**10-1-2036**	**12-31-2036**	0.1990	0.1990
61	**1-1-2037**	**3-31-2037**	0.7723	0.7723
62	**4-1-2037**	**6-30-2037**	1.5438	1.5438
63	**7-1-2037**	**9-30-2037**	1.5608	1.5608
		Highest	1.5608	1.5608

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.9728	0.0620	4.7080	3.4900e-003		0.2539	0.2539		0.2539	0.2539	23.9644	13.5352	37.4995	0.0456	1.5000e-003	39.0867
Energy	0.0731	0.6503	0.4559	3.9800e-003		0.0505	0.0505		0.0505	0.0505	0.0000	1,221.0897	1,221.0897	0.0944	0.0230	1,230.3112
Mobile	3.0966	3.5026	30.0302	0.0594	8.2649	0.0337	8.2985	2.2118	0.0315	2.2433	0.0000	5,990.3494	5,990.3494	0.3497	0.2990	6,088.1865
Waste						0.0000	0.0000		0.0000	0.0000	119.3303	0.0000	119.3303	7.0522	0.0000	295.6357
Water						0.0000	0.0000		0.0000	0.0000	15.8429	34.5707	50.4136	1.6328	0.0391	102.8856
Total	**8.1424**	**4.2149**	**35.1940**	**0.0669**	**8.2649**	**0.3380**	**8.6029**	**2.2118**	**0.3358**	**2.5476**	**159.1375**	**7,259.5450**	**7,418.6825**	**9.1747**	**0.3626**	**7,756.1057**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

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	3.7939	0.0353	3.0560	1.6000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	5.0149	5.0149	4.7800e-003	0.0000	5.1344
Energy	0.0638	0.5678	0.3965	3.4800e-003		0.0441	0.0441		0.0441	0.0441	0.0000	1,092.1638	1,092.1638	0.0866	0.0206	1,100.4710
Mobile	2.5873	2.6859	23.0469	0.0403	5.4961	0.0238	5.5200	1.4709	0.0223	1.4931	0.0000	4,058.8874	4,058.8874	0.2744	0.2281	4,133.7295
Waste						0.0000	0.0000		0.0000	0.0000	119.3303	0.0000	119.3303	7.0522	0.0000	295.6357
Water						0.0000	0.0000		0.0000	0.0000	12.6743	28.9867	41.6610	1.3065	0.0313	83.6518
Total	**6.4450**	**3.2890**	**26.4994**	**0.0439**	**5.4961**	**0.0849**	**5.5811**	**1.4709**	**0.0834**	**1.5542**	**132.0046**	**5,185.0527**	**5,317.0573**	**8.7245**	**0.2801**	**5,618.6225**

	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	N20	CO2e
Percent Reduction	**20.85**	**21.97**	**24.70**	**34.38**	**33.50**	**74.87**	**35.13**	**33.50**	**75.17**	**38.99**	**17.05**	**28.58**	**28.33**	**4.91**	**22.77**	**27.56**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	10/7/2022	5	200	
2	Site Preparation	Site Preparation	10/8/2022	3/24/2023	5	120	
3	Grading	Grading	3/25/2023	5/31/2024	5	310	

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4	Building Construction	Building Construction	6/1/2024	4/18/2036	5	3100	
5	Paving	Paving	4/19/2036	2/20/2037	5	220	
6	Architectural Coating	Architectural Coating	2/21/2037	12/25/2037	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 938,385; Residential Outdoor: 312,795; Non-Residential Indoor: 530,708; Non-Residential Outdoor: 176,903; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
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
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
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	413.00	105.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	83.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9023	339.9023	0.0955	0.0000	342.2892
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**		**0.1243**	**0.1243**		**0.1155**	**0.1155**	**0.0000**	**339.9023**	**339.9023**	**0.0955**	**0.0000**	**342.2892**

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3.2 Demolition - 2022

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	5.7300e-003	4.1300e-003	0.0452	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1300e-003	7.0000e-005	3.2000e-003	0.0000	9.9005	9.9005	3.8000e-004	3.3000e-004	10.0097
Total	**5.7300e-003**	**4.1300e-003**	**0.0452**	**1.1000e-004**	**0.0118**	**8.0000e-005**	**0.0119**	**3.1300e-003**	**7.0000e-005**	**3.2000e-003**	**0.0000**	**9.9005**	**9.9005**	**3.8000e-004**	**3.3000e-004**	**10.0097**

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	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9019	339.9019	0.0955	0.0000	342.2887
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**		**0.1243**	**0.1243**		**0.1155**	**0.1155**	**0.0000**	**339.9019**	**339.9019**	**0.0955**	**0.0000**	**342.2887**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	5.7300e-003	4.1300e-003	0.0452	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1300e-003	7.0000e-005	3.2000e-003	0.0000	9.9005	9.9005	3.8000e-004	3.3000e-004	10.0097
Total	**5.7300e-003**	**4.1300e-003**	**0.0452**	**1.1000e-004**	**0.0118**	**8.0000e-005**	**0.0119**	**3.1300e-003**	**7.0000e-005**	**3.2000e-003**	**0.0000**	**9.9005**	**9.9005**	**3.8000e-004**	**3.3000e-004**	**10.0097**

3.3 Site Preparation - 2022

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3182	100.3182	0.0324	0.0000	101.1293
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.6374**	**0.0484**	**0.6858**	**0.3082**	**0.0445**	**0.3527**	**0.0000**	**100.3182**	**100.3182**	**0.0324**	**0.0000**	**101.1293**

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3.3 Site Preparation - 2022

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	2.0600e-003	1.4900e-003	0.0163	4.0000e-005	4.2400e-003	3.0000e-005	4.2700e-003	1.1300e-003	3.0000e-005	1.1500e-003	0.0000	3.5642	3.5642	1.4000e-004	1.2000e-004	3.6035
Total	**2.0600e-003**	**1.4900e-003**	**0.0163**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2700e-003**	**1.1300e-003**	**3.0000e-005**	**1.1500e-003**	**0.0000**	**3.5642**	**3.5642**	**1.4000e-004**	**1.2000e-004**	**3.6035**

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3181	100.3181	0.0324	0.0000	101.1292
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.6374**	**0.0484**	**0.6858**	**0.3082**	**0.0445**	**0.3527**	**0.0000**	**100.3181**	**100.3181**	**0.0324**	**0.0000**	**101.1292**

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3.3 Site Preparation - 2022

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	2.0600e-003	1.4900e-003	0.0163	4.0000e-005	4.2400e-003	3.0000e-005	4.2700e-003	1.1300e-003	3.0000e-005	1.1500e-003	0.0000	3.5642	3.5642	1.4000e-004	1.2000e-004	3.6035
Total	**2.0600e-003**	**1.4900e-003**	**0.0163**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2700e-003**	**1.1300e-003**	**3.0000e-005**	**1.1500e-003**	**0.0000**	**3.5642**	**3.5642**	**1.4000e-004**	**1.2000e-004**	**3.6035**

3.3 Site Preparation - 2023

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3521	100.3521	0.0325	0.0000	101.1635
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.6374**	**0.0380**	**0.6754**	**0.3082**	**0.0349**	**0.3432**	**0.0000**	**100.3521**	**100.3521**	**0.0325**	**0.0000**	**101.1635**

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3.3 Site Preparation - 2023

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	1.9100e-003	1.3100e-003	0.0149	4.0000e-005	4.2400e-003	3.0000e-005	4.2600e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.4737	3.4737	1.2000e-004	1.1000e-004	3.5097
Total	**1.9100e-003**	**1.3100e-003**	**0.0149**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2600e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4737**	**3.4737**	**1.2000e-004**	**1.1000e-004**	**3.5097**

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3520	100.3520	0.0325	0.0000	101.1634
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.6374**	**0.0380**	**0.6754**	**0.3082**	**0.0349**	**0.3432**	**0.0000**	**100.3520**	**100.3520**	**0.0325**	**0.0000**	**101.1634**

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3.3 Site Preparation - 2023

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	1.9100e-003	1.3100e-003	0.0149	4.0000e-005	4.2400e-003	3.0000e-005	4.2600e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.4737	3.4737	1.2000e-004	1.1000e-004	3.5097
Total	**1.9100e-003**	**1.3100e-003**	**0.0149**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2600e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4737**	**3.4737**	**1.2000e-004**	**1.1000e-004**	**3.5097**

3.4 Grading - 2023

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					1.0953	0.0000	1.0953	0.3843	0.0000	0.3843	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3322	3.4516	2.8051	6.2100e-003		0.1425	0.1425		0.1311	0.1311	0.0000	545.3521	545.3521	0.1764	0.0000	549.7615
Total	**0.3322**	**3.4516**	**2.8051**	**6.2100e-003**	**1.0953**	**0.1425**	**1.2378**	**0.3843**	**0.1311**	**0.5153**	**0.0000**	**545.3521**	**545.3521**	**0.1764**	**0.0000**	**549.7615**

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3.4 Grading - 2023

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	7.0800e-003	4.8500e-003	0.0551	1.4000e-004	0.0157	1.0000e-004	0.0158	4.1800e-003	9.0000e-005	4.2700e-003	0.0000	12.8654	12.8654	4.5000e-004	4.1000e-004	12.9990
Total	**7.0800e-003**	**4.8500e-003**	**0.0551**	**1.4000e-004**	**0.0157**	**1.0000e-004**	**0.0158**	**4.1800e-003**	**9.0000e-005**	**4.2700e-003**	**0.0000**	**12.8654**	**12.8654**	**4.5000e-004**	**4.1000e-004**	**12.9990**

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					1.0953	0.0000	1.0953	0.3843	0.0000	0.3843	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3322	3.4516	2.8051	6.2100e-003		0.1425	0.1425		0.1311	0.1311	0.0000	545.3514	545.3514	0.1764	0.0000	549.7609
Total	**0.3322**	**3.4516**	**2.8051**	**6.2100e-003**	**1.0953**	**0.1425**	**1.2378**	**0.3843**	**0.1311**	**0.5153**	**0.0000**	**545.3514**	**545.3514**	**0.1764**	**0.0000**	**549.7609**

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3.4 Grading - 2023

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	7.0800e-003	4.8500e-003	0.0551	1.4000e-004	0.0157	1.0000e-004	0.0158	4.1800e-003	9.0000e-005	4.2700e-003	0.0000	12.8654	12.8654	4.5000e-004	4.1000e-004	12.9990
Total	**7.0800e-003**	**4.8500e-003**	**0.0551**	**1.4000e-004**	**0.0157**	**1.0000e-004**	**0.0158**	**4.1800e-003**	**9.0000e-005**	**4.2700e-003**	**0.0000**	**12.8654**	**12.8654**	**4.5000e-004**	**4.1000e-004**	**12.9990**

3.4 Grading - 2024

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					0.8244	0.0000	0.8244	0.2353	0.0000	0.2353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1770	1.7807	1.5248	3.4100e-003		0.0735	0.0735		0.0676	0.0676	0.0000	299.8574	299.8574	0.0970	0.0000	302.2819
Total	**0.1770**	**1.7807**	**1.5248**	**3.4100e-003**	**0.8244**	**0.0735**	**0.8978**	**0.2353**	**0.0676**	**0.3029**	**0.0000**	**299.8574**	**299.8574**	**0.0970**	**0.0000**	**302.2819**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

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	3.6200e-003	2.3700e-003	0.0279	7.0000e-005	8.6300e-003	5.0000e-005	8.6800e-003	2.3000e-003	5.0000e-005	2.3400e-003	0.0000	6.9015	6.9015	2.3000e-004	2.1000e-004	6.9693
Total	**3.6200e-003**	**2.3700e-003**	**0.0279**	**7.0000e-005**	**8.6300e-003**	**5.0000e-005**	**8.6800e-003**	**2.3000e-003**	**5.0000e-005**	**2.3400e-003**	**0.0000**	**6.9015**	**6.9015**	**2.3000e-004**	**2.1000e-004**	**6.9693**

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					0.8244	0.0000	0.8244	0.2353	0.0000	0.2353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1770	1.7807	1.5248	3.4100e-003		0.0735	0.0735		0.0676	0.0676	0.0000	299.8570	299.8570	0.0970	0.0000	302.2815
Total	**0.1770**	**1.7807**	**1.5248**	**3.4100e-003**	**0.8244**	**0.0735**	**0.8978**	**0.2353**	**0.0676**	**0.3029**	**0.0000**	**299.8570**	**299.8570**	**0.0970**	**0.0000**	**302.2815**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

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	3.6200e-003	2.3700e-003	0.0279	7.0000e-005	8.6300e-003	5.0000e-005	8.6800e-003	2.3000e-003	5.0000e-005	2.3400e-003	0.0000	6.9015	6.9015	2.3000e-004	2.1000e-004	6.9693
Total	**3.6200e-003**	**2.3700e-003**	**0.0279**	**7.0000e-005**	**8.6300e-003**	**5.0000e-005**	**8.6800e-003**	**2.3000e-003**	**5.0000e-005**	**2.3400e-003**	**0.0000**	**6.9015**	**6.9015**	**2.3000e-004**	**2.1000e-004**	**6.9693**

3.5 Building Construction - 2024

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	0.1118	1.0217	1.2287	2.0500e-003		0.0466	0.0466		0.0438	0.0438	0.0000	176.2053	176.2053	0.0417	0.0000	177.2470
Total	**0.1118**	**1.0217**	**1.2287**	**2.0500e-003**		**0.0466**	**0.0466**		**0.0438**	**0.0438**	**0.0000**	**176.2053**	**176.2053**	**0.0417**	**0.0000**	**177.2470**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	8.3100e-003	0.3753	0.1031	1.5900e-003	0.0518	2.0100e-003	0.0538	0.0150	1.9200e-003	0.0169	0.0000	154.8250	154.8250	2.9100e-003	0.0234	161.8776
Worker	0.1034	0.0675	0.7965	2.1000e-003	0.2463	1.4200e-003	0.2478	0.0656	1.3100e-003	0.0669	0.0000	196.9317	196.9317	6.4400e-003	5.9500e-003	198.8655
Total	**0.1117**	**0.4429**	**0.8995**	**3.6900e-003**	**0.2981**	**3.4300e-003**	**0.3016**	**0.0806**	**3.2300e-003**	**0.0838**	**0.0000**	**351.7568**	**351.7568**	**9.3500e-003**	**0.0294**	**360.7432**

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	0.1118	1.0217	1.2287	2.0500e-003		0.0466	0.0466		0.0438	0.0438	0.0000	176.2051	176.2051	0.0417	0.0000	177.2468
Total	**0.1118**	**1.0217**	**1.2287**	**2.0500e-003**		**0.0466**	**0.0466**		**0.0438**	**0.0438**	**0.0000**	**176.2051**	**176.2051**	**0.0417**	**0.0000**	**177.2468**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	8.3100e-003	0.3753	0.1031	1.5900e-003	0.0518	2.0100e-003	0.0538	0.0150	1.9200e-003	0.0169	0.0000	154.8250	154.8250	2.9100e-003	0.0234	161.8776
Worker	0.1034	0.0675	0.7965	2.1000e-003	0.2463	1.4200e-003	0.2478	0.0656	1.3100e-003	0.0669	0.0000	196.9317	196.9317	6.4400e-003	5.9500e-003	198.8655
Total	**0.1117**	**0.4429**	**0.8995**	**3.6900e-003**	**0.2981**	**3.4300e-003**	**0.3016**	**0.0806**	**3.2300e-003**	**0.0838**	**0.0000**	**351.7568**	**351.7568**	**9.3500e-003**	**0.0294**	**360.7432**

3.5 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0137	0.6378	0.1726	2.6800e-003	0.0889	3.4100e-003	0.0924	0.0257	3.2600e-003	0.0290	0.0000	261.1411	261.1411	5.1100e-003	0.0395	273.0390
Worker	0.1657	0.1036	1.2692	3.4900e-003	0.4230	2.3200e-003	0.4253	0.1126	2.1300e-003	0.1147	0.0000	330.0731	330.0731	9.9900e-003	9.5000e-003	333.1530
Total	**0.1794**	**0.7414**	**1.4417**	**6.1700e-003**	**0.5119**	**5.7300e-003**	**0.5177**	**0.1383**	**5.3900e-003**	**0.1437**	**0.0000**	**591.2142**	**591.2142**	**0.0151**	**0.0490**	**606.1920**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0137	0.6378	0.1726	2.6800e-003	0.0889	3.4100e-003	0.0924	0.0257	3.2600e-003	0.0290	0.0000	261.1411	261.1411	5.1100e-003	0.0395	273.0390
Worker	0.1657	0.1036	1.2692	3.4900e-003	0.4230	2.3200e-003	0.4253	0.1126	2.1300e-003	0.1147	0.0000	330.0731	330.0731	9.9900e-003	9.5000e-003	333.1530
Total	**0.1794**	**0.7414**	**1.4417**	**6.1700e-003**	**0.5119**	**5.7300e-003**	**0.5177**	**0.1383**	**5.3900e-003**	**0.1437**	**0.0000**	**591.2142**	**591.2142**	**0.0151**	**0.0490**	**606.1920**

3.5 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

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	0.0132	0.6297	0.1690	2.6300e-003	0.0889	3.3500e-003	0.0923	0.0257	3.2100e-003	0.0289	0.0000	256.3842	256.3842	5.2300e-003	0.0388	268.0667
Worker	0.1552	0.0934	1.1850	3.3800e-003	0.4230	2.1900e-003	0.4252	0.1126	2.0200e-003	0.1146	0.0000	322.2718	322.2718	9.0700e-003	8.8900e-003	325.1488
Total	**0.1684**	**0.7230**	**1.3540**	**6.0100e-003**	**0.5119**	**5.5400e-003**	**0.5175**	**0.1383**	**5.2300e-003**	**0.1435**	**0.0000**	**578.6559**	**578.6559**	**0.0143**	**0.0477**	**593.2155**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

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	0.0132	0.6297	0.1690	2.6300e-003	0.0889	3.3500e-003	0.0923	0.0257	3.2100e-003	0.0289	0.0000	256.3842	256.3842	5.2300e-003	0.0388	268.0667
Worker	0.1552	0.0934	1.1850	3.3800e-003	0.4230	2.1900e-003	0.4252	0.1126	2.0200e-003	0.1146	0.0000	322.2718	322.2718	9.0700e-003	8.8900e-003	325.1488
Total	**0.1684**	**0.7230**	**1.3540**	**6.0100e-003**	**0.5119**	**5.5400e-003**	**0.5175**	**0.1383**	**5.2300e-003**	**0.1435**	**0.0000**	**578.6559**	**578.6559**	**0.0143**	**0.0477**	**593.2155**

3.5 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

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	0.0128	0.6219	0.1660	2.5800e-003	0.0889	3.2900e-003	0.0922	0.0257	3.1500e-003	0.0289	0.0000	251.3098	251.3098	5.3200e-003	0.0380	262.7635
Worker	0.1455	0.0846	1.1132	3.2800e-003	0.4230	2.0500e-003	0.4250	0.1126	1.8900e-003	0.1145	0.0000	315.1363	315.1363	8.2700e-003	8.3800e-003	317.8402
Total	**0.1583**	**0.7065**	**1.2792**	**5.8600e-003**	**0.5119**	**5.3400e-003**	**0.5173**	**0.1383**	**5.0400e-003**	**0.1433**	**0.0000**	**566.4461**	**566.4461**	**0.0136**	**0.0464**	**580.6037**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

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	0.0128	0.6219	0.1660	2.5800e-003	0.0889	3.2900e-003	0.0922	0.0257	3.1500e-003	0.0289	0.0000	251.3098	251.3098	5.3200e-003	0.0380	262.7635
Worker	0.1455	0.0846	1.1132	3.2800e-003	0.4230	2.0500e-003	0.4250	0.1126	1.8900e-003	0.1145	0.0000	315.1363	315.1363	8.2700e-003	8.3800e-003	317.8402
Total	**0.1583**	**0.7065**	**1.2792**	**5.8600e-003**	**0.5119**	**5.3400e-003**	**0.5173**	**0.1383**	**5.0400e-003**	**0.1433**	**0.0000**	**566.4461**	**566.4461**	**0.0136**	**0.0464**	**580.6037**

3.5 Building Construction - 2028

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

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	0.0124	0.6134	0.1631	2.5200e-003	0.0886	3.2400e-003	0.0918	0.0256	3.1000e-003	0.0287	0.0000	245.5926	245.5926	5.4000e-003	0.0371	256.7870
Worker	0.1360	0.0768	1.0489	3.1800e-003	0.4214	1.9100e-003	0.4233	0.1122	1.7600e-003	0.1139	0.0000	307.5152	307.5152	7.5500e-003	7.9100e-003	310.0618
Total	**0.1484**	**0.6902**	**1.2119**	**5.7000e-003**	**0.5099**	**5.1500e-003**	**0.5151**	**0.1378**	**4.8600e-003**	**0.1426**	**0.0000**	**553.1077**	**553.1077**	**0.0130**	**0.0450**	**566.8489**

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

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	0.0124	0.6134	0.1631	2.5200e-003	0.0886	3.2400e-003	0.0918	0.0256	3.1000e-003	0.0287	0.0000	245.5926	245.5926	5.4000e-003	0.0371	256.7870
Worker	0.1360	0.0768	1.0489	3.1800e-003	0.4214	1.9100e-003	0.4233	0.1122	1.7600e-003	0.1139	0.0000	307.5152	307.5152	7.5500e-003	7.9100e-003	310.0618
Total	**0.1484**	**0.6902**	**1.2119**	**5.7000e-003**	**0.5099**	**5.1500e-003**	**0.5151**	**0.1378**	**4.8600e-003**	**0.1426**	**0.0000**	**553.1077**	**553.1077**	**0.0130**	**0.0450**	**566.8489**

3.5 Building Construction - 2029

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

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	0.0121	0.6083	0.1616	2.4800e-003	0.0889	3.1900e-003	0.0921	0.0257	3.0600e-003	0.0288	0.0000	241.6006	241.6006	5.5200e-003	0.0365	252.6145
Worker	0.1276	0.0706	0.9995	3.1100e-003	0.4230	1.7900e-003	0.4248	0.1126	1.6500e-003	0.1142	0.0000	302.8501	302.8501	6.9600e-003	7.5700e-003	305.2786
Total	**0.1397**	**0.6789**	**1.1611**	**5.5900e-003**	**0.5119**	**4.9800e-003**	**0.5169**	**0.1383**	**4.7100e-003**	**0.1430**	**0.0000**	**544.4507**	**544.4507**	**0.0125**	**0.0441**	**557.8931**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Springs Specific Plan - Alternative 3 - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

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	0.0121	0.6083	0.1616	2.4800e-003	0.0889	3.1900e-003	0.0921	0.0257	3.0600e-003	0.0288	0.0000	241.6006	241.6006	5.5200e-003	0.0365	252.6145
Worker	0.1276	0.0706	0.9995	3.1100e-003	0.4230	1.7900e-003	0.4248	0.1126	1.6500e-003	0.1142	0.0000	302.8501	302.8501	6.9600e-003	7.5700e-003	305.2786
Total	**0.1397**	**0.6789**	**1.1611**	**5.5900e-003**	**0.5119**	**4.9800e-003**	**0.5169**	**0.1383**	**4.7100e-003**	**0.1430**	**0.0000**	**544.4507**	**544.4507**	**0.0125**	**0.0441**	**557.8931**

3.5 Building Construction - 2030

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

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	0.0119	0.6035	0.1602	2.4300e-003	0.0889	3.1600e-003	0.0921	0.0257	3.0200e-003	0.0287	0.0000	237.3474	237.3474	5.6000e-003	0.0358	248.1689
Worker	0.1193	0.0650	0.9543	3.0300e-003	0.4230	1.6700e-003	0.4247	0.1126	1.5400e-003	0.1141	0.0000	297.6398	297.6398	6.4100e-003	7.2400e-003	299.9588
Total	**0.1312**	**0.6685**	**1.1146**	**5.4600e-003**	**0.5119**	**4.8300e-003**	**0.5167**	**0.1383**	**4.5600e-003**	**0.1429**	**0.0000**	**534.9872**	**534.9872**	**0.0120**	**0.0431**	**548.1277**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

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	0.0119	0.6035	0.1602	2.4300e-003	0.0889	3.1600e-003	0.0921	0.0257	3.0200e-003	0.0287	0.0000	237.3474	237.3474	5.6000e-003	0.0358	248.1689
Worker	0.1193	0.0650	0.9543	3.0300e-003	0.4230	1.6700e-003	0.4247	0.1126	1.5400e-003	0.1141	0.0000	297.6398	297.6398	6.4100e-003	7.2400e-003	299.9588
Total	**0.1312**	**0.6685**	**1.1146**	**5.4600e-003**	**0.5119**	**4.8300e-003**	**0.5167**	**0.1383**	**4.5600e-003**	**0.1429**	**0.0000**	**534.9872**	**534.9872**	**0.0120**	**0.0431**	**548.1277**

3.5 Building Construction - 2031

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

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	0.0116	0.5997	0.1593	2.3900e-003	0.0889	3.1300e-003	0.0920	0.0257	2.9900e-003	0.0287	0.0000	233.5667	233.5667	5.7000e-003	0.0353	244.2178
Worker	0.1105	0.0598	0.9130	2.9700e-003	0.4230	1.5600e-003	0.4245	0.1126	1.4300e-003	0.1140	0.0000	292.9254	292.9254	5.9100e-003	6.9500e-003	295.1453
Total	**0.1222**	**0.6595**	**1.0723**	**5.3600e-003**	**0.5119**	**4.6900e-003**	**0.5166**	**0.1383**	**4.4200e-003**	**0.1427**	**0.0000**	**526.4921**	**526.4921**	**0.0116**	**0.0422**	**539.3631**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

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	0.0116	0.5997	0.1593	2.3900e-003	0.0889	3.1300e-003	0.0920	0.0257	2.9900e-003	0.0287	0.0000	233.5667	233.5667	5.7000e-003	0.0353	244.2178
Worker	0.1105	0.0598	0.9130	2.9700e-003	0.4230	1.5600e-003	0.4245	0.1126	1.4300e-003	0.1140	0.0000	292.9254	292.9254	5.9100e-003	6.9500e-003	295.1453
Total	**0.1222**	**0.6595**	**1.0723**	**5.3600e-003**	**0.5119**	**4.6900e-003**	**0.5166**	**0.1383**	**4.4200e-003**	**0.1427**	**0.0000**	**526.4921**	**526.4921**	**0.0116**	**0.0422**	**539.3631**

3.5 Building Construction - 2032

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

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	0.0115	0.5990	0.1594	2.3700e-003	0.0893	3.1200e-003	0.0924	0.0258	2.9800e-003	0.0288	0.0000	231.1131	231.1131	5.7900e-003	0.0349	241.6545
Worker	0.1037	0.0559	0.8819	2.9200e-003	0.4246	1.4600e-003	0.4261	0.1130	1.3500e-003	0.1144	0.0000	289.8654	289.8654	5.5000e-003	6.7500e-003	292.0135
Total	**0.1152**	**0.6549**	**1.0412**	**5.2900e-003**	**0.5139**	**4.5800e-003**	**0.5184**	**0.1388**	**4.3300e-003**	**0.1431**	**0.0000**	**520.9785**	**520.9785**	**0.0113**	**0.0416**	**533.6680**

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

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	0.0115	0.5990	0.1594	2.3700e-003	0.0893	3.1200e-003	0.0924	0.0258	2.9800e-003	0.0288	0.0000	231.1131	231.1131	5.7900e-003	0.0349	241.6545
Worker	0.1037	0.0559	0.8819	2.9200e-003	0.4246	1.4600e-003	0.4261	0.1130	1.3500e-003	0.1144	0.0000	289.8654	289.8654	5.5000e-003	6.7500e-003	292.0135
Total	**0.1152**	**0.6549**	**1.0412**	**5.2900e-003**	**0.5139**	**4.5800e-003**	**0.5184**	**0.1388**	**4.3300e-003**	**0.1431**	**0.0000**	**520.9785**	**520.9785**	**0.0113**	**0.0416**	**533.6680**

3.5 Building Construction - 2033

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

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	0.0113	0.5917	0.1579	2.3200e-003	0.0886	3.0700e-003	0.0916	0.0256	2.9400e-003	0.0285	0.0000	226.3570	226.3570	5.8200e-003	0.0342	236.6839
Worker	0.0962	0.0520	0.8452	2.8400e-003	0.4214	1.3600e-003	0.4227	0.1122	1.2500e-003	0.1134	0.0000	283.9656	283.9656	5.0700e-003	6.5000e-003	286.0299
Total	**0.1075**	**0.6438**	**1.0031**	**5.1600e-003**	**0.5099**	**4.4300e-003**	**0.5144**	**0.1378**	**4.1900e-003**	**0.1419**	**0.0000**	**510.3226**	**510.3226**	**0.0109**	**0.0407**	**522.7138**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

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	0.0113	0.5917	0.1579	2.3200e-003	0.0886	3.0700e-003	0.0916	0.0256	2.9400e-003	0.0285	0.0000	226.3570	226.3570	5.8200e-003	0.0342	236.6839
Worker	0.0962	0.0520	0.8452	2.8400e-003	0.4214	1.3600e-003	0.4227	0.1122	1.2500e-003	0.1134	0.0000	283.9656	283.9656	5.0700e-003	6.5000e-003	286.0299
Total	**0.1075**	**0.6438**	**1.0031**	**5.1600e-003**	**0.5099**	**4.4300e-003**	**0.5144**	**0.1378**	**4.1900e-003**	**0.1419**	**0.0000**	**510.3226**	**510.3226**	**0.0109**	**0.0407**	**522.7138**

3.5 Building Construction - 2034

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

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	0.0112	0.5889	0.1577	2.2900e-003	0.0886	3.0500e-003	0.0916	0.0256	2.9200e-003	0.0285	0.0000	223.5504	223.5504	5.8800e-003	0.0337	233.7517
Worker	0.0905	0.0492	0.8187	2.8000e-003	0.4214	1.2700e-003	0.4226	0.1122	1.1700e-003	0.1133	0.0000	280.7069	280.7069	4.7300e-003	6.3400e-003	282.7152
Total	**0.1016**	**0.6381**	**0.9764**	**5.0900e-003**	**0.5099**	**4.3200e-003**	**0.5142**	**0.1378**	**4.0900e-003**	**0.1419**	**0.0000**	**504.2573**	**504.2573**	**0.0106**	**0.0401**	**516.4669**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

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	0.0112	0.5889	0.1577	2.2900e-003	0.0886	3.0500e-003	0.0916	0.0256	2.9200e-003	0.0285	0.0000	223.5504	223.5504	5.8800e-003	0.0337	233.7517
Worker	0.0905	0.0492	0.8187	2.8000e-003	0.4214	1.2700e-003	0.4226	0.1122	1.1700e-003	0.1133	0.0000	280.7069	280.7069	4.7300e-003	6.3400e-003	282.7152
Total	**0.1016**	**0.6381**	**0.9764**	**5.0900e-003**	**0.5099**	**4.3200e-003**	**0.5142**	**0.1378**	**4.0900e-003**	**0.1419**	**0.0000**	**504.2573**	**504.2573**	**0.0106**	**0.0401**	**516.4669**

3.5 Building Construction - 2035

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

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	0.0111	0.5879	0.1582	2.2700e-003	0.0889	3.0400e-003	0.0919	0.0257	2.9100e-003	0.0286	0.0000	221.8330	221.8330	5.9400e-003	0.0335	231.9576
Worker	0.0856	0.0472	0.7990	2.7700e-003	0.4230	1.2000e-003	0.4242	0.1126	1.1000e-003	0.1137	0.0000	278.9535	278.9535	4.4500e-003	6.2400e-003	280.9238
Total	**0.0967**	**0.6351**	**0.9571**	**5.0400e-003**	**0.5119**	**4.2400e-003**	**0.5161**	**0.1383**	**4.0100e-003**	**0.1423**	**0.0000**	**500.7865**	**500.7865**	**0.0104**	**0.0397**	**512.8814**

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

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	0.0111	0.5879	0.1582	2.2700e-003	0.0889	3.0400e-003	0.0919	0.0257	2.9100e-003	0.0286	0.0000	221.8330	221.8330	5.9400e-003	0.0335	231.9576
Worker	0.0856	0.0472	0.7990	2.7700e-003	0.4230	1.2000e-003	0.4242	0.1126	1.1000e-003	0.1137	0.0000	278.9535	278.9535	4.4500e-003	6.2400e-003	280.9238
Total	**0.0967**	**0.6351**	**0.9571**	**5.0400e-003**	**0.5119**	**4.2400e-003**	**0.5161**	**0.1383**	**4.0100e-003**	**0.1423**	**0.0000**	**500.7865**	**500.7865**	**0.0104**	**0.0397**	**512.8814**

3.5 Building Construction - 2036

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	0.0481	0.2829	0.6367	1.2200e-003		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	103.8301	103.8301	3.8700e-003	0.0000	103.9268
Total	**0.0481**	**0.2829**	**0.6367**	**1.2200e-003**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**103.8301**	**103.8301**	**3.8700e-003**	**0.0000**	**103.9268**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

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	3.3600e-003	0.1780	0.0479	6.9000e-004	0.0269	9.2000e-004	0.0278	7.7800e-003	8.8000e-004	8.6600e-003	0.0000	67.1449	67.1449	1.8000e-003	0.0101	70.2094
Worker	0.0259	0.0143	0.2418	8.4000e-004	0.1280	3.6000e-004	0.1284	0.0341	3.3000e-004	0.0344	0.0000	84.4342	84.4342	1.3500e-003	1.8900e-003	85.0306
Total	**0.0293**	**0.1922**	**0.2897**	**1.5300e-003**	**0.1549**	**1.2800e-003**	**0.1562**	**0.0419**	**1.2100e-003**	**0.0431**	**0.0000**	**151.5791**	**151.5791**	**3.1500e-003**	**0.0120**	**155.2400**

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	0.0481	0.2829	0.6367	1.2200e-003		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	103.8300	103.8300	3.8700e-003	0.0000	103.9267
Total	**0.0481**	**0.2829**	**0.6367**	**1.2200e-003**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**103.8300**	**103.8300**	**3.8700e-003**	**0.0000**	**103.9267**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

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	3.3600e-003	0.1780	0.0479	6.9000e-004	0.0269	9.2000e-004	0.0278	7.7800e-003	8.8000e-004	8.6600e-003	0.0000	67.1449	67.1449	1.8000e-003	0.0101	70.2094
Worker	0.0259	0.0143	0.2418	8.4000e-004	0.1280	3.6000e-004	0.1284	0.0341	3.3000e-004	0.0344	0.0000	84.4342	84.4342	1.3500e-003	1.8900e-003	85.0306
Total	**0.0293**	**0.1922**	**0.2897**	**1.5300e-003**	**0.1549**	**1.2800e-003**	**0.1562**	**0.0419**	**1.2100e-003**	**0.0431**	**0.0000**	**151.5791**	**151.5791**	**3.1500e-003**	**0.0120**	**155.2400**

3.6 Paving - 2036

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	0.1044	0.4462	1.4476	2.5700e-003		0.0172	0.0172		0.0172	0.0172	0.0000	220.5106	220.5106	8.4900e-003	0.0000	220.7227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**0.4462**	**1.4476**	**2.5700e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**220.5106**	**220.5106**	**8.4900e-003**	**0.0000**	**220.7227**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

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	2.1800e-003	1.2000e-003	0.0204	7.0000e-005	0.0108	3.0000e-005	0.0108	2.8700e-003	3.0000e-005	2.9000e-003	0.0000	7.1037	7.1037	1.1000e-004	1.6000e-004	7.1539
Total	**2.1800e-003**	**1.2000e-003**	**0.0204**	**7.0000e-005**	**0.0108**	**3.0000e-005**	**0.0108**	**2.8700e-003**	**3.0000e-005**	**2.9000e-003**	**0.0000**	**7.1037**	**7.1037**	**1.1000e-004**	**1.6000e-004**	**7.1539**

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	0.1044	0.4462	1.4476	2.5700e-003		0.0172	0.0172		0.0172	0.0172	0.0000	220.5103	220.5103	8.4900e-003	0.0000	220.7225
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**0.4462**	**1.4476**	**2.5700e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**220.5103**	**220.5103**	**8.4900e-003**	**0.0000**	**220.7225**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

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	2.1800e-003	1.2000e-003	0.0204	7.0000e-005	0.0108	3.0000e-005	0.0108	2.8700e-003	3.0000e-005	2.9000e-003	0.0000	7.1037	7.1037	1.1000e-004	1.6000e-004	7.1539
Total	**2.1800e-003**	**1.2000e-003**	**0.0204**	**7.0000e-005**	**0.0108**	**3.0000e-005**	**0.0108**	**2.8700e-003**	**3.0000e-005**	**2.9000e-003**	**0.0000**	**7.1037**	**7.1037**	**1.1000e-004**	**1.6000e-004**	**7.1539**

3.6 Paving - 2037

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	0.0211	0.0902	0.2927	5.2000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6270
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0211**	**0.0902**	**0.2927**	**5.2000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6270**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2037

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	4.4000e-004	2.4000e-004	4.1100e-003	1.0000e-005	2.1800e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4363	1.4363	2.0000e-005	3.0000e-005	1.4464
Total	**4.4000e-004**	**2.4000e-004**	**4.1100e-003**	**1.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.4363**	**1.4363**	**2.0000e-005**	**3.0000e-005**	**1.4464**

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	0.0211	0.0902	0.2927	5.2000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6269
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0211**	**0.0902**	**0.2927**	**5.2000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6269**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2037

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	4.4000e-004	2.4000e-004	4.1100e-003	1.0000e-005	2.1800e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4363	1.4363	2.0000e-005	3.0000e-005	1.4464
Total	**4.4000e-004**	**2.4000e-004**	**4.1100e-003**	**1.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.4363**	**1.4363**	**2.0000e-005**	**3.0000e-005**	**1.4464**

3.7 Architectural Coating - 2037

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	5.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0834	0.1974	3.3000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total	**5.1199**	**0.0834**	**0.1974**	**3.3000e-004**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

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	0.0145	7.9900e-003	0.1353	4.7000e-004	0.0717	2.0000e-004	0.0719	0.0191	1.9000e-004	0.0193	0.0000	47.2544	47.2544	7.5000e-004	1.0600e-003	47.5881
Total	**0.0145**	**7.9900e-003**	**0.1353**	**4.7000e-004**	**0.0717**	**2.0000e-004**	**0.0719**	**0.0191**	**1.9000e-004**	**0.0193**	**0.0000**	**47.2544**	**47.2544**	**7.5000e-004**	**1.0600e-003**	**47.5881**

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	5.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0834	0.1974	3.3000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total	**5.1199**	**0.0834**	**0.1974**	**3.3000e-004**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

3.7 Architectural Coating - 2037

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	0.0145	7.9900e-003	0.1353	4.7000e-004	0.0717	2.0000e-004	0.0719	0.0191	1.9000e-004	0.0193	0.0000	47.2544	47.2544	7.5000e-004	1.0600e-003	47.5881
Total	**0.0145**	**7.9900e-003**	**0.1353**	**4.7000e-004**	**0.0717**	**2.0000e-004**	**0.0719**	**0.0191**	**1.9000e-004**	**0.0193**	**0.0000**	**47.2544**	**47.2544**	**7.5000e-004**	**1.0600e-003**	**47.5881**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	2.5873	2.6859	23.0469	0.0403	5.4961	0.0238	5.5200	1.4709	0.0223	1.4931	0.0000	4,058.8874	4,058.8874	0.2744	0.2281	4,133.7295
Unmitigated	3.0966	3.5026	30.0302	0.0594	8.2649	0.0337	8.2985	2.2118	0.0315	2.2433	0.0000	5,990.3494	5,990.3494	0.3497	0.2990	6,088.1865

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	760.80	845.60	652.80	1,749,495	1,163,414
Apartments Mid Rise	1,908.90	1,722.60	1433.70	4,190,551	2,786,717
General Office Building	682.44	154.83	49.09	1,234,524	820,958
Hotel	1,303.20	1,276.80	927.60	2,366,879	1,573,975
Recreational Swimming Pool	690.77	218.08	326.01	1,032,197	686,411
Single Family Housing	772.38	780.57	699.93	1,762,692	1,172,190
Strip Mall	7,231.77	6,859.94	3333.88	10,197,807	6,781,542
Total	13,350.26	11,858.42	7,423.01	22,534,146	14,985,207

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Apartments Mid Rise	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
General Office Building	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Hotel	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Recreational Swimming Pool	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Single Family Housing	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533
Strip Mall	0.607923	0.051236	0.156689	0.105527	0.021293	0.006087	0.015426	0.006394	0.001025	0.000244	0.024437	0.001187	0.002533

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	460.5143	460.5143	0.0745	9.0300e-003	465.0680
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	498.0678	498.0678	0.0806	9.7700e-003	502.9928
NaturalGas Mitigated	0.0638	0.5678	0.3965	3.4800e-003		0.0441	0.0441		0.0441	0.0441	0.0000	631.6495	631.6495	0.0121	0.0116	635.4030
NaturalGas Unmitigated	0.0731	0.6503	0.4559	3.9800e-003		0.0505	0.0505		0.0505	0.0505	0.0000	723.0218	723.0218	0.0139	0.0133	727.3184

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	789423	4.2600e-003	0.0364	0.0155	2.3000e-004		2.9400e-003	2.9400e-003		2.9400e-003	2.9400e-003	0.0000	42.1266	42.1266	8.1000e-004	7.7000e-004	42.3770
Apartments Mid Rise	2.26305e+006	0.0122	0.1043	0.0444	6.7000e-004		8.4300e-003	8.4300e-003		8.4300e-003	8.4300e-003	0.0000	120.7652	120.7652	2.3100e-003	2.2100e-003	121.4828
General Office Building	873958	4.7100e-003	0.0428	0.0360	2.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	46.6377	46.6377	8.9000e-004	8.6000e-004	46.9149
Hotel	7.65088e+006	0.0413	0.3750	0.3150	2.2500e-003		0.0285	0.0285		0.0285	0.0285	0.0000	408.2800	408.2800	7.8300e-003	7.4900e-003	410.7062
Recreational Swimming Pool	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
Single Family Housing	1.67766e+006	9.0500e-003	0.0773	0.0329	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	89.5264	89.5264	1.7200e-003	1.6400e-003	90.0584
Strip Mall	293944	1.5800e-003	0.0144	0.0121	9.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	15.6860	15.6860	3.0000e-004	2.9000e-004	15.7792
Total		**0.0731**	**0.6503**	**0.4559**	**3.9900e-003**		**0.0505**	**0.0505**		**0.0505**	**0.0505**	**0.0000**	**723.0219**	**723.0219**	**0.0139**	**0.0133**	**727.3184**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

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
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	708870	3.8200e-003	0.0327	0.0139	2.1000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	37.8280	37.8280	7.3000e-004	6.9000e-004	38.0528
Apartments Mid Rise	2.05137e+006	0.0111	0.0945	0.0402	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4691	109.4691	2.1000e-003	2.0100e-003	110.1196
General Office Building	743349	4.0100e-003	0.0364	0.0306	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6680	39.6680	7.6000e-004	7.3000e-004	39.9037
Hotel	6.62739e+006	0.0357	0.3249	0.2729	1.9500e-003		0.0247	0.0247		0.0247	0.0247	0.0000	353.6629	353.6629	6.7800e-003	6.4800e-003	355.7646
Recreational Swimming Pool	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
Single Family Housing	1.45583e+006	7.8500e-003	0.0671	0.0286	4.3000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	77.6885	77.6885	1.4900e-003	1.4200e-003	78.1501
Strip Mall	249852	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3331	13.3331	2.6000e-004	2.4000e-004	13.4123
Total		**0.0638**	**0.5678**	**0.3965**	**3.4800e-003**		**0.0441**	**0.0441**		**0.0441**	**0.0441**	**0.0000**	**631.6495**	**631.6495**	**0.0121**	**0.0116**	**635.4030**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	324881	30.0592	4.8600e-003	5.9000e-004	30.3564
Apartments Mid Rise	1.04394e+006	96.5889	0.0156	1.8900e-003	97.5440
General Office Building	926287	85.7036	0.0139	1.6800e-003	86.5510
Hotel	1.28938e+006	119.2979	0.0193	2.3400e-003	120.4776
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	493493	45.6598	7.3900e-003	9.0000e-004	46.1113
Strip Mall	1.30516e+006	120.7584	0.0195	2.3700e-003	121.9525
Total		**498.0678**	**0.0806**	**9.7700e-003**	**502.9928**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	313574	29.0130	4.6900e-003	5.7000e-004	29.2999
Apartments Mid Rise	1.00903e+006	93.3597	0.0151	1.8300e-003	94.2829
General Office Building	848694	78.5244	0.0127	1.5400e-003	79.3008
Hotel	1.17603e+006	108.8110	0.0176	2.1300e-003	109.8870
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	476629	44.0995	7.1300e-003	8.6000e-004	44.5356
Strip Mall	1.15329e+006	106.7067	0.0173	2.0900e-003	107.7619
Total		**460.5143**	**0.0745**	**9.0200e-003**	**465.0680**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	3.7939	0.0353	3.0560	1.6000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	5.0149	5.0149	4.7800e-003	0.0000	5.1344
Unmitigated	4.9728	0.0620	4.7080	3.4900e-003		0.2539	0.2539		0.2539	0.2539	23.9644	13.5352	37.4995	0.0456	1.5000e-003	39.0867

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	0.5107					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1916					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1789	0.0267	1.6520	3.3300e-003		0.2369	0.2369		0.2369	0.2369	23.9644	8.5203	32.4847	0.0408	1.5000e-003	33.9523
Landscaping	0.0916	0.0353	3.0560	1.6000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	5.0149	5.0149	4.7800e-003	0.0000	5.1344
Total	**4.9727**	**0.0620**	**4.7080**	**3.4900e-003**		**0.2539**	**0.2539**		**0.2539**	**0.2539**	**23.9644**	**13.5352**	**37.4995**	**0.0456**	**1.5000e-003**	**39.0867**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

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	0.5107					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1916					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0916	0.0353	3.0560	1.6000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	5.0149	5.0149	4.7800e-003	0.0000	5.1344
Total	**3.7939**	**0.0353**	**3.0560**	**1.6000e-004**		**0.0170**	**0.0170**		**0.0170**	**0.0170**	**0.0000**	**5.0149**	**5.0149**	**4.7800e-003**	**0.0000**	**5.1344**

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	41.6610	1.3065	0.0313	83.6518
Unmitigated	50.4136	1.6328	0.0391	102.8856

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.21232 / 3.28603	5.3273	0.1704	4.0800e-003	10.8048
Apartments Mid Rise	17.5916 / 11.0903	17.9796	0.5752	0.0138	36.4662
General Office Building	9.58874 / 5.87697	9.7458	0.3135	7.5100e-003	19.8218
Hotel	3.04401 / 0.338224	2.5992	0.0995	2.3700e-003	5.7931
Recreational Swimming Pool	1.09119 / 0.668794	1.1091	0.0357	8.5000e-004	2.2557
Single Family Housing	4.1047 / 2.58775	4.1952	0.1342	3.2100e-003	8.5088
Strip Mall	9.30499 / 5.70306	9.4574	0.3043	7.2900e-003	19.2353
Total		**50.4136**	**1.6328**	**0.0391**	**102.8856**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.16986 / 3.08558	4.4097	0.1364	3.2700e-003	8.7932
Apartments Mid Rise	14.0733 / 10.4138	14.8829	0.4603	0.0110	29.6771
General Office Building	7.67099 / 5.51847	8.0612	0.2509	6.0100e-003	16.1246
Hotel	2.43521 / 0.317592	2.0946	0.0796	1.9000e-003	4.6498
Recreational Swimming Pool	0.872953 / 0.627998	0.9174	0.0286	6.8000e-004	1.8350
Single Family Housing	3.28376 / 2.4299	3.4727	0.1074	2.5700e-003	6.9247
Strip Mall	7.44399 / 5.35517	7.8226	0.2435	5.8300e-003	15.6475
Total		**41.6610**	**1.3065**	**0.0313**	**83.6518**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	119.3303	7.0522	0.0000	295.6357
Unmitigated	119.3303	7.0522	0.0000	295.6357

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	36.8	7.4701	0.4415	0.0000	18.5068
Apartments Mid Rise	124.2	25.2115	1.4900	0.0000	62.4604
General Office Building	50.17	10.1841	0.6019	0.0000	25.2306
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Recreational Swimming Pool	105.17	21.3486	1.2617	0.0000	52.8902
Single Family Housing	73.92	15.0051	0.8868	0.0000	37.1745
Strip Mall	131.9	26.7745	1.5823	0.0000	66.3327
Total		**119.3303**	**7.0522**	**0.0000**	**295.6357**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	36.8	7.4701	0.4415	0.0000	18.5068
Apartments Mid Rise	124.2	25.2115	1.4900	0.0000	62.4604
General Office Building	50.17	10.1841	0.6019	0.0000	25.2306
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Recreational Swimming Pool	105.17	21.3486	1.2617	0.0000	52.8902
Single Family Housing	73.92	15.0051	0.8868	0.0000	37.1745
Strip Mall	131.9	26.7745	1.5823	0.0000	66.3327
Total		**119.3303**	**7.0522**	**0.0000**	**295.6357**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Springs Specific Plan - Alternative 3 (2050)

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	53.95	1000sqft	18.35	53,948.00	0
Hotel	120.00	Room	4.00	174,240.00	0
Recreational Swimming Pool	18.45	1000sqft	5.80	18,450.00	0
Apartments Low Rise	80.00	Dwelling Unit	15.21	80,000.00	224
Apartments Mid Rise	270.00	Dwelling Unit	68.85	270,000.00	756
Single Family Housing	63.00	Dwelling Unit	28.57	113,400.00	176
Strip Mall	125.62	1000sqft	38.03	125,617.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2050
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land Use - Proxies selected for each land use based on the Specific Plan land uses (multifamily = apartments mid rise. mixed use = apartments low rise). Population estimated based on 2.8 persons/dwelling unit. Acreages estimated.

Construction Phase - Construction Phase - Construction schedule simplified for the purposes of modeling.

Grading - Assume 178 acres is graded.

Vehicle Trips - VMT - VMT adjusted based on the VMT provided by W-Trans (November 2021) - 14,984,162 VMT per year

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - Woodstoves - BAAQMD Rule: "Effective November 1, 2016 - No wood-burning devices of any kind may be installed in new homes or buildings being
constructed in the Bay Area". This is consistent with BAAQMD's ban on woodburning fireplaces and stoves.

Area Mitigation - VOC

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	53,950.00	53,948.00
tblLandUse	LandUseSquareFeet	125,620.00	125,617.00
tblLandUse	LotAcreage	1.24	18.35
tblLandUse	LotAcreage	0.42	5.80
tblLandUse	LotAcreage	5.00	15.21
tblLandUse	LotAcreage	7.11	68.85
tblLandUse	LotAcreage	20.45	28.57
tblLandUse	LotAcreage	2.88	38.03
tblLandUse	Population	229.00	224.00
tblLandUse	Population	772.00	756.00
tblLandUse	Population	180.00	176.00
tblVehicleTrips	ST_TR	8.14	10.57
tblVehicleTrips	ST_TR	4.91	6.38
tblVehicleTrips	ST_TR	2.21	2.87
tblVehicleTrips	ST_TR	8.19	10.64
tblVehicleTrips	ST_TR	9.10	11.82
tblVehicleTrips	ST_TR	9.54	12.39
tblVehicleTrips	ST_TR	42.04	54.61
tblVehicleTrips	SU_TR	6.28	8.16
tblVehicleTrips	SU_TR	4.09	5.31
tblVehicleTrips	SU_TR	0.70	0.91
tblVehicleTrips	SU_TR	5.95	7.73
tblVehicleTrips	SU_TR	13.60	17.67
tblVehicleTrips	SU_TR	8.55	11.11

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	20.43	26.54
tblVehicleTrips	WD_TR	7.32	9.51
tblVehicleTrips	WD_TR	5.44	7.07
tblVehicleTrips	WD_TR	9.74	12.65
tblVehicleTrips	WD_TR	8.36	10.86
tblVehicleTrips	WD_TR	28.82	37.44
tblVehicleTrips	WD_TR	9.44	12.26
tblVehicleTrips	WD_TR	44.32	57.57

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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					
2022	0.3668	3.5701	2.7118	5.1700e-003	0.6534	0.1728	0.8262	0.3125	0.1601	0.4726	0.0000	453.6851	453.6851	0.1284	4.6000e-004	457.0316
2023	0.4210	4.2835	3.4224	7.5300e-003	1.7527	0.1806	1.9333	0.6978	0.1661	0.8639	0.0000	662.0432	662.0432	0.2094	5.2000e-004	667.4338
2024	0.4041	3.2477	3.6809	9.2300e-003	1.1311	0.1235	1.2547	0.3182	0.1147	0.4329	0.0000	834.7210	834.7210	0.1482	0.0296	847.2413
2025	0.3578	2.3687	3.5408	9.7000e-003	0.5119	0.0746	0.5865	0.1383	0.0702	0.2085	0.0000	893.8691	893.8691	0.0863	0.0490	910.6255
2026	0.3468	2.3503	3.4530	9.5300e-003	0.5119	0.0744	0.5863	0.1383	0.0700	0.2083	0.0000	881.3108	881.3108	0.0855	0.0477	897.6490
2027	0.3368	2.3338	3.3782	9.3800e-003	0.5119	0.0742	0.5861	0.1383	0.0698	0.2081	0.0000	869.1010	869.1010	0.0847	0.0464	885.0372
2028	0.3261	2.3113	3.3030	9.2000e-003	0.5099	0.0737	0.5837	0.1378	0.0694	0.2071	0.0000	854.6030	854.6030	0.0838	0.0450	870.1160
2029	0.3182	2.3062	3.2602	9.1000e-003	0.5119	0.0738	0.5857	0.1383	0.0695	0.2078	0.0000	847.1056	847.1056	0.0836	0.0441	862.3266
2030	0.3020	1.7040	3.2231	9.5100e-003	0.5119	0.0242	0.5361	0.1383	0.0239	0.1622	0.0000	878.0209	878.0209	0.0258	0.0431	891.5054
2031	0.2930	1.6950	3.1807	9.4000e-003	0.5119	0.0240	0.5359	0.1383	0.0238	0.1621	0.0000	869.5257	869.5257	0.0254	0.0422	882.7408
2032	0.2867	1.6944	3.1578	9.3400e-003	0.5139	0.0240	0.5378	0.1388	0.0237	0.1626	0.0000	865.3264	865.3264	0.0251	0.0416	878.3613
2033	0.2777	1.6753	3.1035	9.1800e-003	0.5099	0.0237	0.5336	0.1378	0.0235	0.1612	0.0000	852.0419	852.0419	0.0246	0.0407	864.7759
2034	0.2718	1.6696	3.0768	9.1100e-003	0.5099	0.0236	0.5335	0.1378	0.0234	0.1611	0.0000	845.9766	845.9766	0.0243	0.0401	858.5289
2035	0.2555	1.5696	3.0605	9.0800e-003	0.5119	0.0160	0.5279	0.1383	0.0158	0.1541	0.0000	843.8202	843.8202	0.0232	0.0397	856.2344
2036	0.1839	0.9225	2.3943	5.3800e-003	0.1657	0.0220	0.1877	0.0447	0.0220	0.0667	0.0000	483.0234	483.0234	0.0156	0.0122	487.0433
2037	5.1559	0.1818	0.6295	1.3300e-003	0.0738	4.7700e-003	0.0786	0.0197	4.7500e-003	0.0244	0.0000	121.3605	121.3605	3.5300e-003	1.0900e-003	121.7733
Maximum	**5.1559**	**4.2835**	**3.6809**	**9.7000e-003**	**1.7527**	**0.1806**	**1.9333**	**0.6978**	**0.1661**	**0.8639**	**0.0000**	**893.8691**	**893.8691**	**0.2094**	**0.0490**	**910.6255**

2.1 Overall Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.3668	3.5701	2.7118	5.1700e-003	0.6534	0.1728	0.8262	0.3125	0.1601	0.4726	0.0000	453.6846	453.6846	0.1284	4.6000e-004	457.0311
2023	0.4210	4.2834	3.4224	7.5300e-003	1.7527	0.1806	1.9333	0.6978	0.1661	0.8639	0.0000	662.0425	662.0425	0.2094	5.2000e-004	667.4330
2024	0.4041	3.2477	3.6809	9.2300e-003	1.1311	0.1235	1.2547	0.3182	0.1147	0.4329	0.0000	834.7204	834.7204	0.1482	0.0296	847.2408
2025	0.3578	2.3687	3.5408	9.7000e-003	0.5119	0.0746	0.5865	0.1383	0.0702	0.2085	0.0000	893.8688	893.8688	0.0863	0.0490	910.6252
2026	0.3468	2.3503	3.4530	9.5300e-003	0.5119	0.0744	0.5863	0.1383	0.0700	0.2083	0.0000	881.3105	881.3105	0.0855	0.0477	897.6486
2027	0.3368	2.3338	3.3782	9.3800e-003	0.5119	0.0742	0.5861	0.1383	0.0698	0.2081	0.0000	869.1006	869.1006	0.0847	0.0464	885.0368
2028	0.3261	2.3113	3.3030	9.2000e-003	0.5099	0.0737	0.5837	0.1378	0.0694	0.2071	0.0000	854.6027	854.6027	0.0838	0.0450	870.1156
2029	0.3182	2.3062	3.2602	9.1000e-003	0.5119	0.0738	0.5857	0.1383	0.0695	0.2078	0.0000	847.1052	847.1052	0.0836	0.0441	862.3262
2030	0.3020	1.7040	3.2231	9.5100e-003	0.5119	0.0242	0.5361	0.1383	0.0239	0.1622	0.0000	878.0205	878.0205	0.0258	0.0431	891.5049
2031	0.2930	1.6950	3.1807	9.4000e-003	0.5119	0.0240	0.5359	0.1383	0.0238	0.1621	0.0000	869.5253	869.5253	0.0254	0.0422	882.7404
2032	0.2867	1.6944	3.1578	9.3400e-003	0.5139	0.0240	0.5378	0.1388	0.0237	0.1626	0.0000	865.3260	865.3260	0.0251	0.0416	878.3609
2033	0.2777	1.6753	3.1035	9.1800e-003	0.5099	0.0237	0.5336	0.1378	0.0235	0.1612	0.0000	852.0415	852.0415	0.0246	0.0407	864.7755
2034	0.2718	1.6696	3.0768	9.1100e-003	0.5099	0.0236	0.5335	0.1378	0.0234	0.1611	0.0000	845.9762	845.9762	0.0243	0.0401	858.5285
2035	0.2555	1.5696	3.0605	9.0800e-003	0.5119	0.0160	0.5279	0.1383	0.0158	0.1541	0.0000	843.8198	843.8198	0.0232	0.0397	856.2340
2036	0.1839	0.9225	2.3943	5.3800e-003	0.1657	0.0220	0.1877	0.0447	0.0220	0.0667	0.0000	483.0230	483.0230	0.0156	0.0122	487.0429
2037	5.1559	0.1818	0.6295	1.3300e-003	0.0738	4.7700e-003	0.0786	0.0197	4.7500e-003	0.0244	0.0000	121.3605	121.3605	3.5300e-003	1.0900e-003	121.7732
Maximum	**5.1559**	**4.2834**	**3.6809**	**9.7000e-003**	**1.7527**	**0.1806**	**1.9333**	**0.6978**	**0.1661**	**0.8639**	**0.0000**	**893.8688**	**893.8688**	**0.2094**	**0.0490**	**910.6252**

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	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	N20	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	1-1-2022	3-31-2022	0.9150	0.9150
2	4-1-2022	6-30-2022	0.9248	0.9248
3	7-1-2022	9-30-2022	0.9350	0.9350
4	10-1-2022	12-31-2022	1.1756	1.1756
5	1-1-2023	3-31-2023	0.9931	0.9931
6	4-1-2023	6-30-2023	1.2335	1.2335
7	7-1-2023	9-30-2023	1.2471	1.2471
8	10-1-2023	12-31-2023	1.2475	1.2475
9	1-1-2024	3-31-2024	1.1607	1.1607
10	4-1-2024	6-30-2024	1.0137	1.0137
11	7-1-2024	9-30-2024	0.7234	0.7234
12	10-1-2024	12-31-2024	0.7399	0.7399
13	1-1-2025	3-31-2025	0.6809	0.6809
14	4-1-2025	6-30-2025	0.6729	0.6729
15	7-1-2025	9-30-2025	0.6803	0.6803
16	10-1-2025	12-31-2025	0.6960	0.6960
17	1-1-2026	3-31-2026	0.6732	0.6732
18	4-1-2026	6-30-2026	0.6658	0.6658
19	7-1-2026	9-30-2026	0.6731	0.6731
20	10-1-2026	12-31-2026	0.6881	0.6881
21	1-1-2027	3-31-2027	0.6662	0.6662
22	4-1-2027	6-30-2027	0.6593	0.6593
23	7-1-2027	9-30-2027	0.6665	0.6665

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24	**10-1-2027**	**12-31-2027**	0.6810	0.6810
25	**1-1-2028**	**3-31-2028**	0.6675	0.6675
26	**4-1-2028**	**6-30-2028**	0.6537	0.6537
27	**7-1-2028**	**9-30-2028**	0.6609	0.6609
28	**10-1-2028**	**12-31-2028**	0.6748	0.6748
29	**1-1-2029**	**3-31-2029**	0.6541	0.6541
30	**4-1-2029**	**6-30-2029**	0.6481	0.6481
31	**7-1-2029**	**9-30-2029**	0.6552	0.6552
32	**10-1-2029**	**12-31-2029**	0.6686	0.6686
33	**1-1-2030**	**3-31-2030**	0.5015	0.5015
34	**4-1-2030**	**6-30-2030**	0.4941	0.4941
35	**7-1-2030**	**9-30-2030**	0.4996	0.4996
36	**10-1-2030**	**12-31-2030**	0.5126	0.5126
37	**1-1-2031**	**3-31-2031**	0.4967	0.4967
38	**4-1-2031**	**6-30-2031**	0.4897	0.4897
39	**7-1-2031**	**9-30-2031**	0.4951	0.4951
40	**10-1-2031**	**12-31-2031**	0.5077	0.5077
41	**1-1-2032**	**3-31-2032**	0.4983	0.4983
42	**4-1-2032**	**6-30-2032**	0.4861	0.4861
43	**7-1-2032**	**9-30-2032**	0.4915	0.4915
44	**10-1-2032**	**12-31-2032**	0.5038	0.5038
45	**1-1-2033**	**3-31-2033**	0.4894	0.4894
46	**4-1-2033**	**6-30-2033**	0.4829	0.4829
47	**7-1-2033**	**9-30-2033**	0.4882	0.4882
48	**10-1-2033**	**12-31-2033**	0.5003	0.5003
49	**1-1-2034**	**3-31-2034**	0.4864	0.4864
50	**4-1-2034**	**6-30-2034**	0.4800	0.4800
51	**7-1-2034**	**9-30-2034**	0.4853	0.4853
52	**10-1-2034**	**12-31-2034**	0.4972	0.4972

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53	**1-1-2035**	**3-31-2035**	0.4557	0.4557
54	**4-1-2035**	**6-30-2035**	0.4492	0.4492
55	**7-1-2035**	**9-30-2035**	0.4542	0.4542
56	**10-1-2035**	**12-31-2035**	0.4658	0.4658
57	**1-1-2036**	**3-31-2036**	0.4608	0.4608
58	**4-1-2036**	**6-30-2036**	0.2467	0.2467
59	**7-1-2036**	**9-30-2036**	0.1989	0.1989
60	**10-1-2036**	**12-31-2036**	0.1990	0.1990
61	**1-1-2037**	**3-31-2037**	0.7723	0.7723
62	**4-1-2037**	**6-30-2037**	1.5438	1.5438
63	**7-1-2037**	**9-30-2037**	1.5608	1.5608
		Highest	1.5608	1.5608

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.9728	0.0620	4.7080	3.4900e-003		0.2539	0.2539		0.2539	0.2539	23.9644	13.5352	37.4996	0.0456	1.5000e-003	39.0867
Energy	0.0731	0.6503	0.4559	3.9800e-003		0.0505	0.0505		0.0505	0.0505	0.0000	1,221.0897	1,221.0897	0.0944	0.0230	1,230.3112
Mobile	2.6845	3.2450	27.9524	0.0572	8.2575	0.0277	8.2853	2.2087	0.0259	2.2346	0.0000	5,814.0800	5,814.0800	0.3138	0.2869	5,907.4175
Waste						0.0000	0.0000		0.0000	0.0000	119.3303	0.0000	119.3303	7.0522	0.0000	295.6357
Water						0.0000	0.0000		0.0000	0.0000	15.8429	34.5707	50.4136	1.6328	0.0391	102.8856
Total	**7.7303**	**3.9572**	**33.1162**	**0.0647**	**8.2575**	**0.3321**	**8.5896**	**2.2087**	**0.3302**	**2.5389**	**159.1375**	**7,083.2755**	**7,242.4130**	**9.1388**	**0.3505**	**7,575.3367**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

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	3.7939	0.0353	3.0560	1.6000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	5.0149	5.0149	4.7800e-003	0.0000	5.1344
Energy	0.0638	0.5678	0.3965	3.4800e-003		0.0441	0.0441		0.0441	0.0441	0.0000	1,092.1638	1,092.1638	0.0866	0.0206	1,100.4710
Mobile	2.2194	2.5050	21.4672	0.0387	5.4913	0.0196	5.5109	1.4688	0.0183	1.4871	0.0000	3,938.9522	3,938.9522	0.2445	0.2196	4,010.5058
Waste						0.0000	0.0000		0.0000	0.0000	119.3303	0.0000	119.3303	7.0522	0.0000	295.6357
Water						0.0000	0.0000		0.0000	0.0000	12.6743	28.9867	41.6610	1.3065	0.0313	83.6518
Total	**6.0771**	**3.1081**	**24.9196**	**0.0424**	**5.4913**	**0.0807**	**5.5720**	**1.4688**	**0.0794**	**1.5482**	**132.0046**	**5,065.1176**	**5,197.1221**	**8.6945**	**0.2715**	**5,495.3987**

	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	N20	CO2e
Percent Reduction	**21.39**	**21.46**	**24.75**	**34.46**	**33.50**	**75.69**	**35.13**	**33.50**	**75.95**	**39.02**	**17.05**	**28.49**	**28.24**	**4.86**	**22.54**	**27.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	10/7/2022	5	200	
2	Site Preparation	Site Preparation	10/8/2022	3/24/2023	5	120	
3	Grading	Grading	3/25/2023	5/31/2024	5	310	

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4	Building Construction	Building Construction	6/1/2024	4/18/2036	5	3100	
5	Paving	Paving	4/19/2036	2/20/2037	5	220	
6	Architectural Coating	Architectural Coating	2/21/2037	12/25/2037	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 938,385; Residential Outdoor: 312,795; Non-Residential Indoor: 530,708; Non-Residential Outdoor: 176,903; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
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
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
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	413.00	105.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	83.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9023	339.9023	0.0955	0.0000	342.2892
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**		**0.1243**	**0.1243**		**0.1155**	**0.1155**	**0.0000**	**339.9023**	**339.9023**	**0.0955**	**0.0000**	**342.2892**

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3.2 Demolition - 2022

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	5.7300e-003	4.1300e-003	0.0452	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1300e-003	7.0000e-005	3.2000e-003	0.0000	9.9005	9.9005	3.8000e-004	3.3000e-004	10.0097
Total	**5.7300e-003**	**4.1300e-003**	**0.0452**	**1.1000e-004**	**0.0118**	**8.0000e-005**	**0.0119**	**3.1300e-003**	**7.0000e-005**	**3.2000e-003**	**0.0000**	**9.9005**	**9.9005**	**3.8000e-004**	**3.3000e-004**	**10.0097**

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	0.2639	2.5719	2.0594	3.8800e-003		0.1243	0.1243		0.1155	0.1155	0.0000	339.9019	339.9019	0.0955	0.0000	342.2887
Total	**0.2639**	**2.5719**	**2.0594**	**3.8800e-003**		**0.1243**	**0.1243**		**0.1155**	**0.1155**	**0.0000**	**339.9019**	**339.9019**	**0.0955**	**0.0000**	**342.2887**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	5.7300e-003	4.1300e-003	0.0452	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1300e-003	7.0000e-005	3.2000e-003	0.0000	9.9005	9.9005	3.8000e-004	3.3000e-004	10.0097
Total	**5.7300e-003**	**4.1300e-003**	**0.0452**	**1.1000e-004**	**0.0118**	**8.0000e-005**	**0.0119**	**3.1300e-003**	**7.0000e-005**	**3.2000e-003**	**0.0000**	**9.9005**	**9.9005**	**3.8000e-004**	**3.3000e-004**	**10.0097**

3.3 Site Preparation - 2022

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3182	100.3182	0.0324	0.0000	101.1293
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.6374**	**0.0484**	**0.6858**	**0.3082**	**0.0445**	**0.3527**	**0.0000**	**100.3182**	**100.3182**	**0.0324**	**0.0000**	**101.1293**

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3.3 Site Preparation - 2022

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	2.0600e-003	1.4900e-003	0.0163	4.0000e-005	4.2400e-003	3.0000e-005	4.2700e-003	1.1300e-003	3.0000e-005	1.1500e-003	0.0000	3.5642	3.5642	1.4000e-004	1.2000e-004	3.6035
Total	**2.0600e-003**	**1.4900e-003**	**0.0163**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2700e-003**	**1.1300e-003**	**3.0000e-005**	**1.1500e-003**	**0.0000**	**3.5642**	**3.5642**	**1.4000e-004**	**1.2000e-004**	**3.6035**

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3181	100.3181	0.0324	0.0000	101.1292
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.6374**	**0.0484**	**0.6858**	**0.3082**	**0.0445**	**0.3527**	**0.0000**	**100.3181**	**100.3181**	**0.0324**	**0.0000**	**101.1292**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	2.0600e-003	1.4900e-003	0.0163	4.0000e-005	4.2400e-003	3.0000e-005	4.2700e-003	1.1300e-003	3.0000e-005	1.1500e-003	0.0000	3.5642	3.5642	1.4000e-004	1.2000e-004	3.6035
Total	**2.0600e-003**	**1.4900e-003**	**0.0163**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2700e-003**	**1.1300e-003**	**3.0000e-005**	**1.1500e-003**	**0.0000**	**3.5642**	**3.5642**	**1.4000e-004**	**1.2000e-004**	**3.6035**

3.3 Site Preparation - 2023

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3521	100.3521	0.0325	0.0000	101.1635
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.6374**	**0.0380**	**0.6754**	**0.3082**	**0.0349**	**0.3432**	**0.0000**	**100.3521**	**100.3521**	**0.0325**	**0.0000**	**101.1635**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

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	1.9100e-003	1.3100e-003	0.0149	4.0000e-005	4.2400e-003	3.0000e-005	4.2600e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.4737	3.4737	1.2000e-004	1.1000e-004	3.5097
Total	**1.9100e-003**	**1.3100e-003**	**0.0149**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2600e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4737**	**3.4737**	**1.2000e-004**	**1.1000e-004**	**3.5097**

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3520	100.3520	0.0325	0.0000	101.1634
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.6374**	**0.0380**	**0.6754**	**0.3082**	**0.0349**	**0.3432**	**0.0000**	**100.3520**	**100.3520**	**0.0325**	**0.0000**	**101.1634**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

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	1.9100e-003	1.3100e-003	0.0149	4.0000e-005	4.2400e-003	3.0000e-005	4.2600e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.4737	3.4737	1.2000e-004	1.1000e-004	3.5097
Total	**1.9100e-003**	**1.3100e-003**	**0.0149**	**4.0000e-005**	**4.2400e-003**	**3.0000e-005**	**4.2600e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4737**	**3.4737**	**1.2000e-004**	**1.1000e-004**	**3.5097**

3.4 Grading - 2023

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					1.0953	0.0000	1.0953	0.3843	0.0000	0.3843	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3322	3.4516	2.8051	6.2100e-003		0.1425	0.1425		0.1311	0.1311	0.0000	545.3521	545.3521	0.1764	0.0000	549.7615
Total	**0.3322**	**3.4516**	**2.8051**	**6.2100e-003**	**1.0953**	**0.1425**	**1.2378**	**0.3843**	**0.1311**	**0.5153**	**0.0000**	**545.3521**	**545.3521**	**0.1764**	**0.0000**	**549.7615**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	7.0800e-003	4.8500e-003	0.0551	1.4000e-004	0.0157	1.0000e-004	0.0158	4.1800e-003	9.0000e-005	4.2700e-003	0.0000	12.8654	12.8654	4.5000e-004	4.1000e-004	12.9990
Total	**7.0800e-003**	**4.8500e-003**	**0.0551**	**1.4000e-004**	**0.0157**	**1.0000e-004**	**0.0158**	**4.1800e-003**	**9.0000e-005**	**4.2700e-003**	**0.0000**	**12.8654**	**12.8654**	**4.5000e-004**	**4.1000e-004**	**12.9990**

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					1.0953	0.0000	1.0953	0.3843	0.0000	0.3843	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3322	3.4516	2.8051	6.2100e-003		0.1425	0.1425		0.1311	0.1311	0.0000	545.3514	545.3514	0.1764	0.0000	549.7609
Total	**0.3322**	**3.4516**	**2.8051**	**6.2100e-003**	**1.0953**	**0.1425**	**1.2378**	**0.3843**	**0.1311**	**0.5153**	**0.0000**	**545.3514**	**545.3514**	**0.1764**	**0.0000**	**549.7609**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	7.0800e-003	4.8500e-003	0.0551	1.4000e-004	0.0157	1.0000e-004	0.0158	4.1800e-003	9.0000e-005	4.2700e-003	0.0000	12.8654	12.8654	4.5000e-004	4.1000e-004	12.9990
Total	**7.0800e-003**	**4.8500e-003**	**0.0551**	**1.4000e-004**	**0.0157**	**1.0000e-004**	**0.0158**	**4.1800e-003**	**9.0000e-005**	**4.2700e-003**	**0.0000**	**12.8654**	**12.8654**	**4.5000e-004**	**4.1000e-004**	**12.9990**

3.4 Grading - 2024

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					0.8244	0.0000	0.8244	0.2353	0.0000	0.2353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1770	1.7807	1.5248	3.4100e-003		0.0735	0.0735		0.0676	0.0676	0.0000	299.8574	299.8574	0.0970	0.0000	302.2819
Total	**0.1770**	**1.7807**	**1.5248**	**3.4100e-003**	**0.8244**	**0.0735**	**0.8978**	**0.2353**	**0.0676**	**0.3029**	**0.0000**	**299.8574**	**299.8574**	**0.0970**	**0.0000**	**302.2819**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

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	3.6200e-003	2.3700e-003	0.0279	7.0000e-005	8.6300e-003	5.0000e-005	8.6800e-003	2.3000e-003	5.0000e-005	2.3400e-003	0.0000	6.9015	6.9015	2.3000e-004	2.1000e-004	6.9693
Total	**3.6200e-003**	**2.3700e-003**	**0.0279**	**7.0000e-005**	**8.6300e-003**	**5.0000e-005**	**8.6800e-003**	**2.3000e-003**	**5.0000e-005**	**2.3400e-003**	**0.0000**	**6.9015**	**6.9015**	**2.3000e-004**	**2.1000e-004**	**6.9693**

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					0.8244	0.0000	0.8244	0.2353	0.0000	0.2353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1770	1.7807	1.5248	3.4100e-003		0.0735	0.0735		0.0676	0.0676	0.0000	299.8570	299.8570	0.0970	0.0000	302.2815
Total	**0.1770**	**1.7807**	**1.5248**	**3.4100e-003**	**0.8244**	**0.0735**	**0.8978**	**0.2353**	**0.0676**	**0.3029**	**0.0000**	**299.8570**	**299.8570**	**0.0970**	**0.0000**	**302.2815**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

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	3.6200e-003	2.3700e-003	0.0279	7.0000e-005	8.6300e-003	5.0000e-005	8.6800e-003	2.3000e-003	5.0000e-005	2.3400e-003	0.0000	6.9015	6.9015	2.3000e-004	2.1000e-004	6.9693
Total	**3.6200e-003**	**2.3700e-003**	**0.0279**	**7.0000e-005**	**8.6300e-003**	**5.0000e-005**	**8.6800e-003**	**2.3000e-003**	**5.0000e-005**	**2.3400e-003**	**0.0000**	**6.9015**	**6.9015**	**2.3000e-004**	**2.1000e-004**	**6.9693**

3.5 Building Construction - 2024

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	0.1118	1.0217	1.2287	2.0500e-003		0.0466	0.0466		0.0438	0.0438	0.0000	176.2053	176.2053	0.0417	0.0000	177.2470
Total	**0.1118**	**1.0217**	**1.2287**	**2.0500e-003**		**0.0466**	**0.0466**		**0.0438**	**0.0438**	**0.0000**	**176.2053**	**176.2053**	**0.0417**	**0.0000**	**177.2470**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	8.3100e-003	0.3753	0.1031	1.5900e-003	0.0518	2.0100e-003	0.0538	0.0150	1.9200e-003	0.0169	0.0000	154.8250	154.8250	2.9100e-003	0.0234	161.8776
Worker	0.1034	0.0675	0.7965	2.1000e-003	0.2463	1.4200e-003	0.2478	0.0656	1.3100e-003	0.0669	0.0000	196.9317	196.9317	6.4400e-003	5.9500e-003	198.8655
Total	**0.1117**	**0.4429**	**0.8995**	**3.6900e-003**	**0.2981**	**3.4300e-003**	**0.3016**	**0.0806**	**3.2300e-003**	**0.0838**	**0.0000**	**351.7568**	**351.7568**	**9.3500e-003**	**0.0294**	**360.7432**

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	0.1118	1.0217	1.2287	2.0500e-003		0.0466	0.0466		0.0438	0.0438	0.0000	176.2051	176.2051	0.0417	0.0000	177.2468
Total	**0.1118**	**1.0217**	**1.2287**	**2.0500e-003**		**0.0466**	**0.0466**		**0.0438**	**0.0438**	**0.0000**	**176.2051**	**176.2051**	**0.0417**	**0.0000**	**177.2468**

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3.5 Building Construction - 2024

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	8.3100e-003	0.3753	0.1031	1.5900e-003	0.0518	2.0100e-003	0.0538	0.0150	1.9200e-003	0.0169	0.0000	154.8250	154.8250	2.9100e-003	0.0234	161.8776
Worker	0.1034	0.0675	0.7965	2.1000e-003	0.2463	1.4200e-003	0.2478	0.0656	1.3100e-003	0.0669	0.0000	196.9317	196.9317	6.4400e-003	5.9500e-003	198.8655
Total	**0.1117**	**0.4429**	**0.8995**	**3.6900e-003**	**0.2981**	**3.4300e-003**	**0.3016**	**0.0806**	**3.2300e-003**	**0.0838**	**0.0000**	**351.7568**	**351.7568**	**9.3500e-003**	**0.0294**	**360.7432**

3.5 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0137	0.6378	0.1726	2.6800e-003	0.0889	3.4100e-003	0.0924	0.0257	3.2600e-003	0.0290	0.0000	261.1411	261.1411	5.1100e-003	0.0395	273.0390
Worker	0.1657	0.1036	1.2692	3.4900e-003	0.4230	2.3200e-003	0.4253	0.1126	2.1300e-003	0.1147	0.0000	330.0731	330.0731	9.9900e-003	9.5000e-003	333.1530
Total	**0.1794**	**0.7414**	**1.4417**	**6.1700e-003**	**0.5119**	**5.7300e-003**	**0.5177**	**0.1383**	**5.3900e-003**	**0.1437**	**0.0000**	**591.2142**	**591.2142**	**0.0151**	**0.0490**	**606.1920**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0137	0.6378	0.1726	2.6800e-003	0.0889	3.4100e-003	0.0924	0.0257	3.2600e-003	0.0290	0.0000	261.1411	261.1411	5.1100e-003	0.0395	273.0390
Worker	0.1657	0.1036	1.2692	3.4900e-003	0.4230	2.3200e-003	0.4253	0.1126	2.1300e-003	0.1147	0.0000	330.0731	330.0731	9.9900e-003	9.5000e-003	333.1530
Total	**0.1794**	**0.7414**	**1.4417**	**6.1700e-003**	**0.5119**	**5.7300e-003**	**0.5177**	**0.1383**	**5.3900e-003**	**0.1437**	**0.0000**	**591.2142**	**591.2142**	**0.0151**	**0.0490**	**606.1920**

3.5 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

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	0.0132	0.6297	0.1690	2.6300e-003	0.0889	3.3500e-003	0.0923	0.0257	3.2100e-003	0.0289	0.0000	256.3842	256.3842	5.2300e-003	0.0388	268.0667
Worker	0.1552	0.0934	1.1850	3.3800e-003	0.4230	2.1900e-003	0.4252	0.1126	2.0200e-003	0.1146	0.0000	322.2718	322.2718	9.0700e-003	8.8900e-003	325.1488
Total	**0.1684**	**0.7230**	**1.3540**	**6.0100e-003**	**0.5119**	**5.5400e-003**	**0.5175**	**0.1383**	**5.2300e-003**	**0.1435**	**0.0000**	**578.6559**	**578.6559**	**0.0143**	**0.0477**	**593.2155**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

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	0.0132	0.6297	0.1690	2.6300e-003	0.0889	3.3500e-003	0.0923	0.0257	3.2100e-003	0.0289	0.0000	256.3842	256.3842	5.2300e-003	0.0388	268.0667
Worker	0.1552	0.0934	1.1850	3.3800e-003	0.4230	2.1900e-003	0.4252	0.1126	2.0200e-003	0.1146	0.0000	322.2718	322.2718	9.0700e-003	8.8900e-003	325.1488
Total	**0.1684**	**0.7230**	**1.3540**	**6.0100e-003**	**0.5119**	**5.5400e-003**	**0.5175**	**0.1383**	**5.2300e-003**	**0.1435**	**0.0000**	**578.6559**	**578.6559**	**0.0143**	**0.0477**	**593.2155**

3.5 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

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	0.0128	0.6219	0.1660	2.5800e-003	0.0889	3.2900e-003	0.0922	0.0257	3.1500e-003	0.0289	0.0000	251.3098	251.3098	5.3200e-003	0.0380	262.7635
Worker	0.1455	0.0846	1.1132	3.2800e-003	0.4230	2.0500e-003	0.4250	0.1126	1.8900e-003	0.1145	0.0000	315.1363	315.1363	8.2700e-003	8.3800e-003	317.8402
Total	**0.1583**	**0.7065**	**1.2792**	**5.8600e-003**	**0.5119**	**5.3400e-003**	**0.5173**	**0.1383**	**5.0400e-003**	**0.1433**	**0.0000**	**566.4461**	**566.4461**	**0.0136**	**0.0464**	**580.6037**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

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	0.0128	0.6219	0.1660	2.5800e-003	0.0889	3.2900e-003	0.0922	0.0257	3.1500e-003	0.0289	0.0000	251.3098	251.3098	5.3200e-003	0.0380	262.7635
Worker	0.1455	0.0846	1.1132	3.2800e-003	0.4230	2.0500e-003	0.4250	0.1126	1.8900e-003	0.1145	0.0000	315.1363	315.1363	8.2700e-003	8.3800e-003	317.8402
Total	**0.1583**	**0.7065**	**1.2792**	**5.8600e-003**	**0.5119**	**5.3400e-003**	**0.5173**	**0.1383**	**5.0400e-003**	**0.1433**	**0.0000**	**566.4461**	**566.4461**	**0.0136**	**0.0464**	**580.6037**

3.5 Building Construction - 2028

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

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	0.0124	0.6134	0.1631	2.5200e-003	0.0886	3.2400e-003	0.0918	0.0256	3.1000e-003	0.0287	0.0000	245.5926	245.5926	5.4000e-003	0.0371	256.7870
Worker	0.1360	0.0768	1.0489	3.1800e-003	0.4214	1.9100e-003	0.4233	0.1122	1.7600e-003	0.1139	0.0000	307.5152	307.5152	7.5500e-003	7.9100e-003	310.0618
Total	**0.1484**	**0.6902**	**1.2119**	**5.7000e-003**	**0.5099**	**5.1500e-003**	**0.5151**	**0.1378**	**4.8600e-003**	**0.1426**	**0.0000**	**553.1077**	**553.1077**	**0.0130**	**0.0450**	**566.8489**

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

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	0.0124	0.6134	0.1631	2.5200e-003	0.0886	3.2400e-003	0.0918	0.0256	3.1000e-003	0.0287	0.0000	245.5926	245.5926	5.4000e-003	0.0371	256.7870
Worker	0.1360	0.0768	1.0489	3.1800e-003	0.4214	1.9100e-003	0.4233	0.1122	1.7600e-003	0.1139	0.0000	307.5152	307.5152	7.5500e-003	7.9100e-003	310.0618
Total	**0.1484**	**0.6902**	**1.2119**	**5.7000e-003**	**0.5099**	**5.1500e-003**	**0.5151**	**0.1378**	**4.8600e-003**	**0.1426**	**0.0000**	**553.1077**	**553.1077**	**0.0130**	**0.0450**	**566.8489**

3.5 Building Construction - 2029

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

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	0.0121	0.6083	0.1616	2.4800e-003	0.0889	3.1900e-003	0.0921	0.0257	3.0600e-003	0.0288	0.0000	241.6006	241.6006	5.5200e-003	0.0365	252.6145
Worker	0.1276	0.0706	0.9995	3.1100e-003	0.4230	1.7900e-003	0.4248	0.1126	1.6500e-003	0.1142	0.0000	302.8501	302.8501	6.9600e-003	7.5700e-003	305.2786
Total	**0.1397**	**0.6789**	**1.1611**	**5.5900e-003**	**0.5119**	**4.9800e-003**	**0.5169**	**0.1383**	**4.7100e-003**	**0.1430**	**0.0000**	**544.4507**	**544.4507**	**0.0125**	**0.0441**	**557.8931**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

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	0.0121	0.6083	0.1616	2.4800e-003	0.0889	3.1900e-003	0.0921	0.0257	3.0600e-003	0.0288	0.0000	241.6006	241.6006	5.5200e-003	0.0365	252.6145
Worker	0.1276	0.0706	0.9995	3.1100e-003	0.4230	1.7900e-003	0.4248	0.1126	1.6500e-003	0.1142	0.0000	302.8501	302.8501	6.9600e-003	7.5700e-003	305.2786
Total	**0.1397**	**0.6789**	**1.1611**	**5.5900e-003**	**0.5119**	**4.9800e-003**	**0.5169**	**0.1383**	**4.7100e-003**	**0.1430**	**0.0000**	**544.4507**	**544.4507**	**0.0125**	**0.0441**	**557.8931**

3.5 Building Construction - 2030

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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3.5 Building Construction - 2030

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	0.0119	0.6035	0.1602	2.4300e-003	0.0889	3.1600e-003	0.0921	0.0257	3.0200e-003	0.0287	0.0000	237.3474	237.3474	5.6000e-003	0.0358	248.1689
Worker	0.1193	0.0650	0.9543	3.0300e-003	0.4230	1.6700e-003	0.4247	0.1126	1.5400e-003	0.1141	0.0000	297.6398	297.6398	6.4100e-003	7.2400e-003	299.9588
Total	**0.1312**	**0.6685**	**1.1146**	**5.4600e-003**	**0.5119**	**4.8300e-003**	**0.5167**	**0.1383**	**4.5600e-003**	**0.1429**	**0.0000**	**534.9872**	**534.9872**	**0.0120**	**0.0431**	**548.1277**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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3.5 Building Construction - 2030

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	0.0119	0.6035	0.1602	2.4300e-003	0.0889	3.1600e-003	0.0921	0.0257	3.0200e-003	0.0287	0.0000	237.3474	237.3474	5.6000e-003	0.0358	248.1689
Worker	0.1193	0.0650	0.9543	3.0300e-003	0.4230	1.6700e-003	0.4247	0.1126	1.5400e-003	0.1141	0.0000	297.6398	297.6398	6.4100e-003	7.2400e-003	299.9588
Total	**0.1312**	**0.6685**	**1.1146**	**5.4600e-003**	**0.5119**	**4.8300e-003**	**0.5167**	**0.1383**	**4.5600e-003**	**0.1429**	**0.0000**	**534.9872**	**534.9872**	**0.0120**	**0.0431**	**548.1277**

3.5 Building Construction - 2031

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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3.5 Building Construction - 2031

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	0.0116	0.5997	0.1593	2.3900e-003	0.0889	3.1300e-003	0.0920	0.0257	2.9900e-003	0.0287	0.0000	233.5667	233.5667	5.7000e-003	0.0353	244.2178
Worker	0.1105	0.0598	0.9130	2.9700e-003	0.4230	1.5600e-003	0.4245	0.1126	1.4300e-003	0.1140	0.0000	292.9254	292.9254	5.9100e-003	6.9500e-003	295.1453
Total	**0.1222**	**0.6595**	**1.0723**	**5.3600e-003**	**0.5119**	**4.6900e-003**	**0.5166**	**0.1383**	**4.4200e-003**	**0.1427**	**0.0000**	**526.4921**	**526.4921**	**0.0116**	**0.0422**	**539.3631**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

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	0.0116	0.5997	0.1593	2.3900e-003	0.0889	3.1300e-003	0.0920	0.0257	2.9900e-003	0.0287	0.0000	233.5667	233.5667	5.7000e-003	0.0353	244.2178
Worker	0.1105	0.0598	0.9130	2.9700e-003	0.4230	1.5600e-003	0.4245	0.1126	1.4300e-003	0.1140	0.0000	292.9254	292.9254	5.9100e-003	6.9500e-003	295.1453
Total	**0.1222**	**0.6595**	**1.0723**	**5.3600e-003**	**0.5119**	**4.6900e-003**	**0.5166**	**0.1383**	**4.4200e-003**	**0.1427**	**0.0000**	**526.4921**	**526.4921**	**0.0116**	**0.0422**	**539.3631**

3.5 Building Construction - 2032

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

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	0.0115	0.5990	0.1594	2.3700e-003	0.0893	3.1200e-003	0.0924	0.0258	2.9800e-003	0.0288	0.0000	231.1131	231.1131	5.7900e-003	0.0349	241.6545
Worker	0.1037	0.0559	0.8819	2.9200e-003	0.4246	1.4600e-003	0.4261	0.1130	1.3500e-003	0.1144	0.0000	289.8654	289.8654	5.5000e-003	6.7500e-003	292.0135
Total	**0.1152**	**0.6549**	**1.0412**	**5.2900e-003**	**0.5139**	**4.5800e-003**	**0.5184**	**0.1388**	**4.3300e-003**	**0.1431**	**0.0000**	**520.9785**	**520.9785**	**0.0113**	**0.0416**	**533.6680**

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

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3.5 Building Construction - 2032

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	0.0115	0.5990	0.1594	2.3700e-003	0.0893	3.1200e-003	0.0924	0.0258	2.9800e-003	0.0288	0.0000	231.1131	231.1131	5.7900e-003	0.0349	241.6545
Worker	0.1037	0.0559	0.8819	2.9200e-003	0.4246	1.4600e-003	0.4261	0.1130	1.3500e-003	0.1144	0.0000	289.8654	289.8654	5.5000e-003	6.7500e-003	292.0135
Total	**0.1152**	**0.6549**	**1.0412**	**5.2900e-003**	**0.5139**	**4.5800e-003**	**0.5184**	**0.1388**	**4.3300e-003**	**0.1431**	**0.0000**	**520.9785**	**520.9785**	**0.0113**	**0.0416**	**533.6680**

3.5 Building Construction - 2033

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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3.5 Building Construction - 2033

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	0.0113	0.5917	0.1579	2.3200e-003	0.0886	3.0700e-003	0.0916	0.0256	2.9400e-003	0.0285	0.0000	226.3570	226.3570	5.8200e-003	0.0342	236.6839
Worker	0.0962	0.0520	0.8452	2.8400e-003	0.4214	1.3600e-003	0.4227	0.1122	1.2500e-003	0.1134	0.0000	283.9656	283.9656	5.0700e-003	6.5000e-003	286.0299
Total	**0.1075**	**0.6438**	**1.0031**	**5.1600e-003**	**0.5099**	**4.4300e-003**	**0.5144**	**0.1378**	**4.1900e-003**	**0.1419**	**0.0000**	**510.3226**	**510.3226**	**0.0109**	**0.0407**	**522.7138**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

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	0.0113	0.5917	0.1579	2.3200e-003	0.0886	3.0700e-003	0.0916	0.0256	2.9400e-003	0.0285	0.0000	226.3570	226.3570	5.8200e-003	0.0342	236.6839
Worker	0.0962	0.0520	0.8452	2.8400e-003	0.4214	1.3600e-003	0.4227	0.1122	1.2500e-003	0.1134	0.0000	283.9656	283.9656	5.0700e-003	6.5000e-003	286.0299
Total	**0.1075**	**0.6438**	**1.0031**	**5.1600e-003**	**0.5099**	**4.4300e-003**	**0.5144**	**0.1378**	**4.1900e-003**	**0.1419**	**0.0000**	**510.3226**	**510.3226**	**0.0109**	**0.0407**	**522.7138**

3.5 Building Construction - 2034

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

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	0.0112	0.5889	0.1577	2.2900e-003	0.0886	3.0500e-003	0.0916	0.0256	2.9200e-003	0.0285	0.0000	223.5504	223.5504	5.8800e-003	0.0337	233.7517
Worker	0.0905	0.0492	0.8187	2.8000e-003	0.4214	1.2700e-003	0.4226	0.1122	1.1700e-003	0.1133	0.0000	280.7069	280.7069	4.7300e-003	6.3400e-003	282.7152
Total	**0.1016**	**0.6381**	**0.9764**	**5.0900e-003**	**0.5099**	**4.3200e-003**	**0.5142**	**0.1378**	**4.0900e-003**	**0.1419**	**0.0000**	**504.2573**	**504.2573**	**0.0106**	**0.0401**	**516.4669**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

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	0.0112	0.5889	0.1577	2.2900e-003	0.0886	3.0500e-003	0.0916	0.0256	2.9200e-003	0.0285	0.0000	223.5504	223.5504	5.8800e-003	0.0337	233.7517
Worker	0.0905	0.0492	0.8187	2.8000e-003	0.4214	1.2700e-003	0.4226	0.1122	1.1700e-003	0.1133	0.0000	280.7069	280.7069	4.7300e-003	6.3400e-003	282.7152
Total	**0.1016**	**0.6381**	**0.9764**	**5.0900e-003**	**0.5099**	**4.3200e-003**	**0.5142**	**0.1378**	**4.0900e-003**	**0.1419**	**0.0000**	**504.2573**	**504.2573**	**0.0106**	**0.0401**	**516.4669**

3.5 Building Construction - 2035

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

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	0.0111	0.5879	0.1582	2.2700e-003	0.0889	3.0400e-003	0.0919	0.0257	2.9100e-003	0.0286	0.0000	221.8330	221.8330	5.9400e-003	0.0335	231.9576
Worker	0.0856	0.0472	0.7990	2.7700e-003	0.4230	1.2000e-003	0.4242	0.1126	1.1000e-003	0.1137	0.0000	278.9535	278.9535	4.4500e-003	6.2400e-003	280.9238
Total	**0.0967**	**0.6351**	**0.9571**	**5.0400e-003**	**0.5119**	**4.2400e-003**	**0.5161**	**0.1383**	**4.0100e-003**	**0.1423**	**0.0000**	**500.7865**	**500.7865**	**0.0104**	**0.0397**	**512.8814**

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

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	0.0111	0.5879	0.1582	2.2700e-003	0.0889	3.0400e-003	0.0919	0.0257	2.9100e-003	0.0286	0.0000	221.8330	221.8330	5.9400e-003	0.0335	231.9576
Worker	0.0856	0.0472	0.7990	2.7700e-003	0.4230	1.2000e-003	0.4242	0.1126	1.1000e-003	0.1137	0.0000	278.9535	278.9535	4.4500e-003	6.2400e-003	280.9238
Total	**0.0967**	**0.6351**	**0.9571**	**5.0400e-003**	**0.5119**	**4.2400e-003**	**0.5161**	**0.1383**	**4.0100e-003**	**0.1423**	**0.0000**	**500.7865**	**500.7865**	**0.0104**	**0.0397**	**512.8814**

3.5 Building Construction - 2036

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	0.0481	0.2829	0.6367	1.2200e-003		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	103.8301	103.8301	3.8700e-003	0.0000	103.9268
Total	**0.0481**	**0.2829**	**0.6367**	**1.2200e-003**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**103.8301**	**103.8301**	**3.8700e-003**	**0.0000**	**103.9268**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

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	3.3600e-003	0.1780	0.0479	6.9000e-004	0.0269	9.2000e-004	0.0278	7.7800e-003	8.8000e-004	8.6600e-003	0.0000	67.1449	67.1449	1.8000e-003	0.0101	70.2094
Worker	0.0259	0.0143	0.2418	8.4000e-004	0.1280	3.6000e-004	0.1284	0.0341	3.3000e-004	0.0344	0.0000	84.4342	84.4342	1.3500e-003	1.8900e-003	85.0306
Total	**0.0293**	**0.1922**	**0.2897**	**1.5300e-003**	**0.1549**	**1.2800e-003**	**0.1562**	**0.0419**	**1.2100e-003**	**0.0431**	**0.0000**	**151.5791**	**151.5791**	**3.1500e-003**	**0.0120**	**155.2400**

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	0.0481	0.2829	0.6367	1.2200e-003		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	103.8300	103.8300	3.8700e-003	0.0000	103.9267
Total	**0.0481**	**0.2829**	**0.6367**	**1.2200e-003**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**103.8300**	**103.8300**	**3.8700e-003**	**0.0000**	**103.9267**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

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	3.3600e-003	0.1780	0.0479	6.9000e-004	0.0269	9.2000e-004	0.0278	7.7800e-003	8.8000e-004	8.6600e-003	0.0000	67.1449	67.1449	1.8000e-003	0.0101	70.2094
Worker	0.0259	0.0143	0.2418	8.4000e-004	0.1280	3.6000e-004	0.1284	0.0341	3.3000e-004	0.0344	0.0000	84.4342	84.4342	1.3500e-003	1.8900e-003	85.0306
Total	**0.0293**	**0.1922**	**0.2897**	**1.5300e-003**	**0.1549**	**1.2800e-003**	**0.1562**	**0.0419**	**1.2100e-003**	**0.0431**	**0.0000**	**151.5791**	**151.5791**	**3.1500e-003**	**0.0120**	**155.2400**

3.6 Paving - 2036

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	0.1044	0.4462	1.4476	2.5700e-003		0.0172	0.0172		0.0172	0.0172	0.0000	220.5106	220.5106	8.4900e-003	0.0000	220.7227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**0.4462**	**1.4476**	**2.5700e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**220.5106**	**220.5106**	**8.4900e-003**	**0.0000**	**220.7227**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

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	2.1800e-003	1.2000e-003	0.0204	7.0000e-005	0.0108	3.0000e-005	0.0108	2.8700e-003	3.0000e-005	2.9000e-003	0.0000	7.1037	7.1037	1.1000e-004	1.6000e-004	7.1539
Total	**2.1800e-003**	**1.2000e-003**	**0.0204**	**7.0000e-005**	**0.0108**	**3.0000e-005**	**0.0108**	**2.8700e-003**	**3.0000e-005**	**2.9000e-003**	**0.0000**	**7.1037**	**7.1037**	**1.1000e-004**	**1.6000e-004**	**7.1539**

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	0.1044	0.4462	1.4476	2.5700e-003		0.0172	0.0172		0.0172	0.0172	0.0000	220.5103	220.5103	8.4900e-003	0.0000	220.7225
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1044**	**0.4462**	**1.4476**	**2.5700e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**220.5103**	**220.5103**	**8.4900e-003**	**0.0000**	**220.7225**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

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	2.1800e-003	1.2000e-003	0.0204	7.0000e-005	0.0108	3.0000e-005	0.0108	2.8700e-003	3.0000e-005	2.9000e-003	0.0000	7.1037	7.1037	1.1000e-004	1.6000e-004	7.1539
Total	**2.1800e-003**	**1.2000e-003**	**0.0204**	**7.0000e-005**	**0.0108**	**3.0000e-005**	**0.0108**	**2.8700e-003**	**3.0000e-005**	**2.9000e-003**	**0.0000**	**7.1037**	**7.1037**	**1.1000e-004**	**1.6000e-004**	**7.1539**

3.6 Paving - 2037

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	0.0211	0.0902	0.2927	5.2000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6270
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0211**	**0.0902**	**0.2927**	**5.2000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6270**

3.6 Paving - 2037

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	4.4000e-004	2.4000e-004	4.1100e-003	1.0000e-005	2.1800e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4363	1.4363	2.0000e-005	3.0000e-005	1.4464
Total	**4.4000e-004**	**2.4000e-004**	**4.1100e-003**	**1.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.4363**	**1.4363**	**2.0000e-005**	**3.0000e-005**	**1.4464**

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	0.0211	0.0902	0.2927	5.2000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6269
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0211**	**0.0902**	**0.2927**	**5.2000e-004**		**3.4700e-003**	**3.4700e-003**		**3.4700e-003**	**3.4700e-003**	**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6269**

3.6 Paving - 2037

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	4.4000e-004	2.4000e-004	4.1100e-003	1.0000e-005	2.1800e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4363	1.4363	2.0000e-005	3.0000e-005	1.4464
Total	**4.4000e-004**	**2.4000e-004**	**4.1100e-003**	**1.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.4363**	**1.4363**	**2.0000e-005**	**3.0000e-005**	**1.4464**

3.7 Architectural Coating - 2037

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	5.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0834	0.1974	3.3000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total	**5.1199**	**0.0834**	**0.1974**	**3.3000e-004**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

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	0.0145	7.9900e-003	0.1353	4.7000e-004	0.0717	2.0000e-004	0.0719	0.0191	1.9000e-004	0.0193	0.0000	47.2544	47.2544	7.5000e-004	1.0600e-003	47.5881
Total	**0.0145**	**7.9900e-003**	**0.1353**	**4.7000e-004**	**0.0717**	**2.0000e-004**	**0.0719**	**0.0191**	**1.9000e-004**	**0.0193**	**0.0000**	**47.2544**	**47.2544**	**7.5000e-004**	**1.0600e-003**	**47.5881**

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	5.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0834	0.1974	3.3000e-004		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total	**5.1199**	**0.0834**	**0.1974**	**3.3000e-004**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

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	0.0145	7.9900e-003	0.1353	4.7000e-004	0.0717	2.0000e-004	0.0719	0.0191	1.9000e-004	0.0193	0.0000	47.2544	47.2544	7.5000e-004	1.0600e-003	47.5881
Total	**0.0145**	**7.9900e-003**	**0.1353**	**4.7000e-004**	**0.0717**	**2.0000e-004**	**0.0719**	**0.0191**	**1.9000e-004**	**0.0193**	**0.0000**	**47.2544**	**47.2544**	**7.5000e-004**	**1.0600e-003**	**47.5881**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	2.2194	2.5050	21.4672	0.0387	5.4913	0.0196	5.5109	1.4688	0.0183	1.4871	0.0000	3,938.9522	3,938.9522	0.2445	0.2196	4,010.5058
Unmitigated	2.6845	3.2450	27.9524	0.0572	8.2575	0.0277	8.2853	2.2087	0.0259	2.2346	0.0000	5,814.0800	5,814.0800	0.3138	0.2869	5,907.4175

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	760.80	845.60	652.80	1,749,495	1,163,414
Apartments Mid Rise	1,908.90	1,722.60	1433.70	4,190,551	2,786,717
General Office Building	682.47	154.84	49.09	1,234,570	820,989
Hotel	1,303.20	1,276.80	927.60	2,366,879	1,573,975
Recreational Swimming Pool	690.77	218.08	326.01	1,032,197	686,411
Single Family Housing	772.38	780.57	699.93	1,762,692	1,172,190
Strip Mall	7,231.94	6,860.11	3333.95	10,198,050	6,781,704
Total	13,350.46	11,858.59	7,423.09	22,534,435	14,985,399

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	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
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Apartments Mid Rise	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
General Office Building	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Hotel	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Recreational Swimming Pool	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Single Family Housing	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322
Strip Mall	0.616156	0.051063	0.155535	0.103256	0.019012	0.005633	0.015595	0.006508	0.001026	0.000227	0.022797	0.000869	0.002322

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	460.5143	460.5143	0.0745	9.0300e-003	465.0680
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	498.0678	498.0678	0.0806	9.7700e-003	502.9928
NaturalGas Mitigated	0.0638	0.5678	0.3965	3.4800e-003		0.0441	0.0441		0.0441	0.0441	0.0000	631.6495	631.6495	0.0121	0.0116	635.4030
NaturalGas Unmitigated	0.0731	0.6503	0.4559	3.9800e-003		0.0505	0.0505		0.0505	0.0505	0.0000	723.0218	723.0218	0.0139	0.0133	727.3184

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	789423	4.2600e-003	0.0364	0.0155	2.3000e-004		2.9400e-003	2.9400e-003		2.9400e-003	2.9400e-003	0.0000	42.1266	42.1266	8.1000e-004	7.7000e-004	42.3770
Apartments Mid Rise	2.26305e+006	0.0122	0.1043	0.0444	6.7000e-004		8.4300e-003	8.4300e-003		8.4300e-003	8.4300e-003	0.0000	120.7652	120.7652	2.3100e-003	2.2100e-003	121.4828
General Office Building	873958	4.7100e-003	0.0428	0.0360	2.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	46.6377	46.6377	8.9000e-004	8.6000e-004	46.9149
Hotel	7.65088e+006	0.0413	0.3750	0.3150	2.2500e-003		0.0285	0.0285		0.0285	0.0285	0.0000	408.2800	408.2800	7.8300e-003	7.4900e-003	410.7062
Recreational Swimming Pool	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
Single Family Housing	1.67766e+006	9.0500e-003	0.0773	0.0329	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	89.5264	89.5264	1.7200e-003	1.6400e-003	90.0584
Strip Mall	293944	1.5800e-003	0.0144	0.0121	9.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	15.6860	15.6860	3.0000e-004	2.9000e-004	15.7792
Total		**0.0731**	**0.6503**	**0.4559**	**3.9900e-003**		**0.0505**	**0.0505**		**0.0505**	**0.0505**	**0.0000**	**723.0219**	**723.0219**	**0.0139**	**0.0133**	**727.3184**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

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
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	708870	3.8200e-003	0.0327	0.0139	2.1000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	37.8280	37.8280	7.3000e-004	6.9000e-004	38.0528
Apartments Mid Rise	2.05137e+006	0.0111	0.0945	0.0402	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.0000	109.4691	109.4691	2.1000e-003	2.0100e-003	110.1196
General Office Building	743349	4.0100e-003	0.0364	0.0306	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6680	39.6680	7.6000e-004	7.3000e-004	39.9037
Hotel	6.62739e+006	0.0357	0.3249	0.2729	1.9500e-003		0.0247	0.0247		0.0247	0.0247	0.0000	353.6629	353.6629	6.7800e-003	6.4800e-003	355.7646
Recreational Swimming Pool	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
Single Family Housing	1.45583e+006	7.8500e-003	0.0671	0.0286	4.3000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	77.6885	77.6885	1.4900e-003	1.4200e-003	78.1501
Strip Mall	249852	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3331	13.3331	2.6000e-004	2.4000e-004	13.4123
Total		**0.0638**	**0.5678**	**0.3965**	**3.4800e-003**		**0.0441**	**0.0441**		**0.0441**	**0.0441**	**0.0000**	**631.6495**	**631.6495**	**0.0121**	**0.0116**	**635.4030**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	324881	30.0592	4.8600e-003	5.9000e-004	30.3564
Apartments Mid Rise	1.04394e+006	96.5889	0.0156	1.8900e-003	97.5440
General Office Building	926287	85.7036	0.0139	1.6800e-003	86.5510
Hotel	1.28938e+006	119.2979	0.0193	2.3400e-003	120.4776
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	493493	45.6598	7.3900e-003	9.0000e-004	46.1113
Strip Mall	1.30516e+006	120.7584	0.0195	2.3700e-003	121.9525
Total		**498.0678**	**0.0806**	**9.7700e-003**	**502.9928**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	313574	29.0130	4.6900e-003	5.7000e-004	29.2999
Apartments Mid Rise	1.00903e+006	93.3597	0.0151	1.8300e-003	94.2829
General Office Building	848694	78.5244	0.0127	1.5400e-003	79.3008
Hotel	1.17603e+006	108.8110	0.0176	2.1300e-003	109.8870
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	476629	44.0995	7.1300e-003	8.6000e-004	44.5356
Strip Mall	1.15329e+006	106.7067	0.0173	2.0900e-003	107.7619
Total		**460.5143**	**0.0745**	**9.0200e-003**	**465.0680**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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	3.7939	0.0353	3.0560	1.6000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	5.0149	5.0149	4.7800e-003	0.0000	5.1344
Unmitigated	4.9728	0.0620	4.7080	3.4900e-003		0.2539	0.2539		0.2539	0.2539	23.9644	13.5352	37.4996	0.0456	1.5000e-003	39.0867

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	0.5107					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1916					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1789	0.0267	1.6520	3.3300e-003		0.2369	0.2369		0.2369	0.2369	23.9644	8.5203	32.4847	0.0408	1.5000e-003	33.9523
Landscaping	0.0916	0.0353	3.0560	1.6000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	5.0149	5.0149	4.7800e-003	0.0000	5.1344
Total	**4.9727**	**0.0620**	**4.7080**	**3.4900e-003**		**0.2539**	**0.2539**		**0.2539**	**0.2539**	**23.9644**	**13.5352**	**37.4995**	**0.0456**	**1.5000e-003**	**39.0867**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

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	0.5107					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1916					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0916	0.0353	3.0560	1.6000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	5.0149	5.0149	4.7800e-003	0.0000	5.1344
Total	**3.7939**	**0.0353**	**3.0560**	**1.6000e-004**		**0.0170**	**0.0170**		**0.0170**	**0.0170**	**0.0000**	**5.0149**	**5.0149**	**4.7800e-003**	**0.0000**	**5.1344**

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	41.6610	1.3065	0.0313	83.6518
Unmitigated	50.4136	1.6328	0.0391	102.8856

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.21232 / 3.28603	5.3273	0.1704	4.0800e-003	10.8048
Apartments Mid Rise	17.5916 / 11.0903	17.9796	0.5752	0.0138	36.4662
General Office Building	9.58874 / 5.87697	9.7458	0.3135	7.5100e-003	19.8218
Hotel	3.04401 / 0.338224	2.5992	0.0995	2.3700e-003	5.7931
Recreational Swimming Pool	1.09119 / 0.668794	1.1091	0.0357	8.5000e-004	2.2557
Single Family Housing	4.1047 / 2.58775	4.1952	0.1342	3.2100e-003	8.5088
Strip Mall	9.30499 / 5.70306	9.4574	0.3043	7.2900e-003	19.2353
Total		**50.4136**	**1.6328**	**0.0391**	**102.8856**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.16986 / 3.08558	4.4097	0.1364	3.2700e-003	8.7932
Apartments Mid Rise	14.0733 / 10.4138	14.8829	0.4603	0.0110	29.6771
General Office Building	7.67099 / 5.51847	8.0612	0.2509	6.0100e-003	16.1246
Hotel	2.43521 / 0.317592	2.0946	0.0796	1.9000e-003	4.6498
Recreational Swimming Pool	0.872953 / 0.627998	0.9174	0.0286	6.8000e-004	1.8350
Single Family Housing	3.28376 / 2.4299	3.4727	0.1074	2.5700e-003	6.9247
Strip Mall	7.44399 / 5.35517	7.8226	0.2435	5.8300e-003	15.6475
Total		**41.6610**	**1.3065**	**0.0313**	**83.6518**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	119.3303	7.0522	0.0000	295.6357
Unmitigated	119.3303	7.0522	0.0000	295.6357

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	36.8	7.4701	0.4415	0.0000	18.5068
Apartments Mid Rise	124.2	25.2115	1.4900	0.0000	62.4604
General Office Building	50.17	10.1841	0.6019	0.0000	25.2306
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Recreational Swimming Pool	105.17	21.3486	1.2617	0.0000	52.8902
Single Family Housing	73.92	15.0051	0.8868	0.0000	37.1745
Strip Mall	131.9	26.7745	1.5823	0.0000	66.3327
Total		**119.3303**	**7.0522**	**0.0000**	**295.6357**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	36.8	7.4701	0.4415	0.0000	18.5068
Apartments Mid Rise	124.2	25.2115	1.4900	0.0000	62.4604
General Office Building	50.17	10.1841	0.6019	0.0000	25.2306
Hotel	65.7	13.3365	0.7882	0.0000	33.0406
Recreational Swimming Pool	105.17	21.3486	1.2617	0.0000	52.8902
Single Family Housing	73.92	15.0051	0.8868	0.0000	37.1745
Strip Mall	131.9	26.7745	1.5823	0.0000	66.3327
Total		**119.3303**	**7.0522**	**0.0000**	**295.6357**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Springs Specific Plan - Alternative 3 (2050) - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C.2

Energy Modeling

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Sonoma
Calendar Year: 2022, 2040
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	Fuel Consumption	MPG (derived)	
Sonoma	2022	All Other Buses	Aggregate	Aggregate	Diesel	8240.637632	0.962833573	**8.55873524**	
Sonoma	2022	LDA	Aggregate	Aggregate	Gasoline	5196180.098	179.8772525	**28.88736638**	
Sonoma	2022	LDA	Aggregate	Aggregate	Diesel	31689.51591	0.763598522	**41.5002321**	
Sonoma	2022	LDT1	Aggregate	Aggregate	Gasoline	610046.7879	25.41294269	**24.00535803**	
Sonoma	2022	LDT1	Aggregate	Aggregate	Diesel	319.0854837	0.01327006	**24.04551844**	
Sonoma	2022	LDT2	Aggregate	Aggregate	Gasoline	2513548.444	108.9549535	**23.06961147**	
Sonoma	2022	LDT2	Aggregate	Aggregate	Diesel	11380.62293	0.371526695	**30.63204632**	
Sonoma	2022	LHD1	Aggregate	Aggregate	Gasoline	308164.6135	34.04413574	**9.051914723**	
Sonoma	2022	LHD1	Aggregate	Aggregate	Diesel	317378.0585	20.24206312	**15.6791359**	
Sonoma	2022	LHD2	Aggregate	Aggregate	Gasoline	50670.46611	6.047944855	**8.37812965**	
Sonoma	2022	LHD2	Aggregate	Aggregate	Diesel	116890.4302	9.108688186	**12.83285011**	
Sonoma	2022	MCY	Aggregate	Aggregate	Gasoline	56210.00846	1.404114637	**40.03234992**	
Sonoma	2022	MDV	Aggregate	Aggregate	Gasoline	1685911.783	89.201376	**18.90006476**	
Sonoma	2022	MDV	Aggregate	Aggregate	Diesel	40501.82159	1.706068043	**23.73986298**	
Sonoma	2022	MH	Aggregate	Aggregate	Gasoline	10944.58079	2.481194462	**4.411012905**	
Sonoma	2022	MH	Aggregate	Aggregate	Diesel	5721.925415	0.608639606	**9.401171667**	
Sonoma	2022	Motor Coach	Aggregate	Aggregate	Diesel	4243.420896	0.773067739	**5.489067361**	
Sonoma	2022	OBUS	Aggregate	Aggregate	Gasoline	8733.20773	1.84800153	**4.725757846**	
Sonoma	2022	PTO	Aggregate	Aggregate	Diesel	13876.69879	2.904326102	**4.777941013**	
Sonoma	2022	SBUS	Aggregate	Aggregate	Gasoline	2953.316042	0.298855219	**9.882096254**	
Sonoma	2022	SBUS	Aggregate	Aggregate	Diesel	9106.625544	1.144512532	**7.956772239**	MHD:
Sonoma	2022	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	104.9282184	0.011896056	**8.82042038**	8.474319
Sonoma	2022	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	143.9426472	0.016276022	**8.843846795**	
Sonoma	2022	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	376.1262554	0.042119968	**8.929879893**	
Sonoma	2022	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	2359.253989	0.247363807	**9.537587661**	
Sonoma	2022	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	7904.967078	0.978373356	**8.079703963**	
Sonoma	2022	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	4505.474525	0.559056315	**8.059070975**	
Sonoma	2022	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	13617.68798	1.690992121	**8.053075949**	
Sonoma	2022	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	5934.782177	0.712521615	**8.329266165**	
Sonoma	2022	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	22684.19901	2.676595294	**8.475020136**	
Sonoma	2022	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	65426.18772	7.707556468	**8.48857715**	
Sonoma	2022	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	39235.98996	4.633838371	**8.46727633**	
Sonoma	2022	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	33035.22865	3.792143401	**8.711492462**	
Sonoma	2022	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	299.0121919	0.033974533	**8.801068622**	
Sonoma	2022	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	12881.35489	1.37398313	**9.375191446**	
Sonoma	2022	T6 OOS Class 4	Aggregate	Aggregate	Diesel	62.34332875	0.007067182	**8.821525787**	
Sonoma	2022	T6 OOS Class 5	Aggregate	Aggregate	Diesel	85.52383626	0.009671486	**8.842884332**	
Sonoma	2022	T6 OOS Class 6	Aggregate	Aggregate	Diesel	223.476231	0.025031419	**8.927829047**	
Sonoma	2022	T6 OOS Class 7	Aggregate	Aggregate	Diesel	1624.95009	0.170100854	**9.552862645**	
Sonoma	2022	T6 Public Class 4	Aggregate	Aggregate	Diesel	1038.092223	0.138363407	**7.502650068**	
Sonoma	2022	T6 Public Class 5	Aggregate	Aggregate	Diesel	3139.566986	0.412010037	**7.620122574**	
Sonoma	2022	T6 Public Class 6	Aggregate	Aggregate	Diesel	1856.607106	0.249635107	**7.437283678**	
Sonoma	2022	T6 Public Class 7	Aggregate	Aggregate	Diesel	4693.475434	0.619727908	**7.573445341**	
Sonoma	2022	T6 Utility Class 5	Aggregate	Aggregate	Diesel	500.7937079	0.057770156	**8.668726933**	
Sonoma	2022	T6 Utility Class 6	Aggregate	Aggregate	Diesel	94.68708839	0.010962234	**8.637572089**	
Sonoma	2022	T6 Utility Class 7	Aggregate	Aggregate	Diesel	130.925941	0.014994665	**8.731501377**	
Sonoma	2022	T6TS	Aggregate	Aggregate	Gasoline	34038.65273	7.367758996	**4.619946547**	HHD:
Sonoma	2022	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	36179.04712	6.053510864	**5.976539555**	5.567667
Sonoma	2022	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	42931.85478	7.184373156	**5.975727297**	
Sonoma	2022	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	15598.51887	2.626376115	**5.939179379**	
Sonoma	2022	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	2948.478705	0.503952915	**5.850702746**	
Sonoma	2022	T7 POAK Class 8	Aggregate	Aggregate	Diesel	6819.981643	1.192060899	**5.721168818**	
Sonoma	2022	T7 Public Class 8	Aggregate	Aggregate	Diesel	13429.08373	2.638053853	**5.09052676**	
Sonoma	2022	T7 Single Concrete/Transit Mix Class 8	Aggregate	Aggregate	Diesel	3539.687723	0.60849939	**5.817076866**	
Sonoma	2022	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	29908.74919	5.209221976	**5.741500235**	
Sonoma	2022	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	32799.7234	5.632031713	**5.823781731**	
Sonoma	2022	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	7576.083967	3.078177678	**2.461223736**	
Sonoma	2022	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	20771.52811	3.442450351	**6.033936873**	
Sonoma	2022	T7 Utility Class 8	Aggregate	Aggregate	Diesel	399.6502613	0.070356915	**5.680326703**	
Sonoma	2022	T7IS	Aggregate	Aggregate	Gasoline	70.89570956	0.022474074	**3.154555328**	
Sonoma	2022	UBUS	Aggregate	Aggregate	Gasoline	3610.694802	0.515545918	**7.003633767**	
Sonoma	2022	UBUS	Aggregate	Aggregate	Diesel	3856.329914	0.44206602	**8.723425315**	
Sonoma	2040	All Other Buses	Aggregate	Aggregate	Diesel	8012.15173	0.823381327	**9.730791156**	
Sonoma	2040	LDA	Aggregate	Aggregate	Gasoline	5459266.075	153.6663472	**35.52675115**	
Sonoma	2040	LDA	Aggregate	Aggregate	Diesel	4466.755749	0.089957481	**49.65407755**	
Sonoma	2040	LDT1	Aggregate	Aggregate	Gasoline	301846.9805	10.08249171	**29.93773653**	
Sonoma	2040	LDT1	Aggregate	Aggregate	Diesel	3.085503968	0.000108115	**28.53912971**	
Sonoma	2040	LDT2	Aggregate	Aggregate	Gasoline	2408493.16	84.05148796	**28.6549735**	
Sonoma	2040	LDT2	Aggregate	Aggregate	Diesel	9295.33413	0.250805731	**37.06188887**	
Sonoma	2040	LHD1	Aggregate	Aggregate	Gasoline	140884.7953	13.11054003	**10.74591856**	
Sonoma	2040	LHD1	Aggregate	Aggregate	Diesel	110162.2284	6.8168827	**16.16020596**	
Sonoma	2040	LHD2	Aggregate	Aggregate	Gasoline	18968.32931	1.986862881	**9.546873861**	
Sonoma	2040	LHD2	Aggregate	Aggregate	Diesel	51152.32614	3.726035457	**13.72835195**	
Sonoma	2040	MCY	Aggregate	Aggregate	Gasoline	40231.42588	0.953472042	**42.19465709**	
Sonoma	2040	MDV	Aggregate	Aggregate	Gasoline	1400920.631	59.48662597	**23.55017802**	
Sonoma	2040	MDV	Aggregate	Aggregate	Diesel	17097.23732	0.612112354	**27.93153446**	
Sonoma	2040	MH	Aggregate	Aggregate	Gasoline	4661.555926	1.05425802	**4.42164616**	
Sonoma	2040	MH	Aggregate	Aggregate	Diesel	3265.461282	0.348895407	**9.359427536**	
Sonoma	2040	Motor Coach	Aggregate	Aggregate	Diesel	4665.902234	0.746349008	**6.251635871**	
Sonoma	2040	OBUS	Aggregate	Aggregate	Gasoline	2257.790097	0.431879258	**5.227827121**	
Sonoma	2040	PTO	Aggregate	Aggregate	Diesel	10268.06486	1.829642161	**5.61206179**	
Sonoma	2040	SBUS	Aggregate	Aggregate	Gasoline	2880.921515	0.277599464	**10.37797937**	
Sonoma	2040	SBUS	Aggregate	Aggregate	Diesel	6317.612282	0.741247076	**8.522950693**	MHD:
Sonoma	2040	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	59.51823346	0.006075547	**9.79635758**	9.298473
Sonoma	2040	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	82.09023109	0.008382822	**9.792672852**	
Sonoma	2040	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	211.2297582	0.021583495	**9.786633704**	
Sonoma	2040	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	2131.556532	0.190479617	**11.1904705**	
Sonoma	2040	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	5425.168042	0.606254124	**8.948669914**	
Sonoma	2040	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	3099.025535	0.347379939	**8.921141347**	
Sonoma	2040	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	9377.380096	1.048643435	**8.942391463**	
Sonoma	2040	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	5052.80511	0.5746857	**8.792293087**	
Sonoma	2040	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	15149.96669	1.624194997	**9.327677232**	
Sonoma	2040	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	43622.86004	4.68840368	**9.30441639**	
Sonoma	2040	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	26193.88152	2.813979361	**9.308483879**	
Sonoma	2040	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	26182.22681	2.858182311	**9.160446732**	
Sonoma	2040	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	193.5386917	0.020597213	**9.396353364**	
Sonoma	2040	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	12778.11329	1.255854392	**10.17483664**	
Sonoma	2040	T6 OOS Class 4	Aggregate	Aggregate	Diesel	71.85527406	0.006845438	**10.49681126**	
Sonoma	2040	T6 OOS Class 5	Aggregate	Aggregate	Diesel	98.57251476	0.009397486	**10.489243**	
Sonoma	2040	T6 OOS Class 6	Aggregate	Aggregate	Diesel	257.5728012	0.02452729	**10.50147829**	
Sonoma	2040	T6 OOS Class 7	Aggregate	Aggregate	Diesel	1872.874554	0.160214379	**11.68980317**	
Sonoma	2040	T6 Public Class 4	Aggregate	Aggregate	Diesel	644.3923451	0.076066427	**8.471442247**	
Sonoma	2040	T6 Public Class 5	Aggregate	Aggregate	Diesel	1995.409578	0.238069637	**8.381621461**	
Sonoma	2040	T6 Public Class 6	Aggregate	Aggregate	Diesel	1175.090829	0.138951253	**8.456856653**	
Sonoma	2040	T6 Public Class 7	Aggregate	Aggregate	Diesel	3062.239964	0.353556404	**8.661248748**	
Sonoma	2040	T6 Utility Class 5	Aggregate	Aggregate	Diesel	240.181878	0.025176543	**9.539906907**	
Sonoma	2040	T6 Utility Class 6	Aggregate	Aggregate	Diesel	45.40168496	0.004757301	**9.543580143**	
Sonoma	2040	T6 Utility Class 7	Aggregate	Aggregate	Diesel	60.86982167	0.006338492	**9.603202578**	
Sonoma	2040	T6TS	Aggregate	Aggregate	Gasoline	12945.37987	2.456921247	**5.268943761**	HHD:
Sonoma	2040	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	36718.95244	5.006012136	**7.33497072**	6.939204
Sonoma	2040	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	54986.77838	7.133565715	**7.708175768**	
Sonoma	2040	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	19978.45899	2.622063808	**7.619364154**	
Sonoma	2040	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	3890.348766	0.536914004	**7.245757675**	
Sonoma	2040	T7 POAK Class 8	Aggregate	Aggregate	Diesel	8157.090645	1.14765462	**7.10761801**	
Sonoma	2040	T7 Public Class 8	Aggregate	Aggregate	Diesel	9227.277789	1.585037281	**5.821489439**	
Sonoma	2040	T7 Single Concrete/Transit Mix Class 8	Aggregate	Aggregate	Diesel	1900.857564	0.285165959	**6.665794098**	
Sonoma	2040	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	20887.70445	3.326491333	**6.279200022**	
Sonoma	2040	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	26329.64412	4.163685933	**6.323638369**	
Sonoma	2040	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	2026.089658	0.79948429	**2.534245741**	
Sonoma	2040	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	23396.49867	3.292398989	**7.106216089**	
Sonoma	2040	T7 Utility Class 8	Aggregate	Aggregate	Diesel	261.0660462	0.041671541	**6.264852175**	
Sonoma	2040	T7IS	Aggregate	Aggregate	Gasoline	38.36063856	0.008265482	**4.641064756**	
Sonoma	2040	UBUS	Aggregate	Aggregate	Gasoline	2670.065266	0.264468965	**10.0959493**	
Sonoma	2040	UBUS	Aggregate	Aggregate	Diesel	2276.106556	0.273004348	**8.337253861**	

Off-road Mobile (Construction) Energy Usage

Note: For the sake of simplicity, and as a conservative estimation, it was assumed that all off-road vehicles use diesel fuel as an energy source. Site preparation and grading off-road mobile vehicle on-site gallons of fuel are calculated below.

Given Factor:	**1,054.34**	**metric tons**	**CO2 (provided in CalEEMod Output File)**	
Conversion Factor:	2204.62	pounds	per metric ton	
Intermediate Result:	**2,324,408**	**pounds**	**CO2**	
Conversion Factor:	22.38	pounds	CO2 per 1 gallon of diesel fuel	(Source: U.S. EIA, 2016).
Final Result:	**103,860.95**	**gallons**	**diesel fuel**	Website: http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11)

On-road Mobile (Operational) Energy Usage

Note: For the sake of simplicity, it was assumed that passenger vehicles, light duty trucks, motorcycles, and mobile homes use gasoline, and all medium-duty trucks, heavy-duty trucks, and buses use diesel fuel.

Therefore:

Average Daily VMT:

51,459 Source: W-Trans, 2021

Step 2: Given:

Fleet Mix (provided by CalEEMod v2020.4.0)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
60.8%	5.1%	15.7%	10.6%	2.1%	0.6%	1.5%	0.6%	0.1%	0.0%	2.4%	0.1%	0.3%

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2020) - Year 2040

LDA	LDT1	LDT2	MDV	MCY	MH	OBUS
35.52675115	29.937737	28.654973	23.55017802	42.19465709	4.42164616	5.2278271

Diesel MPG Factors for each Vehicle Class (from EMFAC2014) - Year 2040

LHD1	LHD2	MHD	HHD	UBUS	SBUS
16.16020596	13.728352	9.2984725	6.939203644	8.337253861	8.522950693

Therefore:

Weighted Average MPG Factors

Gasoline: **32.8** Diesel: **12.4**

Step 3: **Therefore:**

1,487 daily gallons of gasoline **214 daily gallons of diesel**

or

542,800	**annual gallons of gasoline**	**78,270**	**annual gallons of diesel**

On-road Mobile (Construction) Energy Usage - Demolition

Step 1: **Total Daily Worker Trips (provided by CalEEMod)**

15

Worker Trip Length (miles) (provided by CalEEMod)

10.8

Therefore:

Average Worker Daily VMT:

162

Step 2: Given:

Assumed Fleet Mix for Workers (provided by CalEEMod v2020.4.0)

LDA	LDT1	LDT2
0.3333333	0.333333	0.333333

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2020) - Year 2022

LDA	LDT1	LDT2
28.887366	24.00536	23.06961

Therefore:

Weighted Average Worker MPG Factor

25.3

Step 3: **Therefore:**

6.4 **Worker daily gallons of gasoline**

Step 4: 200 **# of Days (see CalEEMod)**

Therefore:

Result: **1,280** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Site Preparation

Step 1: **Total Daily Worker Trips (provided by CalEEMod)**

18

Worker Trip Length (miles) (provided by CalEEMod)

10.8

Therefore:

Average Worker Daily VMT:

194

Step 2: Given:

Assumed Fleet Mix for Workers (provided by CalEEMod v2020.4.0)

LDA	LDT1	LDT2
0.3333333	0.3333333	0.3333333

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2020) - Year 2022

LDA	LDT1	LDT2
28.887366	24.005358	23.069611

Therefore:

Weighted Average Worker MPG Factor

25.3

Step 3: **Therefore:**

7.7 **Worker daily gallons of gasoline**

Step 4: 120 **# of Days (see CalEEMod)**

Therefore:

Result: **921** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Grading

Step 1: **Total Daily Worker Trips (provided by CalEEMod)**

20

Worker Trip Length (miles) (provided by CalEEMod)

10.8

Therefore:

Average Worker Daily VMT:

216

Step 2: Given:

Assumed Fleet Mix for Workers (provided by CalEEMod v2020.4.0)

LDA	LDT1	LDT2
0.3333333	0.3333333	0.3333333

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2020) - Year 2022

LDA	LDT1	LDT2
28.887366	24.005358	23.069611

Therefore:

Weighted Average Worker MPG Factor

25.3

Step 3: **Therefore:**

8.5 **Worker daily gallons of gasoline**

Step 4: 310 **# of Days (see CalEEMod)**

Therefore:

Result: **2,644** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Building Construction

Step 1:

Total Daily Worker Trips (provided by CalEEMod)
32
Note: Assume 5% of building construction occurs at once.

Total Daily Vendor Trips (provided by CalEEMod)
7
Note: Assume 5% of building construction occurs at once.

Total Daily Hauler Trips (provided by CalEEMod)
0

Worker Trip Length (miles) (provided by CalEEMod)
10.8

Vendor Trip Length (miles) (provided by CalEEMod)
7.3

Hauling Trip Length (miles) (provided by CalEEMod)
0

Therefore:

Average Worker Daily VMT:
346.14

Average Vendor Daily VMT:
54

Average Hauling Daily VMT:
-

Step 2:

Given:

Assumed Fleet Mix for Workers (provided by CalEEMod v2020.4.0)

LDA	LDT1	LDT2
0.33333333	0.333333	0.333333

Assumed Fleet Mix for Vendors (provided by CalEEMod v2020.4.0)

MHD	HHD
0.5	0.5

And:

MPG Factors for each Vehicle Class (from EMFAC2020 - Year 2022)

Gasoline:

LDA	LDT1	LDT2
28.8873664	24.00536	23.06961

Diesel:

MHD	HHD
8.474319111	5.567667

Therefore:

Weighted Average Worker (Gasoline) MPG Factor
25.3

Weighted Average Vendor (Diesel) MPG Factor
7.0

Weighted Average Hauling MPG Factor
0.0

Step 3:

Therefore:
14 **Worker daily gallons of gasoline**

Therefore:
8 **Vendor daily gallons of diesel**

Therefore:
0.0

Step 4:

3100 **# of Days (see CalEEMod)**

Therefore:
42,378 **Total gallons of gasoline**

Therefore:
24,013 **Total gallons of diesel**

On-road Mobile (Construction) Energy Usage - Paving

Step 1: **Total Daily Worker Trips (provided by CalEEMod)**

15

Worker Trip Length (miles) (provided by CalEEMod)

10.8

Therefore:

Average Worker Daily VMT:

162

Step 2: Given:

Assumed Fleet Mix for Workers (provided by CalEEMod v2020.4.0)

LDA	LDT1	LDT2
0.3333333	0.3333333	0.3333333

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2020) - Year 2022

LDA	LDT1	LDT2
28.887366	24.005358	23.069611

Therefore:

Weighted Average Worker MPG Factor

25.3

Step 3: **Therefore:**

6.4 **Worker daily gallons of gasoline**

Step 4: 220 **# of Days (see CalEEMod)**

Therefore:

Result: **1,408** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Architectural Coating

Step 1: **Total Daily Worker Trips (provided by CalEEMod)**

128

Worker Trip Length (miles) (provided by CalEEMod)

10.8

Therefore:

Average Worker Daily VMT:

1,382

Step 2: Given:

Assumed Fleet Mix for Workers (provided by CalEEMod v2020.4.0)

LDA	LDT1	LDT2
0.3333333	0.3333333	0.3333333

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2020) - Year 2022

LDA	LDT1	LDT2
28.887366	24.005358	23.069611

Therefore:

Weighted Average Worker MPG Factor

25.3

Step 3: **Therefore:**

54.6 **Worker daily gallons of gasoline**

Step 4: 220 **# of Days (see CalEEMod)**

Therefore:

Result: **12,011** **Total gallons of gasoline**

Appendix C.3

Analysis of Models and Tools for Correlating Project-generated Emissions to Health Endpoints

ANALYSIS OF MODELS AND TOOLS TO CORRELATE PROJECT-GENERATED CRITERIA POLLUTANT EMISSIONS TO HEALTH END POINTS

TOOL	CREATED BY	DESCRIPTION	RESOLUTION	POLLUTANTS ANALYZED	PROJECT-LEVEL CEQA APPLICABILITY
AERMOD Modeling System[1,2]	AERMIC	A steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The modeling system incorporates air dispersion based on a planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}, NH_3	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
AirCounts[3]	Abt Assoc.	Online tool that helps large and medium-sized cities quickly estimate the health benefits of $PM_{2.5}$ emission reductions and economic value of those benefits. The tool estimates the number of deaths (mortality) avoided and economic value related to user-specified regional, annual $PM_{2.5}$ emissions reduction.	City-level	Primary $PM_{2.5}$	This tool is only illustrative, as it is limited to certain cities and does not target specific sectors. The tool is not sector specific, and includes limited California data. It cannot provide results at a project-level. Therefore, the tool is not recommended for project-level CEQA analysis.
Air Pollution Emission Experiments and Policy analysis (APEEP) model[4]	Mueller and Mendelsohn2006, 2009	The Air Pollution Emission Experiments and Policy (APEEP) analysis model (Muller and Mendelsohn 2006, 2009) is a traditional integrated assessment model. Like other integrated assessment models, APEEP connects emissions of air pollution through air-quality modeling to exposures, physical effects, and monetary damages. Making these links requires the use of findings reported in the peer-reviewed literature across several scientific disciplines. The air-quality models in APEEP use the emission data provided by EPA to estimate corresponding ambient concentrations in each county in the coterminous states.	National or county-level	SO_2, ROG, NO_x, Ozone, $PM_{2.5}$, PM_{10}	The model operates at the national scale but may be applied at the county-level (although it is not clear how this adjustment should be made). It cannot provide results at a project-level. The tool is also not commercially available. Therefore, the tool is not recommended for project-level CEQA analysis.

[1] See: https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

[2] Note: May require additional software to estimate the level of each specific pollutant at the modeled receptors.

[3] See: https://www.abtassociates.com/tools

[4] See: https://public.tepper.cmu.edu/nmuller/APModel.aspx

TOOL	CREATED BY	DESCRIPTION	RESOLUTION	POLLUTANTS ANALYZED	PROJECT-LEVEL CEQA APPLICABILITY
CALINE3/ CAL3QHC/ CAL3QHCR[1, 2]	USEPA	A steady-state Gaussian dispersion model designed to determine air pollution concentrations at receptor locations downwind of highways located in relatively uncomplicated terrain. CALINE3 is incorporated into the more refined CAL3QHC and CAL3QHCR models. CAL3QHCR is a more refined version based on CAL3QHC that requires local meteorological data.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Complex Terrain Dispersion Model Plus Algorithms for Unstable Situations (CTDMPLUS)[1, 2]	USEPA	A refined point source gaussian air quality model for use in all stability conditions for complex terrain. The purpose of the model is to provide a practical, refined plum model for elevated point sources near complex terrain.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Co-Benefits Risk Assessment (COBRA)[5]	USEPA	Preliminary screening tool that contains baseline emission estimates of a variety of air pollutants for a single year. COBRA is targeted to state and local governments as a screening assessment for clean energy policies. EPA's CO–Benefits Risk Assessment (COBRA) screening model is a free tool that helps state and local governments: • Explore how changes in air pollution from clean energy policies and programs; • Estimate the economic value of the health benefits associated with clean energy policies and programs to compare against program costs; • Map and visually represent the air quality, human health, and health-related economic benefits from reductions in emissions of particulate matter ($PM_{2.5}$), sulfur dioxide ($S0_2$), nitrogen oxides (NO_X), ammonia (NH_3), and volatile organic compounds (VOCs) that result from clean energy policies and programs.	National, regional, state, or county-levels	$PM_{2.5}$, SO_2, NO_x, NH_3, and ROG	COBRA is a preliminary screening tool only and cannot be used at sub-county resolution. It cannot provide results at a project-level. It also does not account for secondary emission changes resulting from market responses. Accordingly, the tool is not recommended for project-level CEQA analysis.

[5] See: https://www.epa.gov/statelocalenergy/co-benefits-risk-assessment-cobra-health-impacts-screening-and-mapping-tool

TOOL	CREATED BY	DESCRIPTION	RESOLUTION	POLLUTANTS ANALYZED	PROJECT-LEVEL CEQA APPLICABILITY
Environmental Benefits and Mapping Program-Community Edition (BenMAP-CE)[6]	USEPA	The USEPA's detailed model for estimating the health impacts from air pollution. It relies on input concentrations and applies concentration-response (C-R) health impact functions, which relate a change in the concentration of a pollutant with a change in the incidence of a health endpoint, including premature mortality, heart attacks, chronic respiratory illnesses, asthma exacerbation and other adverse health effects. Detailed inputs are required for air quality changes (concentrations from AERMOD), population, baseline incidence rates, and effect estimates.	National, County, City, and sub-regional levels	Ozone, PM, NO_2, SO_2, CO	This tool is not well suited to analyze small or localized changes in pollutant concentrations associated with individual projects. Although this tool is under consideration by some California air districts for use towards project-level analysis, no air district in California has promulgated a methodology (using this tool or any other) that would correlate the expected air quality emissions of projects to the likely health consequences of the increased emissions. Accordingly, the tool is not recommended.
Fast Scenario Screening Tool (TM5-FASST)[7]	Joint Research Centre (Italy)	A tool that allows users to evaluate how air pollutant emissions affect large scale pollutant concentrations and their impact on human health (mortality and years of life lost) and crop yield from national to regional air quality policies, such as climate policies. The target policy domains are national to regional air quality policies, or air pollutant scenarios linked to other policy domains (e.g. climate policy). The tool is web-based and does not require coding or modelling. Users must gain access through publishers.	Global and national-levels	$PM_{2.5}$, Ozone, NO_x, NH_3, CO, ROG, CH_4, SO_2	This tool is applicable at national to global scales. It cannot provide results a project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.
Long-range Energy Alternatives Planning System-Integrated Benefits Calculator (LEAP-IBC)[8]	Climate and Clean Air Coalition (CCAC)	A calculator that allows users to rapidly estimate the impacts of reducing emissions on health, climate, and agriculture. The tool uses sensitivity coefficients that link gridded emissions of air pollutants and precursors to health, climate and agricultural impacts at a national level. The tool is primarily used for policy analysis. The tool is currently Excel-based and is available through the developers only. A web-based interface is currently under development.	National-level	$PM_{2.5}$, Ozone, NO_2	This tool is applicable at national scale. Accordingly, the tool is not recommended for project-level CEQA analysis.
Methodology for Estimating Premature Deaths Associated with Long-Term Exposure to Fine Airborne Particulate Matter in California[9]	California Air Resources Board	The staff report identifies a relative risk of premature death associated with $PM_{2.5}$ exposure based on a review of all relevant scientific literature, and a new relative risk factor was developed. This new factor is a 10% increase in risk of premature death per 10 $\mu g/m^3$ increase in exposure to $PM_{2.5}$ concentrations (uncertainty interval: 3% to 20%)	National	$PM_{2.5}$	The primary author of the CARB staff report notes that the analysis method is not suited for small projects and may yield unreliable results due to various uncertainties. The tool also cannot provide results on a project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.

[6] See: https://www.epa.gov/benmap

[7] See: http://tm5-fasst.jrc.ec.europa.eu/

[8] See: https://www.ccacoalition.org/en/resources/long-range-energy-alternatives-planning-integrated-benefits-calculator-leap-ibc-factsheet

[9] See: https://ww3.arb.ca.gov/research/health/pm-mort/pmmortalityreportfinalr10-24-08.pdf

Tool	Created by	Description	Resolution	Pollutants Analyzed	Project-level CEQA Applicability
Multi-Pollutant Evaluation Method (MPEM)[10]	BAAQMD	Estimates the impacts of control measures on pollutant concentration, population exposures, and health outcomes for criteria, toxic, and GHG pollutants. Monetizes the value of total health benefits from reductions in $PM_{2.5}$, ozone, and certain carcinogens, and the social value of GHG reductions. MPEM was designed for development of a Clean Air Plan for the San Francisco Bay Area. The inputs are specific to the SF region and are not appropriate for projects outside BAAQMD.	Regional level in the SFBAAB	Ozone, PM, air toxics, GHG	This tool is designed to support the BAAQMD in regional planning and emissions analysis within the San Francisco Bay Area Air Basin (SFBAAB). The model applies changes in pollutant concentrations over a four-square kilometer grid. The tool also cannot provide results on a project-level. Additionally, this tool is only applicable for the SFBAAB. Accordingly, the tool is not recommended for project-level CEQA analysis.
Offshore and Coastal Dispersion Model Version 5 (OCD)[1, 2]	USEPA	A straight-line Gaussian model developed to determine the impact of offshore emissions from point, area or line sources on the air quality of coastal regions. OCD incorporates overwater plume transport and dispersion as well as changes that occur as the plume crosses the shoreline. Hourly meteorological data are needed from both offshore and onshore locations.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Response Surface Model (RSM)-based Benefit-per-Ton Estimates[11]	USEPA	Consists of tables reporting the monetized $PM_{2.5}$-related health benefits from reducing $PM_{2.5}$ precursors from certain source types nationally and for 9 US cities/regions. Applying these estimates simply involves multiplying the emissions reduction by the relevant benefit per-ton metric. The resulting value is the PM mortality risk estimate at a 3% discount rate.	National or regional (San Joaquin County only) levels	SOx, VOC, NH_3, NO_x	RSM includes regional values specific to San Joaquin County. The values are also dated. Accordingly, the tool is not recommended for project-level CEQA analysis.
Sector-based Benefit-per-Ton Estimates[12]	USEPA	Two specific sets of Benefit-per-ton (BPT) estimates for 17 key source categories are available. Both are a reduced-form approach based on BenMAP modeling. Applying these factors involves multiplying the emissions reduction (in tons) by the relevant benefit (economic value) or incidence (rates of mortality and morbidity) per-ton metric. The resulting value is the economics, mortality, and morbidity of direct and indirect $PM_{2.5}$ emissions.	National-scale	$PM_{2.5}$, SO_2, NO_x	The BPT estimates do not account for project-specific emissions or receptor locations, local dispersion characteristics, or regional photochemistry. The resultant health effects are therefore reflective of national averages and may not be accurate when applied to the project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.

[10] See: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/mpem_nov_dec_2016-pdf.pdf?la=en

[11] See: https://www.epa.gov/benmap/response-surface-model-rsm-based-benefit-ton-estimates

[12] See: https://www.epa.gov/benmap/sector-based-pm25-benefit-ton-estimates. The updated Technical Support Document (February 2018) is available at: https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf

Appendix D

Water Supply Assessment

APPENDIX D: WATER SUPPLY ASSESSMENT

A. EXECUTIVE SUMMARY

The Water Supply Assessment (WSA) will provide information for use in the California Environmental Quality Act (CEQA) analysis for the proposed Springs Specific Plan (Specific Plan). The requirements for the WSA are described in the California Water Code Sections 10910 through 10915, amended by the enactment of Senate Bill 610 (SB 610) in 2002. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by the new projects, as well as the reasonably foreseeable cumulative demand during normal year, single dry year, and multiple dry year conditions over the next 20 years.

This WSA builds on previous water demand projections created as part of the 2015 Urban Water Management Plan (UWMP) Water Demand Analysis and Water Conservation Measures Update worked on in conjunction with the eight other Sonoma-Marin Saving Water Partnership (SMSWP) Water Contractors and completed in July 2015. The projected demands with active and passive conservation savings from the SMSWP study were approved by Valley of the Moon Water District (the District) and presented in the 2015 UWMP submitted by the District in June 2016, after approval by its Board of Directors on June 7th. The supply information contained herein is based on the 2015 UWMP. [1]

[1] While the foregoing is accurate, the circumstances of the District's water supply have changed in 2019. The District lost its emergency water supply from the Sonoma Development Center (SDC). The use was authorized by the SWRCB on July 3, 2002 for fire or facility failure. The agreement with the SDC was in place by December 2002 and existed until September 2019 when the State's General Services Department decided to close the SDC water treatment plant. In the absence of that supply, the District can produce only 450 gallons per minute (gpm) through its local supply sources, which is insufficient to pressurize its system and fill its tanks in the event the Sonoma Aqueduct (Aqueduct) is damaged and Sonoma Water deliveries to the District are curtailed. The District's immediately available emergency water supply was further reduced in Fall 2019 when the use of one of well, providing 20% of its local supply, was taken out of service due to damage. The District will be evaluating the well in Winter 2019/Spring 2020 to determine if the well can be repaired and how long, if repaired, the well can reasonably remain in production.

The District is diligently acting to develop alternative local sources of water. Without the Springs Specific Plan (SSP), the District requires over 800 gpm to provide drinking water and basic sanitation. Further, based on the tests described at page 48 in the 2015 UWMP, the District requires in excess of 1700 gpm to have a survivable level of water including basic fire flow. Given the conservation achieved by District residents since 2015, the District is comfortable in stating that for current customers 1500 gpm is required to provide service adequate for human health, sanitation and fire flow - if service through the aqueduct is interrupted for any significant time. If the District's damaged well can be used for several more years, then the addition of another 400 gpm of new local water over the District's total current wells' production would current customers to have drinking water and sanitation with no outside use and little or no fire flow.

Additionally, the SSP will impact water service to existing homes along the crest of the hills above it, the top of the District's Zone 1. Currently, these homes have lower service pressure and available fire flow than that provided in other Zones and the balance of Zone 1. Allowing building as proposed in the SSP, e.g. on Verano Ave, in advance of the District putting a tank at the top of Zone 1 into operation will directly impact those customers' daily service and further reduce the already limited available fire flow.

The Springs Project is contained entirely within the service area of the District, which is located in the southeastern portion of Sonoma County, immediately north of the City of Sonoma. The WSA is based on the requirement of the Springs Project of approximately 209 acre-feet per year (AFY) of additional water demand. This project includes several land use and connection types as summarized below.

The 15 new neighborhood commercial connections include 8 new dwelling units and a net increase of 53,390 non-residential sq. ft. of development yielding approximately 17 AFY of additional demand.

The 82 new commercial connections include 120 hotel rooms and 72,245 new non-residential sq. ft. of development for an approximate net increase in demand of 39 AFY.

The 6 new commercial irrigation connections yield approximately 9 AFY of additional demand.

The 50 new mixed-use connections include 138 new dwelling units and a net increase of 123,621 non-residential sq. ft. of development yielding approximately 50 AFY of additional demand.

The 3 mixed-use irrigation connections will yield approximately 5 AFY of additional demand.

The 3 new recreational connections include a reduction of 3 dwelling units and a net increase of 26,648 sq. ft. of recreational use yielding approximately 9 AFY of additional demand.

The 131 medium density residential connections include 119 single family and 113 multifamily dwelling units for an additional demand of approximately 45 AFY.

The 31 high density residential connections include 310 new multifamily dwelling units yielding approximately 35 AFY of additional demand.

The Springs Project is estimated to be developed according to the following approximate schedule:

- 25 percent between 2020 and 2025
- 25 percent between 2025 and 2030
- 25 percent between 2030 and 2035

Some of the foregoing requires immediate action, some can be managed over time.

The District appreciates the County's assistance and looks forward to the County's further direct assistance - in developing additional local sources of water to meet District emergency demands, and storage at the top of the eastern hills [Zone 1] to deliver and maintain adequate pressure and fire flow for customers in that area - as buildings are added within the Plan's around the base of the eastern hills. With the proposed infrastructure improvements in place, the District would then be in a position to provide adequate normal service and emergency service water to support the SSP, and pressures to maintain service pressure and fire flows to existing Zone 1 customers and the SSP.

- 25 percent between 2035 and 2040

The analysis concluded that the Springs Project will add a total of 209 AFY (project and demand values also summarized in Table G-1). In addition, it concludes that the District will have sufficient water supply to serve all the proposed projects as well as existing customers in the 20-year time horizon assuming current conservation programs and water shortage plan remain in effect.

All future development projects are required to maximize the efficient use of water by installing water-saving plumbing fixtures and complying with the Sonoma County Water Efficient Landscape Regulations[2] to reduce water demand.

B. INTRODUCTION

This section presents the purpose and scope of this Water Supply Assessment.

1. Purpose and Authorization

The purpose of the Water Supply Assessment (WSA) is to determine whether there is adequate water supply to meet the water needs of future projects proposed within the Valley of the Moon Water District (the District) service area, in accordance with the Specific Plan. The WSA was developed by the collaborative efforts of the project team consisting of the County of Sonoma, De Novo Planning Group, Maddaus Water Management Inc., and the Valley of the Moon Water District Planning and Engineering Departments. De Novo Planning Group managed the project and provided the Springs development features; the County of Sonoma provided the project schedule; Maddaus Water Management assisted in estimating calculations for water demands and compiling the WSA report; and the District confirmed demand factor, demand projection and water shortage contingency information contained in the report.

2. Scope of Investigation

This WSA focuses on the potential growth due to future implementation of the Specific Plan.

3. Documents and Persons Consulted

Information in this report is supplemental to information found in the forthcoming California Environmental Quality Act Environmental Impact Report (CEQA/EIR) and is enhanced by information confirmed by the District staff from January 2019 to June 2019.

C. PROJECT DESCRIPTION

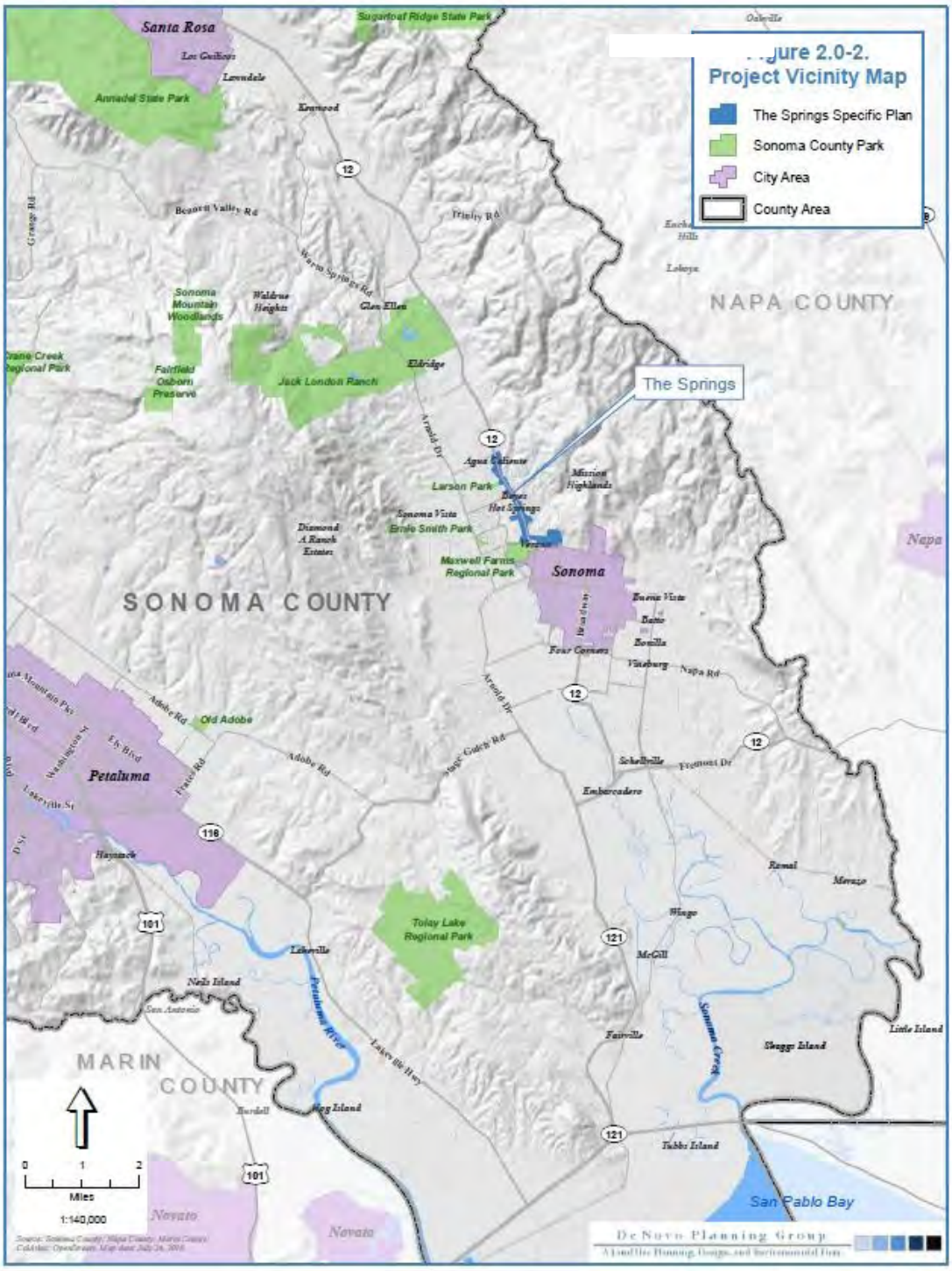
The proposed project included in this WSA is described as follows.

The Specific Plan will accommodate future growth in the area, including new businesses, expansion of existing businesses, and new residential development. The Springs area is defined as approximately 178.81-acres within the southeastern portion of Sonoma County (see Figure

[2] Sonoma County. Code of Ordinances, Chapter 7D3 – Water Efficient Landscape, accessed July 2019: https://library.municode.com/ca/sonoma_county/codes/code_of_ordinances?nodeId=CH7D3WAEFLA

G-1). The Springs is an unincorporated community located in central Sonoma Valley immediately north of the City of Sonoma. The Springs includes portions of the unincorporated communities of Agua Caliente, Fetters Hot Springs, and Boyes Hot Springs. The Specific Plan area is bounded by Agua Caliente Road at the north and Verano Avenue at the south and is bisected by the Highway 12 commercial corridor.

FIGURE G-1 SPRINGS PROJECT VICINITY MAP



The 'L'-shaped project area has several distinct settings: the 1.6-mile stretch of mixed use along Highway 12 corridor that forms the vertical stroke of the 'L', the residential neighborhoods just east and west of the highway, and the residential area that forms the base of the 'L' to the east along Donald and Harley Streets. Agua Caliente Creek crosses the project area south of Encinas Lane. Figure G-2 shows an aerial view of the project area.

FIGURE G-2 SPRINGS PROJECT AERIAL VIEW

In 2016, the Springs population was estimated to be 1,803. The Springs Project area is relatively flat at an elevation of approximately 110 to 185 feet above sea level. The area's terrain generally slopes gently down from east to west. Buildout of the Specific Plan is expected to occur gradually over the next 20 years.

The following table presents some of the Spring Project information used in the development of this WSA, specifically the proposed connection types as well as the net increase in new dwelling units, non-residential area, and projected new water connections.

TABLE G-1 SPRINGS SPECIFIC PLAN PROJECTED INCREASE IN DEMAND

Connection Type[1]	Net Increase in New Dwelling Units	Net Increase in Non-Residential Square Feet	Projected Net Increase in New Water Connections
Neighborhood Commercial	**8**	**53,390**	**15**
Live Work/Mixed Use	8	n/a	1
Commercial Use	n/a	32,034	8
Office Use	n/a	21,356	6
Commercial	**120**	**72,245**	**82**
Commercial Use	n/a	58,721	15
Hotel Room	120	n/a	63
Office Use	n/a	13,524	4
Commercial Irrigation	n/a	n/a	**6**
Mixed Use	**138**	**123,621**	**50**
Single Family	8	n/a	8
Live Work/Mixed Use	130	n/a	11
Commercial Use	n/a	76,275	19
Office Use	n/a	47,346	12
Mixed Use Irrigation	n/a	n/a	**3**
Recreational	**-3**	**26,648**	**3**
Single Family	-3	n/a	-3
Recreational Use	n/a	26,648	6
Medium Density Residential	**232**	n/a	**131**
Single Family	119	n/a	119
Multifamily	113	n/a	12
High Density Residential	**310**	n/a	**31**
Multifamily	310	n/a	31

D. THE DISTRICT AND ITS WATER SUPPLY SOURCE

This section presents information about Valley of the Moon Water District water supply sources, water infrastructure, emergency connections, service area demographics, water supply projections and water shortage plans.

1. The District Water Supplies

The District manages the distribution, operation, and maintenance of the water supply system that would serve the Springs Project. Its water sources, treatment facilities, and distribution system are described in this section.

Sonoma County Water Agency Wholesale Water

As reported in its 2015 UWMP, the District primarily relies upon surface water purchased from the Sonoma County Water Agency (SCWA) to meet customer demands. Local groundwater production from wells owned and leased by the District comprises the remaining portion of the District's water supply portfolio. Under normal conditions, approximately 85 percent of the District's water supply is surface water purchased from the SCWA. The District does not have any recycled water sources to supplement its supply.

The SCWA is currently authorized by the California State Water Resources Control Board (SWRCB) to store up to 245,000 AFY of water in Lake Sonoma and up to 122,500 AFY in Lake Mendocino. Per a series of four permits issued by the SWRCB, the SCWA may divert and redivert 180 cubic feet per second (cfs) of water, up to a maximum of 75,000 AFY, from the Russian River at the SCWA's Wohler and Mirabel facilities and other points of diversion. The SCWA has a pending application with the SWRCB to increase SCWA's Russian River diversion limit from 75,000 AFY to 101,000 AFY.

The SCWA storage and transmission system is supplied water from the natural flow of the Russian River. This water is stored in Lake Sonoma, behind Warm Springs Dam, and in Lake Mendocino, behind Coyote Dam. The design water supply pool capacities of Lake Sonoma and Lake Mendocino are 245,000 AFY and 122,500 AFY, respectively. The SCWA uses approximately 14 miles of the natural channel of Dry Creek and approximately 8 miles of the Russian River to convey water from Lake Sonoma to its diversion facilities. The diverted river water percolates through sand and gravel and only needs the addition of chlorine to meet the California Drinking Water Program quality standards.

The SCWA also owns and operates three groundwater supply wells located in the Santa Rosa Plain Subbasin of the Santa Rosa Valley Groundwater Basin. These groundwater wells are located along the Russian River-Cotati Intertie Pipeline and are used to supplement the SCWA water supply.

The District's water supply is conveyed through ten turnouts from the Sonoma Aqueduct, which is owned and operation by the SCWA. The District's distribution system contains approximately 92 miles of water mains ranging in size from less than 2 inches to 14 inches in diameter, with more than 95 percent between 4 and 12 inches in diameter.

The District's water distribution system has 11 pressure zones. The majority of the District's customers that are located on the valley floor are served from the SCWA aqueduct pressure, while customers in the higher elevations of the Sonoma Valley are served by separate pressure zones. The District's infrastructure assets include 10 turnouts from the Sonoma aqueduct owned and operated by the SCWA, 7 groundwater wells, 10 pumping stations, and 15 storage tanks. The District's water supply is conveyed through these 10 turnouts. Pressure for the aqueduct in this region is provided by Sonoma Booster Pump Stations No. 1 and No. 2, located on the east side of Spring Lake.

Groundwater

The District is located within the Sonoma Valley Groundwater Subbasin 2-02.02 and is a subbasin of the Napa-Sonoma Valley Groundwater Basin (DWR 2-02). The Basin is not adjudicated and has not been identified by the Department of Water Resources (DWR) as a critically-over-drafted groundwater basin.

The Sustainable Groundwater Management Act of 2014 (SGMA), the first comprehensive groundwater legislation in California history, was enacted on September 16, 2014 as part of a three-bill package including AB 1739 (Dickinson), SB 1169 (Pavley), and SB 1319 (Pavley). The legislation provides a framework for the sustainable management of groundwater by local

agencies, with an emphasis on the preservation of local control. The state agencies primarily responsible for implementing SGMA are DWR and the SWRCB. The Napa-Sonoma Basin is listed as a medium priority basin and is therefore subject to the requirements of SGMA. The Sonoma Valley Groundwater Sustainability Agency (GSA) is a public agency formed to sustainably manage groundwater in the Sonoma Valley Groundwater Basin. The agency was formed in June 2017 and has a Board of Directors, an administrator, and an advisory committee. The development of a Groundwater Sustainability Plan (GSP) is scheduled to be completed by June 2022 and is currently in process. More information about this agency and the draft GSP can be found here: http://sonomavalleygroundwater.org/.

An analysis of groundwater data has highlighted two groundwater depression zones in the Sonoma Valley. Management efforts in these areas to date have included informational meetings with impacted parties, community messaging, and voluntary conservation. It is expected that, as the groundwater management program moves from voluntary to mandatory, additional actions will be required to address these areas.

2. Supply Source and Contractual Provisions

The District is one of eight Water Contractors that hold water supply contracts with the SCWA, collectively known as the Restructured Agreement for Water Supply. The Restructured Agreement was executed in 2006 and generally provides for the financing, construction, and operation of existing and new diversion facilities, transmission lines, storage tanks, booster pumps, conventional wells, and appurtenant facilities. The term of the Restructured Agreement is through 2037 and can be extended by amendment.

Under the Restructured Agreement, the District is entitled to 8.5 million gallons per day (MGD) during any month and an annual maximum of 3,200 AFY. Provided the supply is available, the Restructured Agreement permits the District to take delivery of water in excess of its entitlement during a given month, provided specific conditions from the Agreement are met.

3. Emergency Connections

In accordance with the Emergency Services Act, the District has developed an Emergency Operation Plan (EOP) that guides response to unpredicted catastrophic events which might impact water delivery, including regional power outages, earthquakes, and other disasters. The EOP outlines standard operating procedures for all levels of emergency, from minor accidents to major disasters. The EOP has been coordinated with the SCWA and neighboring water purveyors. However, emergency connection infrastructure is missing and may be needed in the future.

Water transfers between SCWA's Water Contractors are authorized under the Restructured Agreement. Such transfers have been utilized in the past out of necessity and may be needed in the future.

4. Service Area Information and Population and Employment Projections

The District's service area is in Sonoma County, approximately 50 miles north of San Francisco, and is adjacent to the City of Sonoma. The service area encompasses approximately 11.8

square miles and includes residential and commercial customers. Elevations in the service area range from approximately 90 feet to 1,190 feet above mean sea level.

The District's service area climate is typical of the Napa and Sonoma County areas, characterized by summers that are dry and warm, and winters that are relatively mild with most rainfall occurring during this season. Average annual evapotranspiration (ETo) is 46.1 inches and average annual rainfall is 29.4 inches. The temperature ranges from an average minimum of 44.2 ˚F to an average maximum of 73.7 ˚F.

The demographics of the District's customers include a range of income, household size, and water demands. Typically, the more affluent households are located along the foothills and are characterized by larger lots and homes with higher water demands for irrigation. On the other end of the spectrum, there are two disadvantaged communities in the District which tend to have smaller lots and lower water use.

Due to the District's above-average tourism, the increase in the number of second homes and vacation rentals in recent years has impacted water use. This is due not only to the increase in the number of accounts, but also because these accounts tend to have higher water use overall.

This WSA uses the population projections contained in the District's 2015 UWMP, whereby the District's 2015 and 2020 service area population was estimated to be 23,782 and 24,873, respectively. The District's year 2015 and projected service area population is summarized in Table G-2 in 5-year increments through the year 2040. The percent increases for the population growth are also listed.

TABLE G-2 DISTRICT CURRENT AND PROJECTED POPULATION PER 2015 UWMP

	2015[1]	2020[2]	2025[2]	2030[2]	2035[2]	2040[2]
Service Area Population	23,782	24,873	25,229	25,586	25,943	26,300
Population Increase, %		4.6%	1.4%	1.4%	1.4%	1.4%

[1] 2015 data is calculated based on a persons-per-connection method.
[2] Projected populations are based on Sonoma County Draft General Plan 2005 estimates.

5. District Water Supply Projections

The District purchases potable water from the SCWA to meet most of the water demands within the service area. The District owns and/or operates a total of seven municipal production wells, five of which are currently active, with capacities ranging from 90 gallons per minute (gpm) to 250 gpm. The District will continue to use its wells to supplement its purchased SCWA water but plans to decrease the use of the wells over time as the District implements additional water conservation programs. Groundwater production will be expanded to meet demands in the case of a drought or a decrease in SCWA water supply.

Given the uncertainty of the implementation of the SGMA, the District plans to continue to purchase wholesale water from SCWA, while monitoring its production of groundwater. The District does not anticipate developing additional long-term water supplies from other sources in the near future. Water supplies from the SCWA through 2040 are projected to be equivalent to the District's entitlement of 3,200 AFY, established in the Restructured Agreement and

effective through 2037. The District has the capacity to meet the demands of its customers in wet and normal years based on supplies from SCWA and groundwater.

SCWA supply and District groundwater projections for normal years are presented in the following table.

TABLE G-3 DISTRICT PROJECTED WATER SUPPLIES, NORMAL YEARS

	2015[1]	2020[2]	2025[2]	2030[2]	2035[2]	2040[2]
Surface Water Supplies						
Total SCWA Supplies (AFY)	1,947	3,200	3,200	3,200	3,200	3,200
Percent Normal, %	n/a	100%	100%	100%	100%	100%
Groundwater Supplies						
Total Groundwater Supplies (AFY)	581	450	327	232	100	100
Percent Normal, %	n/a	100%	100%	100%	100%	100%
Total Supplies	**2,528**	**3,650**	**3,527**	**3,432**	**3,300**	**3,300**
Percent of Normal	n/a	**100%**	**100%**	**100%**	**100%**	**100%**

[1] 2015 data is based on actual numbers from the District's 2015 UWMP.
[2] Projections are from the District's 2015 UWMP, Table 6-2.

During periods of shortage, Section 3.5 of the SCWA Restructured Agreement provides a method for allocating water among the various Water Contractors and other customers of the SCWA water supply. On April 18, 2006, SCWA's Board of Directors adopted Resolution No. 06-0342, which approved a methodology for allocating water in the event of a water supply shortage or in the event of a temporary impairment of the capacity of SCWA's transmission system. This methodology first restricts the delivery of surplus water and then caps water deliveries to each Water Contractor at its respective annual entitlement. If further reductions are required, Section 3.5 of the Restructured Agreement provides a guaranteed supply to each Water Contractor equal to the quantity of water required for human consumption, sanitation, and fire protection. The remaining water is then allocated to each Water Contractor proportionately based up their respective annual entitlements, up to a maximum equal to its "reasonable requirement."

The SCWA and its Water Contractors are in the process of updating the water shortage allocation methodology. The water supply reliability projections presented in this Plan reflect the new methodology as it is likely to govern supply allocations during periods of water shortage over the forecast timeframe. The updated methodology utilizes the same allocation principles established under the Restructured Agreement but refines the calculation of the human health demands and reasonable requirements. Under the proposed revised methodology, the District's human health, sanitation, and fire flow needs are determined to be 1,716 AFY, whereas its reasonable requirement is 2,908 AFY. Based on the annual entitlements included in the Restructured Agreement, The District's Annual Entitlement of 3,200 AFY represents 4.1 percent of the total entitlements of all Water Contractors (77,445 AFY). Therefore, in the event of a water supply reduction imposed by SCWA, the District will receive its human health needs of 1,716 AFY plus 4.1 percent of the remaining water supply, up to a

maximum of 2,908 AFY. The SCWA provided the District with water supply reliability projections for use in its UWMP.

The District's SCWA water supply represents its anticipated supply allocations based upon the allocation methodology described previously. Per the allocation methodology, the District is expected to receive its reasonable requirement of 2,908 AFY during the projected supply reductions occurring after 2025. The District anticipates receiving between 91 and 100 percent of its total projected water supply in single dry years over the forecast timeframe.

No SCWA supply reductions and no groundwater supply reductions are projected to occur during multiple dry years over the forecast timeframe. The District anticipates receiving 100 percent of its total projected water supply in all multiple dry year scenarios during this time.

Table G-4 shows projected supply for the District for a normal year, single dry year, and for five consecutive dry years, based on the 2015 UWMP-reported allocations. During the periods of supply reductions, specifically, a single dry year, the District will have to implement the Water Shortage Contingency Plan to reduce demand. The District Water Shortage Contingency Plan describes the triggering levels and actions to be considered for each stage of demand reduction. As detailed in the next section, the plan has four stages with each stage set to respond to increasingly more severe conditions. Therefore, the system demand will decrease to meet the reduced allocations by SCWA.

TABLE G-4 DISTRICT PROJECTED ANNUAL SUPPLY ALLOCATIONS FOR SINGLE AND MULTIPLE DRY YEARS

	2015[1]	2020[2]	2025[2]	2030[2]	2035[2]	2040[2]
SINGLE DRY YEARS						
Surface Water Supplies						
Total SCWA Supplies (AFY)	1,947	3,200	2,908	2,908	2,908	2,908
Percent Normal, %	n/a	100%	91%	91%	91%	91%
Groundwater Supplies						
Total Groundwater Supplies (AFY)	581	450	327	232	100	100
Percent Normal, %	n/a	100%	100%	100%	100%	100%
Total Supplies	**2,528**	**3,650**	**3,235**	**3,140**	**3,008**	**3,008**
Percent of Normal	n/a	**92%**	**91%**	**91%**	**91%**	**91%**
MULTIPLE DRY YEARS (Years 1-4)[3]						
Surface Water Supplies						
Total SCWA Supplies (AFY)	1,947	3,200	3,200	3,200	3,200	3,200
Percent Normal, %	n/a	100%	100%	100%	100%	100%
Groundwater Supplies						
Total Groundwater Supplies (AFY)	581	450	327	232	100	100
Percent Normal, %	n/a	100%	100%	100%	100%	100%
Total Supplies	**2,528**	**3,650**	**3,527**	**3,432**	**3,300**	**3,300**
Percent of Normal	n/a	**100%**	**100%**	**100%**	**100%**	**100%**

[1] 2015 data is based on actual numbers from the District's 2015 UWMP.
[2] Projections are from the District's 2015 UWMP, Tables 6-4 and 6-6.
[3] The water supply numbers for Years 1-4 are the same and include the Multiple Dry Years first year supply.

District Water Shortage Contingency Plan

The District Water Shortage Contingency Plan (WSCP) was revised on April 7, 2015 to address day per week water restrictions that were mandated by the SWRCB. Among other revisions, the current version of the WSCP includes a new tier for residential billing and provides minor modifications to the water shortage stages. The updated WSCP also gives the District additional flexibility to address supply shortfalls that may result from, but are not limited to: droughts, extreme weather events, natural disasters, extended power outages, reduced deliveries from the SCWA, and regulatory droughts. Reduction goals for each water use sector under Stages 2, 3, and 4 of the WSCP are summarized in the following table.

TABLE G-5 WSCP REDUCTION GOALS BY CUSTOMER CLASS

Customer Class	Stage 2 Reduction Goal	Stage 3 Reduction Goal	Stage 4 Reduction Goal
Single Family Residential	25%	35%	55%
Multifamily Residential	25%	35%	42%
Commercial/Industrial/Institutional	15%	20%	27%
Dedicated Irrigation	50%	75%	90%
Total	**25%**	**35%**	**50%**

The District's increasingly stringent stages of action for responding to reduced supply in a water shortage are summarized below. Stages 2, 3, and 4 of the District's WSCP are enacted through the adoption of a resolution by the District's Board of Directors.

Stage I: This is the normal stage that includes voluntary prohibitions with the goal of up to 25 percent overall reduction. This stage is a continuing effort to conserve water and includes actions such as: (a) limiting irrigation to between 8pm and 6am; (b) requiring a hose-end shut-off nozzle for garden or utility hoses; (c) prohibiting street washing using potable water; (d) prohibiting washing of sidewalks, patios, driveways and other hardscapes, unless for public health and safety; (e) and requiring construction dust control to use recycled water.

Stage II: This stage is mandatory with the goal of 25 percent overall reduction in water use. This stage includes actions such as: (a) adopting a rationing ordinance assigning Stage 2 allotment to each water service; (b) adopting a resolution to implement Stage 2 Water Shortage Charges; (c) increasing District staffing support, including adding a temporary position to staff phone lines, performing patrols for water waste violations, and conducting customer water use audits; and (d) increasing public education and outreach campaigns.

Stage III: This stage is mandatory with the goal of 35 percent overall reduction in water use. This stage includes actions such as: (a) adopting a rationing ordinance assigning Stage 3 allotment to each water service; (b) adopting a resolution to implement Stage 3 Water Shortage Charges; (c) increasing public education and outreach campaigns; (d) establishing a construction water demand offset program; and (e) expanding efforts to patrol for water waste violations and conducting customer water use audits.

Stage IV: This stage is mandatory with the goal of 50 percent overall reduction in water use. This stage includes actions such as: (a) adopting a rationing ordinance assigning Stage 4 allotment to each water service; (b) adopting a resolution to implement Stage 4 Water Shortage Charges; (c) increasing public education and outreach campaigns; (d) promoting participation in a construction water demand offset program; and (e) expanding efforts to patrol for water waste violations and conducting customer water use audits.

Depending on the extent of the water waste, the District may, after written notification to customer and a reasonable time to correct the violation as solely determined by the District,

take action to enforce the District's water waste prevention ordinance (Ordinance No. 1007[3]) or the WSCP. Penalties, fees, and charges are established by a resolution adopted by the District's Board of Directors. While Stages 2, 3, and 4 of the WSCP are in place, customers are subject to potential enforcement action if their water use exceeds the established allotment over two consecutive billing cycles or exceeds the established allotment in three billing cycles within a twelve-month period.

Because the District has based its planning on the SCWA's current water rights and because these current water rights are more restrictive than the multiple dry year condition, a multiple dry year 3-year minimum water supply analysis would be identical to the normal water year analysis.

E. WATER DEMAND PROJECTIONS

This section presents the District's projected demands with and without the proposed project.

1. Future System Demand Projections

Table G-6 shows the future system demand projections and the difference (excess supply allocation) until 2040. As shown, available supplies are sufficient to meet system demand projections in a normal year.

The District's water demand projections were conducted as part of its 2015 Urban Water Management Plan Water Demand Analysis and Water Conservation Measures Update that was produced by Maddaus Water Management on July 1, 2015 and published in Appendix C of the District's 2015 UWMP. The land use and population assumptions that underpin the water use projections are based on the 2008 Sonoma County General Plan (General Plan)[4]. The population and job forecasts provided in the General Plan were relied upon for the demand projections conducted in the MWM demand analysis.

Projected demands include both active and passive conservation. Passive conservation refers to water savings resulting from actions and activities that do not depend on direct financial assistance or educational programs from the District. These savings result primarily from: (1) the natural replacement of existing plumbing fixtures with water-efficient models required under current plumbing code standards and (2) the installation of water-efficient fixtures and equipment in new buildings and retrofits as required under CALGreen Building Code Standards. Active conservation measures undertaken by the District may include rebates; these are presented in Section G of this appendix.

[3] Valley of the Moon Water District. (2000). Water Waste Prohibition Ordinance No. 1007.

[4] Sonoma County. 2008 General Plan, accessed July 2019: https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/General-Plan/

TABLE G-6 FUTURE SYSTEM DEMAND PROJECTIONS (WITHOUT ADDITIONAL PROJECTS)

	2015[1]	2020	2025	2030	2035	2040
District Supplies, AFY[2]	2,528	3,650	3,527	3,432	3,300	3,300
Demand Projections with Passive and Active Conservation Savings, AFY[3]	2,528	2,937	2,905	2,850	2,846	2,850
Annual Excess, AFY	n/a	713	622	582	454	450
Percent Excess, %	n/a	20%	18%	17%	14%	14%

[1] 2015 data is based on actual demand numbers from the District's 2015 UWMP.
[2] Values are consistent with 2015 UWMP Table 5.10 Water Supplies
[3] Demand values are consistent with the District's 2015 UWMP Appendix C Water Demand Analysis and Water Conservation Measures Update.

2. Net Additional Demand from Proposed Projects

This section presents background information on the proposed project and net additional demand. The boundaries of the Specific Plan are within the service area of the District. The process of determining water demand for future development sites is a dynamic one. By the next WSA submittal, there may be actual site data available. This WSA is based on the land use proposed for the project connection types listed below.

The 15 new neighborhood commercial connections include 8 new dwelling units and a net increase of 53,390 non-residential sq. ft. of development yielding approximately 17 AFY of additional demand.

The 82 new commercial connections include 120 hotel rooms and 72,245 new non-residential sq. ft. of development for an approximate net increase in demand of 39 AFY.

The 6 new commercial irrigation connections yield approximately 9 AFY of additional demand.

The 50 new mixed-use connections include 138 new dwelling units and a net increase of 123,621 non-residential sq. ft. of development yielding approximately 50 AFY of additional demand.

The 3 mixed-use irrigation connections will yield approximately 5 AFY of additional demand.

The 3 new recreational connections include a reduction of 3 dwelling units and a net increase of 26,648 sq. ft. of recreational use yielding approximately 9 AFY of additional demand.

The 131 medium density residential connections include 119 single family and 113 multifamily dwelling units for an additional demand of approximately 45 AFY.

The 31 high density residential connections include 310 new multifamily dwelling units yielding approximately 35 AFY of additional demand.

The Springs Project is estimated to be developed according to the following approximate schedule:

- 25 percent between 2020 and 2025

- 25 percent between 2025 and 2030
- 25 percent between 2030 and 2035
- 25 percent between 2035 and 2040

The complete buildout of the Specific Plan area is estimated to require approximately 209 acre-feet per year (AFY) of additional water demand. Development is expected to occur gradually over the next 20 years.

Table G-7 shows the total projected annual additional demand generated from the Springs development project that is under review by the County of Sonoma.

TABLE G-7 ANNUAL ADDITIONAL FUTURE DEMANDS FROM PROJECT IN AFY[1]

Development Project	2020	2025	2030	2035	2040
Springs Specific Plan Area Development Project	-	52	104	157	209

[1] This is the total net increase in demand due to this project. The removal of 3 existing SF units is included in this estimate.

Table G-8 shows the total system demand projected for the District including the demand from the proposed project. The total system demand is calculated by adding the net demand generated from the proposed project from Table G-7 to the system demand projections.

TABLE G-8 TOTAL SYSTEM DEMAND WITH ADDED PROJECT, NO DROUGHT

	2015[1]	2020	2025	2030	2035	2040
Demand Projection for District with Passive and Active Conservation, AFY	2,528	2,937	2,905	2,850	2,846	2,850
Net Demand from Additional Project, AFY	n/a	-	52	104	157	209
Total System Demand, AFY	2,528	2,937	2,957	2,955	3,002	3,059
Supply Assurance, AFY	2,528	3,650	3,527	3,432	3,300	3,300
Estimated Remaining Supply, AFY	n/a	713	570	477	298	241
Est. Remaining Supply Reliability, %	n/a	20%	16%	14%	9%	7%

[1] 2015 data is based on actual numbers from the District's 2015 UWMP.

F. COMPARISON AND CONCLUSION OF SUPPLY ALLOCATION VS. WATER DEMAND PROJECTIONS

This section presents a supply versus demand comparison and conclusion.

1. Comparison of Supply Versus Demand

Table G-9 shows a comparison of the supply allocations from Table G-4 and projected total system demands from Table G-8, through the 20-year planning horizon as required by SB 610. As discussed previously, the District anticipates receiving between 91 and 100 percent of its total projected water supply in single dry years over the forecast timeframe. Furthermore, no SCWA supply reductions and no groundwater supply reductions are projected to occur during

multiple dry years over the forecast timeframe. To meet the reductions in a single dry year, the District will have to cut back its consumption in kind by implementing the WSCP based on the severity of the drought. The District's WSCP describes the triggering levels and actions to be considered for each stage of demand reduction. The plan has four stages with each stage set to respond to increasingly severe conditions.

As shown in Table G-9, there will continue to be sufficient supplies to meet all projected demand, including the additional demand generated from the proposed projects in all conditions until year 2040. This conclusion is dependent on the District implementing the mandatory demand reductions as outlined in the District's WSCP.

In the event of drought conditions, the District would implement the WSCP, which would result in reduced water demand of up to 50 percent within the service area. The WSCP thus would ensure an adequate water supply within the District service area if SCWA reduces water deliveries to the District by up to 10 percent (as could occur during a single drought year). For instance, a 2 percent reduction in water demand would reduce the overall demand during a single dry year to approximately 2,998 AFY in 2040, with the new projects built out, as shown in Table G-9. The anticipated supply that year, considering the reduction in water supplies from SCWA, would be 3,008 AFY, as shown in Table G-4. Thus, even under a single dry year scenario starting in 2040, the District would be estimated to provide adequate water to all existing and anticipated development and maintain a small estimated water surplus of 10 AFY. However, as stated, no such SCWA or groundwater supply reductions are projected to occur during multiple dry years over the forecast timeframe.

TABLE D-9 ANNUAL SUPPLY ALLOCATION VS. MULTIPLE DRY YEARS DEMAND INCLUDING DEMAND REDUCTIONS

Year		Normal Year (AFY)	Single Dry Year (AFY)	Multiple Dry Years (AFY)				
				Year 1	Year 2	Year 3	Year 4	Year 5
			Demand Reduction, %					
			2%	0%	0%	0%	0%	0%
2020	Supply Assurance	3,650	3,650	3,650	3,650	3,650	3,650	3,650
	Demand (NOT including proposed projects)	2,937	2,879	2,937	2,937	2,937	2,937	2,937
	Demand (including proposed projects)	2,937	2,879	2,937	2,937	2,937	2,937	2,937
	Excess (NOT including proposed projects)	713	771	713	713	713	713	713
	Excess (including proposed projects)	713	771	713	713	713	713	713
2025	Supply Assurance	3,527	3,235	3,527	3,650	3,650	3,650	3,650
	Demand (NOT including proposed projects)	2,905	2,847	2,905	2,905	2,905	2,905	2,905
	Demand (including proposed projects)	2,957	2,898	2,957	2,957	2,957	2,957	2,957
	Excess (NOT including proposed projects)	622	388	622	745	745	745	745
	Excess (including proposed projects)	570	337	570	693	693	693	693
2030	Supply Assurance	3,432	3,140	3,432	3,432	3,432	3,432	3,432
	Demand (NOT including proposed projects)	2,850	2,793	2,850	2,850	2,850	2,850	2,850
	Demand (including proposed projects)	2,955	2,896	2,955	2,955	2,955	2,955	2,955
	Excess (NOT including proposed projects)	582	347	582	582	582	582	582
	Excess (including proposed projects)	477	244	477	477	477	477	477

Year		Normal Year (AFY)	Single Dry Year (AFY)	Multiple Dry Years (AFY)				
				Year 1	Year 2	Year 3	Year 4	Year 5
			Demand Reduction, %					
			2%	0%	0%	0%	0%	0%
2035	Supply Assurance	3,300	3,008	3,300	3,300	3,300	3,300	3,300
	Demand (NOT including proposed projects)	2,846	2,789	2,846	2,846	2,846	2,846	2,846
	Demand (including proposed projects)	3,002	2,942	3,002	3,002	3,002	3,002	3,002
	Excess (NOT including proposed projects)	454	219	454	454	454	454	454
	Excess (including proposed projects)	298	66	298	298	298	298	298
2040	Supply Assurance	3,300	3,008	3,300	3,300	3,300	3,300	3,300
	Demand (NOT including proposed projects)	2,850	2,793	2,850	2,850	2,850	2,850	2,850
	Demand (including proposed projects)	3,059	2,998	3,059	3,059	3,059	3,059	3,059
	Excess (NOT including proposed projects)	450	215	450	450	450	450	450
	Excess (including proposed projects)	241	10	241	241	241	241	241

2. Supply and Demand Conclusion

In conclusion, as of June 2019, the water demand associated with the proposed Springs Project could be accommodated during a single dry year (such as that which could result from global climate change) through implementation of the mandatory demand reductions as outlined in the District's WSCP. The WSCP allows for up to 50 percent demand reduction. After year 2035, in a single dry year, the project may require a 2 percent reduction in demand by District customers to balance supply and demand.

The entire proposed Springs Project would generate a water demand of 209 AFY. This water demand would be within the anticipated supply range for the District and would not lead to insufficient water supplies in existing entitlements and resources or require new or expanded entitlements. Therefore, the proposed project would result in a less-than-significant impact upon the existing and anticipated potable water supply.

G. DEMAND MANAGEMENT MEASURES

Over the years, the District has implemented demand management measures to reduce the overall demand for water. Helpful water conservation tips are available online and in brochures to educate customers. Table G-10 presents the water conservation measures that the District is currently implementing or planning to implement. Measure descriptions are based on what was published in the adopted conservation program described in the 2015 UWMP Appendix C Water Demand Analysis and Water Conservation Measures Update as well as the information found on the District's conservation website (https://www.vomwd.org/conservation) and conversations with District staff as of June 2019.

TABLE G-10 DISTRICT CURRENT AND PROPOSED CONSERVATION MEASURES

Measure Name	Measure Description
Water Loss	Maintain a thorough annual accounting of water production, sales by customer class, quantity of water produced, and billed consumption (to define non-revenue water). In conjunction with system accounting, include water system audits that identify and quantify known legitimate uses of non-revenue water to determine remaining potential for reducing real (physical) water losses. Goal would be to lower the Infrastructure Leakage Index (ILI) and real water losses every year by a pre-determined amount based on cost effectiveness. These programs typically pay for themselves based on savings in operational costs (where saved rate revenue can be directed more to system repairs/replacement and other costs) and recovered revenue through addressing apparent losses. Specific goals and methods to be developed by the utility. May include accelerated main and service line replacement. Enhanced real water loss reduction may include more ambitious main replacement and active leak detection. Capture water from water main flushing and hydrant flow testing for reuse.
AMI	Retrofit system with Advanced Metering Infrastructure (AMI) meters and associated network capable of providing continuous consumption data to utility offices. Improved identification of system and customer leaks is a major conservation benefit. Some costs of these systems are offset by operational efficiencies and reduced staffing, as regular meter reading and opening and closing accounts are accomplished without the need for a site visit. Also enables enhanced billing options and ability to monitor unauthorized usage, such as use of/tampering with closed accounts or irrigation when time of day or days per week are regulated. Customer service is improved as staff can quickly access continuous usage records to address customer inquiries. Optional features include online customer access to their usage, which has been shown to improve accountability and reduce water use. A five-year change-out would be a reasonable objective and may take longer if coupled with a full meter replacement program (on the order of 10 years). Require that new, larger or irrigation customers install such AMI meters as described above and possibly purchase means of viewing daily consumption inside their home, business, or by their landscape/property managers, either through the internet (if available) or separate device. The AMI system would, on demand, indicate to the customer and utility where and how their water is used, facilitating water use reduction and prompting leak identification.
Pricing	Assumes average annual price increase of 5 percent for next 20 years. Measure converts price increases to real price increases net of inflation. Annual increase must be above user set threshold (such as assuming 2 percent inflation) to trigger demand reduction.
Public Info & School Education – SMSWP	REGIONAL MEASURE: Regional public information and school education campaign. School education includes school assembly program, classroom presentations, and other options.

Public Info & School Education – District	Public information dissemination and school education initiatives beyond those conducted by SMSWP.
Prohibit Water Waste	Adopt or modify ordinance that prohibits the waste of water defined as gutter flooding, restrictions on watering days, and failure to repair leaks in a timely manner.
HE Faucet Aerator/ Showerhead Giveaway	Utility buys high efficiency (HE) showerheads and faucet aerators in bulk and gives them away at utility offices and community events. Targets residential and non-residential customers.
HE Clothes Washer Rebate – Residential	As of June 2019, the District residential customers replacing a top-loading clothes washer with a qualifying front-loading clothes washer are eligible to receive a $50 rebate. Rebates will remain consistent with relevant state and federal regulations (Department of Energy, Energy Star) and only offer the best available technology. This measure is managed through the Sonoma-Marin High Efficiency Clothes Washer Water Rebate program run by SMSWP. More information can be found here: https://ca-santarosa.civicplus.com/DocumentCenter/View/6857/High-Efficiency-Clothes-Washer-Water-Rebate-Program-PDF?bidId=.
Turf Removal – Residential	As of June 2019, the District residential customers can receive a rebate of $0.50 per square foot of qualify turf replacement. Program and funding restrictions apply. The District can be contacted for details and to schedule the mandatory pre- and post-inspections. More information can be found here: https://docs.wixstatic.com/ugd/1be0f0_a6803b6b1b2641d993941be24f74e02f.pdf.
Water Conserving Landscape and Irrigation Codes	Develop and enforce Water Efficient Landscape Design Standards. Standards specify that development projects subject to design review be landscaped according to climate appropriate principals, with appropriate turf ratios, plant selection, efficient irrigation systems, and smart irrigation controllers. The ordinance could require certification of landscape professionals.
Require Smart Irrigation Controllers and Rain Sensors in New Development	Require Weather Adjusting Smart Irrigation Controllers per CALGreen on new development (rain sensors are optional). Require developers for all properties with greater than four residential units and all commercial development to install the weather-based irrigation controllers. May require landscaper training.

Source: The District's 2015 UWMP Water Demand Analysis and Water Conservation Measures Update, published as Appendix C in the District's 2015 UWMP. Enhancements and updates are based on the District's conservation website (https://www.vomwd.org/conservation) and conversations with District staff as of June 2019.

Appendix E

Noise Data

Environmental Noise Assessment

Sonoma County, California

November 30, 2018

jcb Project # 2016-108

Prepared for:

Attn:
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Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2016-108 - Springs Specific Plan
Description: Existing
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Hwy 12	N. of Agua Caliente	11,930	84		16	2	1	40	50	
2	Hwy 12	Agua Caliente to Mountain	13,460	84		16	2	1	40	50	
3	Hwy 12	Mountain to Lichtenberg	14,680	84		16	2	1	40	50	
4	Hwy 12	Lichtenberg to Boyes	13,400	84		16	2	1	40	50	
5	Hwy 12	Boyes to Calle del Monte	16,030	84		16	2	1	40	50	
6	Hwy 12	Calle del Monte to W. Thomson	16,810	84		16	2	1	40	50	
7	Hwy 12	W. Thomson to Siesta	17,220	84		16	2	1	40	50	
8	Hwy 12	Siesta to Donald	18,240	84		16	2	1	40	50	
9	Hwy 12	Donald to Verano	18,990	84		16	2	1	40	50	
10	Hwy 12	Verano to Maxwell Village	18,770	84		16	2	1	40	50	
11	Hwy 12	Maxwell Village to W. Spain	18,160	84		16	2	1	40	50	
12	Hwy 12	S. of W. Spain	14,190	84		16	2	1	40	50	
13	Agua Caliente	W. of Hwy 12	4,160	84		16	1	0.5	25	50	
14	Boyes Blvd.	W. of Hwy 12	5,280	84		16	1	0.5	25	50	
15	Thomson Ave.	W. of Hwy 12	3,010	84		16	1	0.5	25	50	
16	Donald St.	E. of Hwy 12	980	84		16	1	0.5	25	50	
17	Donald St.	W. of Robinson	7,020	84		16	1	0.5	25	50	
18	Donald St.	E. of Robinson	6,890	84		16	1	0.5	25	50	
19	Verano	W. of Arnold	340	84		16	1	0.5	25	50	
20	Verano	Arnold to Hwy 12	9,640	84		16	1	0.5	25	50	
21	Verano	Hwy 12 to Robinson	5,760	84		16	1	0.5	25	50	
22	Verano	E. of Robinson	390	84		16	1	0.5	25	50	
23	Robinson	N. of Donald	960	84		16	1	0.5	25	50	
24	Robinson	Donald to Verano	470	84		16	1	0.5	25	50	
25	Robinson	S. of Verano	930	84		16	1	0.5	25	50	

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2016-108 - Springs Specific Plan
Description: Existing
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Hwy 12	N. of Agua Caliente	65.5	57.5	59.3	67
2	Hwy 12	Agua Caliente to Mountain	66.0	58.0	59.9	67
3	Hwy 12	Mountain to Lichtenberg	66.4	58.4	60.2	68
4	Hwy 12	Lichtenberg to Boyes	66.0	58.0	59.8	67
5	Hwy 12	Boyes to Calle del Monte	66.7	58.8	60.6	68
6	Hwy 12	Calle del Monte to W. Thomson	66.9	59.0	60.8	68
7	Hwy 12	W. Thomson to Siesta	67.0	59.1	60.9	69
8	Hwy 12	Siesta to Donald	67.3	59.4	61.2	69
9	Hwy 12	Donald to Verano	67.5	59.5	61.4	69
10	Hwy 12	Verano to Maxwell Village	67.4	59.5	61.3	69
11	Hwy 12	Maxwell Village to W. Spain	67.3	59.3	61.2	69
12	Hwy 12	S. of W. Spain	66.2	58.3	60.1	68
13	Agua Caliente	W. of Hwy 12	55.1	46.7	51.4	57
14	Boyes Blvd.	W. of Hwy 12	56.1	47.8	52.4	58
15	Thomson Ave.	W. of Hwy 12	53.7	45.3	50.0	56
16	Donald St.	E. of Hwy 12	48.8	40.5	45.1	51
17	Donald St.	W. of Robinson	57.3	49.0	53.6	59
18	Donald St.	E. of Robinson	57.3	48.9	53.6	59
19	Verano	W. of Arnold	44.2	35.9	40.5	46
20	Verano	Arnold to Hwy 12	58.7	50.4	55.0	61
21	Verano	Hwy 12 to Robinson	56.5	48.2	52.8	58
22	Verano	E. of Robinson	44.8	36.5	41.1	47
23	Robinson	N. of Donald	48.7	40.4	45.0	51
24	Robinson	Donald to Verano	45.6	37.3	41.9	48
25	Robinson	S. of Verano	48.6	40.2	44.9	51

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2016-108 - Springs Specific Plan
Description: Existing
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	Hwy 12	N. of Agua Caliente	14	31	67	145	312
2	Hwy 12	Agua Caliente to Mountain	16	34	73	157	338
3	Hwy 12	Mountain to Lichtenberg	17	36	77	166	358
4	Hwy 12	Lichtenberg to Boyes	16	34	73	157	337
5	Hwy 12	Boyes to Calle del Monte	18	38	82	176	380
6	Hwy 12	Calle del Monte to W. Thomson	18	39	85	182	392
7	Hwy 12	W. Thomson to Siesta	19	40	86	185	399
8	Hwy 12	Siesta to Donald	19	41	89	192	414
9	Hwy 12	Donald to Verano	20	43	92	197	425
10	Hwy 12	Verano to Maxwell Village	20	42	91	196	422
11	Hwy 12	Maxwell Village to W. Spain	19	41	89	192	413
12	Hwy 12	S. of W. Spain	16	35	75	163	350
13	Agua Caliente	W. of Hwy 12	3	7	15	32	68
14	Boyes Blvd.	W. of Hwy 12	4	8	17	37	80
15	Thomson Ave.	W. of Hwy 12	3	6	12	26	55
16	Donald St.	E. of Hwy 12	1	3	6	12	26
17	Donald St.	W. of Robinson	4	10	21	45	97
18	Donald St.	E. of Robinson	4	10	21	44	96
19	Verano	W. of Arnold	1	1	3	6	13
20	Verano	Arnold to Hwy 12	6	12	26	56	120
21	Verano	Hwy 12 to Robinson	4	8	18	39	85
22	Verano	E. of Robinson	1	1	3	7	14
23	Robinson	N. of Donald	1	3	6	12	26
24	Robinson	Donald to Verano	1	2	3	7	16
25	Robinson	S. of Verano	1	3	5	12	25

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2016-108 - Springs Specific Plan
Description: Existing + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Hwy 12	N. of Agua Caliente	13,310	84		16	2	1	40	50	
2	Hwy 12	Agua Caliente to Mountain	15,830	84		16	2	1	40	50	
3	Hwy 12	Mountain to Lichtenberg	17,450	84		16	2	1	40	50	
4	Hwy 12	Lichtenberg to Boyes	16,720	84		16	2	1	40	50	
5	Hwy 12	Boyes to Calle del Monte	19,580	84		16	2	1	40	50	
6	Hwy 12	Calle del Monte to W. Thomson	20,590	84		16	2	1	40	50	
7	Hwy 12	W. Thomson to Siesta	21,160	84		16	2	1	40	50	
8	Hwy 12	Siesta to Donald	22,480	84		16	2	1	40	50	
9	Hwy 12	Donald to Verano	22,750	84		16	2	1	40	50	
10	Hwy 12	Verano to Maxwell Village	21,260	84		16	2	1	40	50	
11	Hwy 12	Maxwell Village to W. Spain	20,370	84		16	2	1	40	50	
12	Hwy 12	S. of W. Spain	16,030	84		16	2	1	40	50	
13	Agua Caliente	W. of Hwy 12	4,480	84		16	1	0.5	25	50	
14	Boyes Blvd.	W. of Hwy 12	6,010	84		16	1	0.5	25	50	
15	Thomson Ave.	W. of Hwy 12	3,520	84		16	1	0.5	25	50	
16	Donald St.	E. of Hwy 12	1,760	84		16	1	0.5	25	50	
17	Donald St.	W. of Robinson	7,800	84		16	1	0.5	25	50	
18	Donald St.	E. of Robinson	9,100	84		16	1	0.5	25	50	
19	Verano	W. of Arnold	340	84		16	1	0.5	25	50	
20	Verano	Arnold to Hwy 12	11,670	84		16	1	0.5	25	50	
21	Verano	Hwy 12 to Robinson	7,330	84		16	1	0.5	25	50	
22	Verano	E. of Robinson	570	84		16	1	0.5	25	50	
23	Robinson	N. of Donald	960	84		16	1	0.5	25	50	
24	Robinson	Donald to Verano	1,990	84		16	1	0.5	25	50	
25	Robinson	S. of Verano	930	84		16	1	0.5	25	50	

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2016-108 - Springs Specific Plan
Description: Existing + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Hwy 12	N. of Agua Caliente	65.9	58.0	59.8	67
2	Hwy 12	Agua Caliente to Mountain	66.7	58.7	60.6	68
3	Hwy 12	Mountain to Lichtenberg	67.1	59.2	61.0	69
4	Hwy 12	Lichtenberg to Boyes	66.9	59.0	60.8	68
5	Hwy 12	Boyes to Calle del Monte	67.6	59.7	61.5	69
6	Hwy 12	Calle del Monte to W. Thomson	67.8	59.9	61.7	69
7	Hwy 12	W. Thomson to Siesta	67.9	60.0	61.8	69
8	Hwy 12	Siesta to Donald	68.2	60.3	62.1	70
9	Hwy 12	Donald to Verano	68.3	60.3	62.1	70
10	Hwy 12	Verano to Maxwell Village	68.0	60.0	61.8	69
11	Hwy 12	Maxwell Village to W. Spain	67.8	59.8	61.7	69
12	Hwy 12	S. of W. Spain	66.7	58.8	60.6	68
13	Agua Caliente	W. of Hwy 12	55.4	47.1	51.7	57
14	Boyes Blvd.	W. of Hwy 12	56.7	48.3	53.0	59
15	Thomson Ave.	W. of Hwy 12	54.3	46.0	50.6	56
16	Donald St.	E. of Hwy 12	51.3	43.0	47.6	53
17	Donald St.	W. of Robinson	57.8	49.5	54.1	60
18	Donald St.	E. of Robinson	58.5	50.1	54.8	60
19	Verano	W. of Arnold	44.2	35.9	40.5	46
20	Verano	Arnold to Hwy 12	59.5	51.2	55.8	62
21	Verano	Hwy 12 to Robinson	57.5	49.2	53.8	59
22	Verano	E. of Robinson	46.4	38.1	42.7	48
23	Robinson	N. of Donald	48.7	40.4	45.0	51
24	Robinson	Donald to Verano	51.9	43.5	48.2	54
25	Robinson	S. of Verano	48.6	40.2	44.9	51

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2016-108 - Springs Specific Plan
Description: Existing + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	Hwy 12	N. of Agua Caliente	16	34	72	156	336
2	Hwy 12	Agua Caliente to Mountain	17	38	81	175	377
3	Hwy 12	Mountain to Lichtenberg	19	40	87	187	402
4	Hwy 12	Lichtenberg to Boyes	18	39	84	181	391
5	Hwy 12	Boyes to Calle del Monte	20	43	94	202	434
6	Hwy 12	Calle del Monte to W. Thomson	21	45	97	208	449
7	Hwy 12	W. Thomson to Siesta	21	46	99	212	457
8	Hwy 12	Siesta to Donald	22	48	103	221	476
9	Hwy 12	Donald to Verano	22	48	103	223	480
10	Hwy 12	Verano to Maxwell Village	21	46	99	213	459
11	Hwy 12	Maxwell Village to W. Spain	21	45	96	207	446
12	Hwy 12	S. of W. Spain	18	38	82	176	380
13	Agua Caliente	W. of Hwy 12	3	7	15	33	72
14	Boyes Blvd.	W. of Hwy 12	4	9	19	41	87
15	Thomson Ave.	W. of Hwy 12	3	6	13	28	61
16	Donald St.	E. of Hwy 12	2	4	8	18	39
17	Donald St.	W. of Robinson	5	10	22	48	104
18	Donald St.	E. of Robinson	5	12	25	53	115
19	Verano	W. of Arnold	1	1	3	6	13
20	Verano	Arnold to Hwy 12	6	14	29	63	136
21	Verano	Hwy 12 to Robinson	5	10	21	46	100
22	Verano	E. of Robinson	1	2	4	8	18
23	Robinson	N. of Donald	1	3	6	12	26
24	Robinson	Donald to Verano	2	4	9	19	42
25	Robinson	S. of Verano	1	3	5	12	25

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2016-108 - Springs Specific Plan
Description: Future No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Hwy 12	N. of Agua Caliente	16,190	84		16	2	1	40	50	
2	Hwy 12	Agua Caliente to Mountain	16,630	84		16	2	1	40	50	
3	Hwy 12	Mountain to Lichtenberg	17,650	84		16	2	1	40	50	
4	Hwy 12	Lichtenberg to Boyes	15,600	84		16	2	1	40	50	
5	Hwy 12	Boyes to Calle del Monte	18,320	84		16	2	1	40	50	
6	Hwy 12	Calle del Monte to W. Thomson	19,130	84		16	2	1	40	50	
7	Hwy 12	W. Thomson to Siesta	19,530	84		16	2	1	40	50	
8	Hwy 12	Siesta to Donald	20,550	84		16	2	1	40	50	
9	Hwy 12	Donald to Verano	21,550	84		16	2	1	40	50	
10	Hwy 12	Verano to Maxwell Village	21,510	84		16	2	1	40	50	
11	Hwy 12	Maxwell Village to W. Spain	21,080	84		16	2	1	40	50	
12	Hwy 12	S. of W. Spain	16,860	84		16	2	1	40	50	
13	Agua Caliente	W. of Hwy 12	5,900	84		16	1	0.5	25	50	
14	Boyes Blvd.	W. of Hwy 12	5,610	84		16	1	0.5	25	50	
15	Thomson Ave.	W. of Hwy 12	3,200	84		16	1	0.5	25	50	
16	Donald St.	E. of Hwy 12	1,040	84		16	1	0.5	25	50	
17	Donald St.	W. of Robinson	7,250	84		16	1	0.5	25	50	
18	Donald St.	E. of Robinson	7,110	84		16	1	0.5	25	50	
19	Verano	W. of Arnold	360	84		16	1	0.5	25	50	
20	Verano	Arnold to Hwy 12	10,240	84		16	1	0.5	25	50	
21	Verano	Hwy 12 to Robinson	6,120	84		16	1	0.5	25	50	
22	Verano	E. of Robinson	410	84		16	1	0.5	25	50	
23	Robinson	N. of Donald	990	84		16	1	0.5	25	50	
24	Robinson	Donald to Verano	500	84		16	1	0.5	25	50	
25	Robinson	S. of Verano	990	84		16	1	0.5	25	50	

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2016-108 - Springs Specific Plan
Description: Future No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Hwy 12	N. of Agua Caliente	66.8	58.8	60.7	68
2	Hwy 12	Agua Caliente to Mountain	66.9	59.0	60.8	68
3	Hwy 12	Mountain to Lichtenberg	67.2	59.2	61.0	69
4	Hwy 12	Lichtenberg to Boyes	66.6	58.7	60.5	68
5	Hwy 12	Boyes to Calle del Monte	67.3	59.4	61.2	69
6	Hwy 12	Calle del Monte to W. Thomson	67.5	59.6	61.4	69
7	Hwy 12	W. Thomson to Siesta	67.6	59.7	61.5	69
8	Hwy 12	Siesta to Donald	67.8	59.9	61.7	69
9	Hwy 12	Donald to Verano	68.0	60.1	61.9	69
10	Hwy 12	Verano to Maxwell Village	68.0	60.1	61.9	69
11	Hwy 12	Maxwell Village to W. Spain	67.9	60.0	61.8	69
12	Hwy 12	S. of W. Spain	67.0	59.0	60.8	68
13	Agua Caliente	W. of Hwy 12	56.6	48.3	52.9	59
14	Boyes Blvd.	W. of Hwy 12	56.4	48.0	52.7	58
15	Thomson Ave.	W. of Hwy 12	53.9	45.6	50.2	56
16	Donald St.	E. of Hwy 12	49.0	40.7	45.3	51
17	Donald St.	W. of Robinson	57.5	49.2	53.8	59
18	Donald St.	E. of Robinson	57.4	49.1	53.7	59
19	Verano	W. of Arnold	44.4	36.1	40.7	46
20	Verano	Arnold to Hwy 12	59.0	50.7	55.3	61
21	Verano	Hwy 12 to Robinson	56.7	48.4	53.0	59
22	Verano	E. of Robinson	45.0	36.7	41.3	47
23	Robinson	N. of Donald	48.8	40.5	45.1	51
24	Robinson	Donald to Verano	45.9	37.5	42.2	48
25	Robinson	S. of Verano	48.8	40.5	45.1	51

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2016-108 - Springs Specific Plan
Description: Future No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	Hwy 12	N. of Agua Caliente	18	38	82	178	383
2	Hwy 12	Agua Caliente to Mountain	18	39	84	181	389
3	Hwy 12	Mountain to Lichtenberg	19	41	87	188	405
4	Hwy 12	Lichtenberg to Boyes	17	37	80	173	373
5	Hwy 12	Boyes to Calle del Monte	19	42	90	193	415
6	Hwy 12	Calle del Monte to W. Thomson	20	43	92	198	428
7	Hwy 12	W. Thomson to Siesta	20	43	93	201	434
8	Hwy 12	Siesta to Donald	21	45	97	208	448
9	Hwy 12	Donald to Verano	21	46	100	215	463
10	Hwy 12	Verano to Maxwell Village	21	46	100	215	462
11	Hwy 12	Maxwell Village to W. Spain	21	46	98	212	456
12	Hwy 12	S. of W. Spain	18	39	85	182	393
13	Agua Caliente	W. of Hwy 12	4	9	19	40	86
14	Boyes Blvd.	W. of Hwy 12	4	8	18	39	83
15	Thomson Ave.	W. of Hwy 12	3	6	12	27	57
16	Donald St.	E. of Hwy 12	1	3	6	13	27
17	Donald St.	W. of Robinson	5	10	21	46	99
18	Donald St.	E. of Robinson	5	10	21	45	98
19	Verano	W. of Arnold	1	1	3	6	13
20	Verano	Arnold to Hwy 12	6	12	27	58	125
21	Verano	Hwy 12 to Robinson	4	9	19	41	88
22	Verano	E. of Robinson	1	1	3	7	15
23	Robinson	N. of Donald	1	3	6	12	26
24	Robinson	Donald to Verano	1	2	4	8	17
25	Robinson	S. of Verano	1	3	6	12	26

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2016-108 - Springs Specific Plan
Description: Future + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Hwy 12	N. of Agua Caliente	17,570	84		16	2	1	40	50	
2	Hwy 12	Agua Caliente to Mountain	18,750	84		16	2	1	40	50	
3	Hwy 12	Mountain to Lichtenberg	20,420	84		16	2	1	40	50	
4	Hwy 12	Lichtenberg to Boyes	19,110	84		16	2	1	40	50	
5	Hwy 12	Boyes to Calle del Monte	21,870	84		16	2	1	40	50	
6	Hwy 12	Calle del Monte to W. Thomson	22,910	84		16	2	1	40	50	
7	Hwy 12	W. Thomson to Siesta	23,470	84		16	2	1	40	50	
8	Hwy 12	Siesta to Donald	24,790	84		16	2	1	40	50	
9	Hwy 12	Donald to Verano	25,310	84		16	2	1	40	50	
10	Hwy 12	Verano to Maxwell Village	23,990	84		16	2	1	40	50	
11	Hwy 12	Maxwell Village to W. Spain	23,290	84		16	2	1	40	50	
12	Hwy 12	S. of W. Spain	18,700	84		16	2	1	40	50	
13	Agua Caliente	W. of Hwy 12	6,220	84		16	1	0.5	25	50	
14	Boyes Blvd.	W. of Hwy 12	6,340	84		16	1	0.5	25	50	
15	Thomson Ave.	W. of Hwy 12	3,710	84		16	1	0.5	25	50	
16	Donald St.	E. of Hwy 12	1,820	84		16	1	0.5	25	50	
17	Donald St.	W. of Robinson	8,030	84		16	1	0.5	25	50	
18	Donald St.	E. of Robinson	9,320	84		16	1	0.5	25	50	
19	Verano	W. of Arnold	360	84		16	1	0.5	25	50	
20	Verano	Arnold to Hwy 12	12,270	84		16	1	0.5	25	50	
21	Verano	Hwy 12 to Robinson	7,690	84		16	1	0.5	25	50	
22	Verano	E. of Robinson	690	84		16	1	0.5	25	50	
23	Robinson	N. of Donald	990	84		16	1	0.5	25	50	
24	Robinson	Donald to Verano	1,920	84		16	1	0.5	25	50	
25	Robinson	S. of Verano	990	84		16	1	0.5	25	50	

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2016-108 - Springs Specific Plan
Description: Future + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Hwy 12	N. of Agua Caliente	67.1	59.2	61.0	69
2	Hwy 12	Agua Caliente to Mountain	67.4	59.5	61.3	69
3	Hwy 12	Mountain to Lichtenberg	67.8	59.9	61.7	69
4	Hwy 12	Lichtenberg to Boyes	67.5	59.6	61.4	69
5	Hwy 12	Boyes to Calle del Monte	68.1	60.2	62.0	70
6	Hwy 12	Calle del Monte to W. Thomson	68.3	60.4	62.2	70
7	Hwy 12	W. Thomson to Siesta	68.4	60.5	62.3	70
8	Hwy 12	Siesta to Donald	68.6	60.7	62.5	70
9	Hwy 12	Donald to Verano	68.7	60.8	62.6	70
10	Hwy 12	Verano to Maxwell Village	68.5	60.6	62.4	70
11	Hwy 12	Maxwell Village to W. Spain	68.4	60.4	62.2	70
12	Hwy 12	S. of W. Spain	67.4	59.5	61.3	69
13	Agua Caliente	W. of Hwy 12	56.8	48.5	53.1	59
14	Boyes Blvd.	W. of Hwy 12	56.9	48.6	53.2	59
15	Thomson Ave.	W. of Hwy 12	54.6	46.3	50.9	57
16	Donald St.	E. of Hwy 12	51.5	43.2	47.8	53
17	Donald St.	W. of Robinson	57.9	49.6	54.2	60
18	Donald St.	E. of Robinson	58.6	50.3	54.9	61
19	Verano	W. of Arnold	44.4	36.1	40.7	46
20	Verano	Arnold to Hwy 12	59.8	51.4	56.1	62
21	Verano	Hwy 12 to Robinson	57.7	49.4	54.0	60
22	Verano	E. of Robinson	47.3	38.9	43.6	49
23	Robinson	N. of Donald	48.8	40.5	45.1	51
24	Robinson	Donald to Verano	51.7	43.4	48.0	54
25	Robinson	S. of Verano	48.8	40.5	45.1	51

Appendix A

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2016-108 - Springs Specific Plan
Description: Future + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	Hwy 12	N. of Agua Caliente	19	40	87	188	404
2	Hwy 12	Agua Caliente to Mountain	20	42	91	196	422
3	Hwy 12	Mountain to Lichtenberg	21	45	96	207	447
4	Hwy 12	Lichtenberg to Boyes	20	43	92	198	427
5	Hwy 12	Boyes to Calle del Monte	22	47	101	217	467
6	Hwy 12	Calle del Monte to W. Thomson	22	48	104	224	482
7	Hwy 12	W. Thomson to Siesta	23	49	106	227	490
8	Hwy 12	Siesta to Donald	24	51	109	236	508
9	Hwy 12	Donald to Verano	24	52	111	239	515
10	Hwy 12	Verano to Maxwell Village	23	50	107	231	497
11	Hwy 12	Maxwell Village to W. Spain	23	49	105	226	488
12	Hwy 12	S. of W. Spain	20	42	91	195	421
13	Agua Caliente	W. of Hwy 12	4	9	19	41	89
14	Boyes Blvd.	W. of Hwy 12	4	9	19	42	91
15	Thomson Ave.	W. of Hwy 12	3	6	14	29	63
16	Donald St.	E. of Hwy 12	2	4	8	18	39
17	Donald St.	W. of Robinson	5	11	23	49	106
18	Donald St.	E. of Robinson	5	12	25	54	117
19	Verano	W. of Arnold	1	1	3	6	13
20	Verano	Arnold to Hwy 12	7	14	30	65	141
21	Verano	Hwy 12 to Robinson	5	10	22	48	103
22	Verano	E. of Robinson	1	2	4	10	21
23	Robinson	N. of Donald	1	3	6	12	26
24	Robinson	Donald to Verano	2	4	9	19	41
25	Robinson	S. of Verano	1	3	6	12	26

Appendix B
Springs Specific Plan
24hr Continuous Noise Monitoring - Site A
Tuesday, November 17, 2015

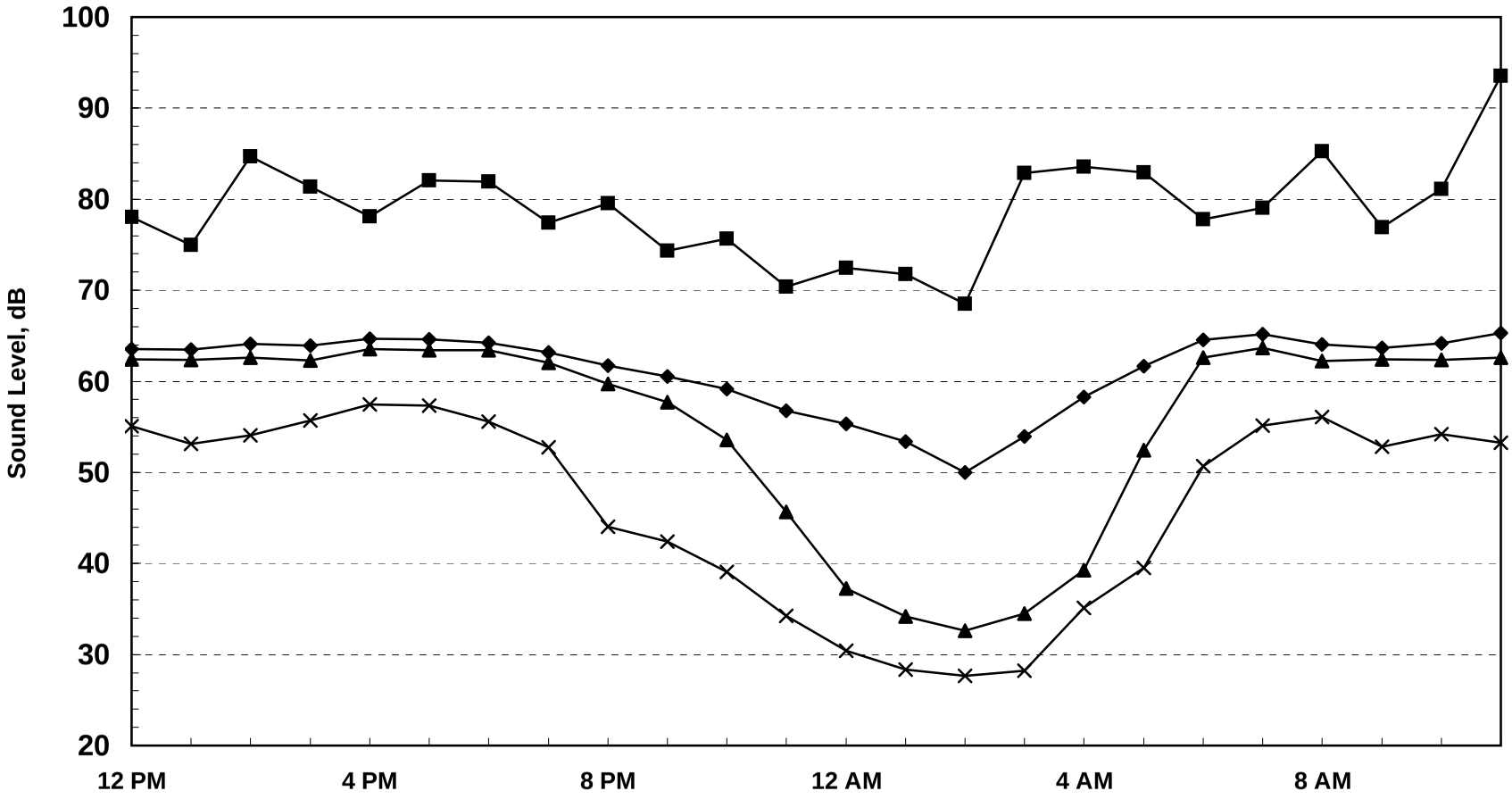
Hour	Leq	Lmax	L50	L90
12:00:00	64	78	62	55
13:00:00	63	75	62	53
14:00:00	64	85	63	54
15:00:00	64	81	62	56
16:00:00	65	78	64	57
17:00:00	65	82	63	57
18:00:00	64	82	63	56
19:00:00	63	77	62	53
20:00:00	62	80	60	44
21:00:00	61	74	58	42
22:00:00	59	76	54	39
23:00:00	57	70	46	34
0:00:00	55	72	37	30
1:00:00	53	72	34	28
2:00:00	50	69	33	28
3:00:00	54	83	34	28
4:00:00	58	84	39	35
5:00:00	62	83	52	40
6:00:00	65	78	63	51
7:00:00	65	79	64	55
8:00:00	64	85	62	56
9:00:00	64	77	62	53
10:00:00	64	81	62	54
11:00:00	65	94	63	53

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	65	61	64	65	50	59
Lmax (Maximum)	94	74	81	84	69	76
L50 (Median)	64	58	62	63	33	44
L90 (Background)	57	42	53	51	28	35

Computed Ldn, dB	67
% Daytime Energy	84%
% Nighttime Energy	16%

j.c. brennan & associates
consultants in acoustics

Appendix B
Springs Specific Plan
24hr Continuous Noise Monitoring - Site A
Tuesday, November 17, 2015



Ldn = 67 dB

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Appendix B
Springs Specific Plan
24hr Continuous Noise Monitoring - Site B
Tuesday, November 17, 2015

Hour	Leq	Lmax	L50	L90
12:00:00	71	87	66	59
13:00:00	68	87	62	54
14:00:00	68	88	62	57
15:00:00	69	87	62	57
16:00:00	64	85	62	57
17:00:00	64	83	61	56
18:00:00	64	83	61	55
19:00:00	65	90	61	52
20:00:00	62	86	59	47
21:00:00	60	83	56	42
22:00:00	59	77	54	42
23:00:00	55	74	44	35
0:00:00	55	77	41	32
1:00:00	53	76	35	29
2:00:00	49	68	31	28
3:00:00	53	79	33	29
4:00:00	56	77	39	31
5:00:00	66	90	55	48
6:00:00	71	86	67	51
7:00:00	74	93	74	65
8:00:00	74	93	73	63
9:00:00	75	94	73	64
10:00:00	74	92	72	66
11:00:00	73	92	71	62

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	75	60	71	71	49	63
Lmax (Maximum)	94	83	88	90	68	78
L50 (Median)	74	56	65	67	31	44
L90 (Background)	66	42	57	51	28	36

Computed Ldn, dB	72
% Daytime Energy	90%
% Nighttime Energy	10%

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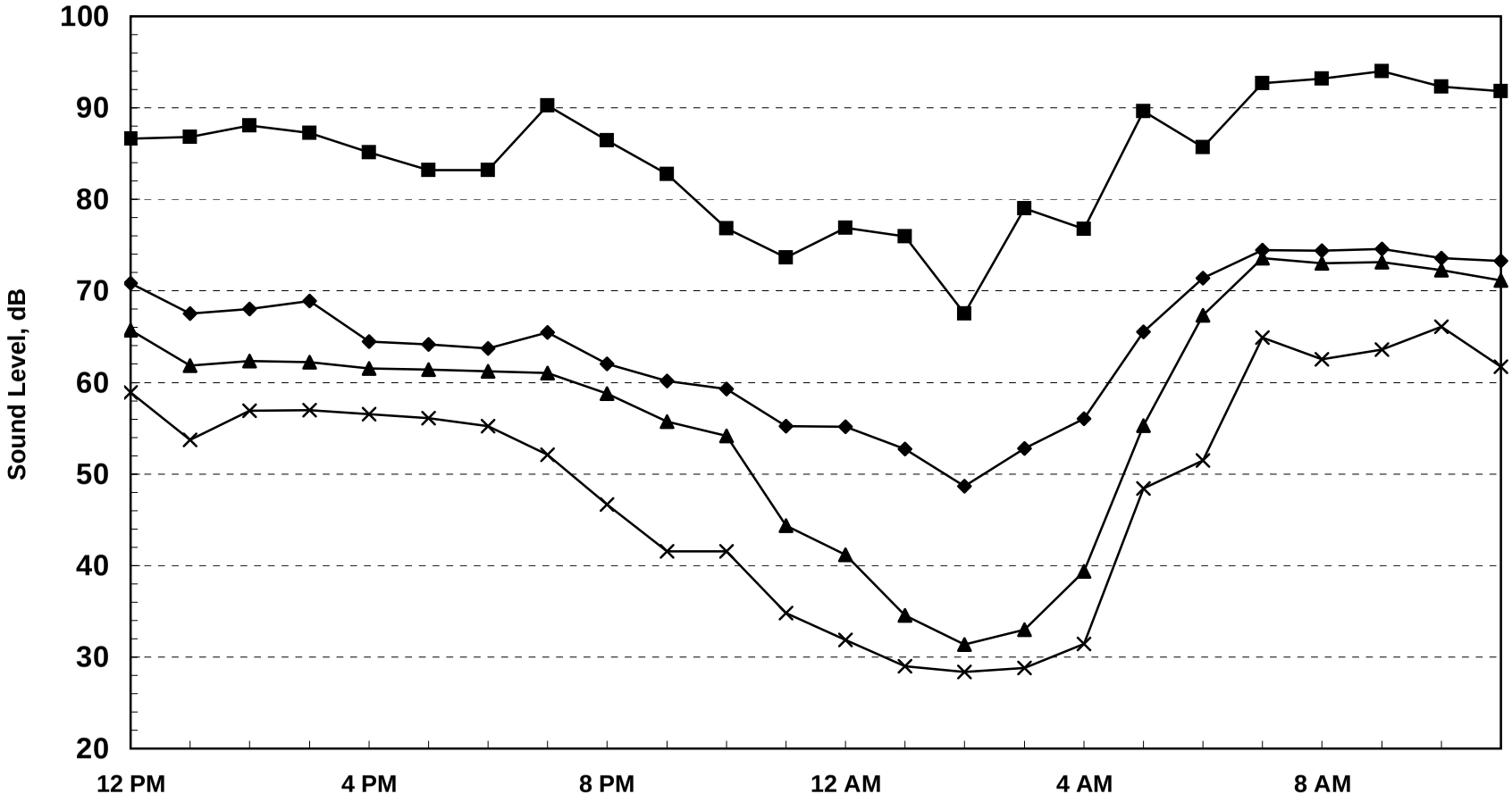
Appendix B

Springs Specific Plan

24hr Continuous Noise Monitoring - Site B

Tuesday, November 17, 2015



Ldn = 72 dB

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Appendix B
Springs Specific Plan
24hr Continuous Noise Monitoring - Site C
Tuesday, November 17, 2015

Hour	Leq	Lmax	L50	L90
12:00:00	70	78	70	64
13:00:00	70	86	69	62
14:00:00	70	87	69	63
15:00:00	68	82	68	61
16:00:00	70	84	70	64
17:00:00	69	85	68	60
18:00:00	69	82	68	61
19:00:00	70	87	70	63
20:00:00	69	86	69	59
21:00:00	68	83	66	54
22:00:00	67	79	64	50
23:00:00	64	75	58	44
0:00:00	62	84	49	38
1:00:00	60	79	43	35
2:00:00	58	75	40	35
3:00:00	57	76	39	35
4:00:00	63	79	50	38
5:00:00	67	84	61	45
6:00:00	71	79	70	59
7:00:00	72	85	72	65
8:00:00	72	81	71	66
9:00:00	71	79	71	63
10:00:00	71	83	70	64
11:00:00	71	94	70	64

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	72	68	70	71	57	65
Lmax (Maximum)	94	78	84	84	75	79
L50 (Median)	72	66	69	70	39	53
L90 (Background)	66	54	62	59	35	42

Computed Ldn, dB	73
% Daytime Energy	84%
% Nighttime Energy	16%

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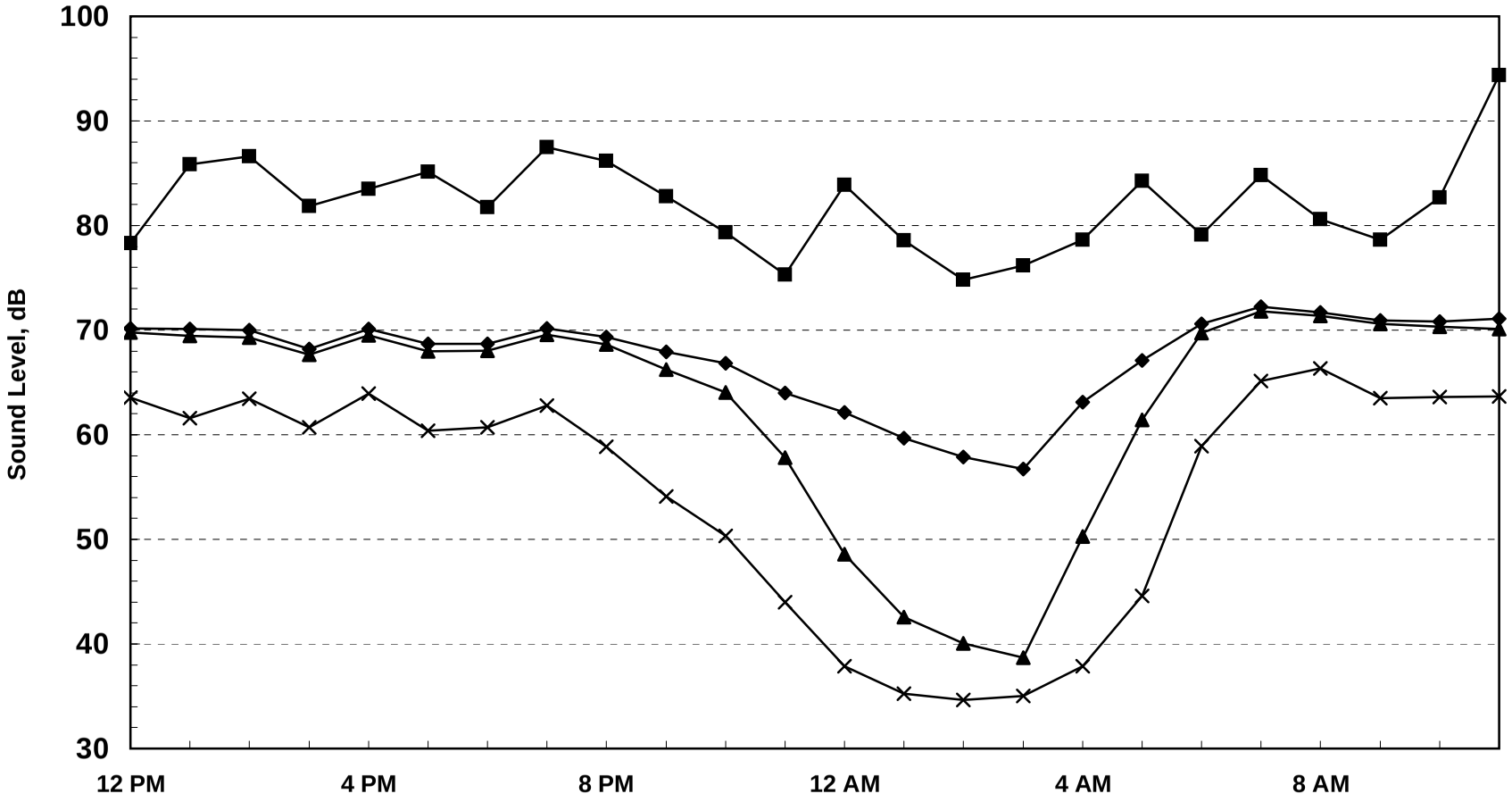
Appendix B

Springs Specific Plan

24hr Continuous Noise Monitoring - Site C

Tuesday, November 17, 2015



Ldn = 73 dB

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Appendix F

VMT Findings and Mitigation Strategy

August 18, 2021

Mr. Doug Bush
Permit Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403-2859

Springs Specific Plan VMT Findings and Mitigation Strategy

Dear Mr. Bush;

W-Trans has prepared the following summary of findings for the Springs Specific Plan Vehicle Miles Traveled (VMT) assessment to be incorporated into the Plan's programmatic EIR. The intent of this summary is to provide Permit Sonoma staff with the VMT findings to facilitate discussions about potential mitigation strategies, and to summarize the components of recommended TDM requirements.

Significance Thresholds

As directed by Permit Sonoma, significance thresholds for the project are set at 15 percent below regional average VMT performance metrics. Based on modeling completed by the Metropolitan Transportation Commission (MTC), the existing average home-based VMT per capita in the nine-county Bay Area is 15.0. The applicable significance threshold for residential uses is 15 percent below this value, or 12.8 home-based VMT per capita. For employment uses, MTC's reported average home-based commute VMT in the nine-county Bay Area is 21.8 VMT per employee, which translates to an applicable significance threshold of 18.5 home-based commute VMT per employee.

VMT Findings

Results produced by the Sonoma County Transportation Authority's SCTM\15 travel demand model indicate that the added residential units associated with the Project would generate approximately 14.7 VMT per capita, which exceeds the applied 12.8 VMT per capita threshold and is considered a significant impact. Residential VMT would need to be reduced by 12.9 percent to meet the significance threshold. With respect to nonresidential uses, the Plan's added employment uses would generate approximately 15.8 VMT per employee, which falls below the applied threshold of 18.5 VMT per employee and indicates a less-than-significant impact. A summary of the VMT analysis is shown in Table 1.

The Springs Specific Plan EIR identifies three alternatives to the proposed project that may result in reduced environmental impacts in one or more CEQA subject areas. VMT analysis results for the three project alternatives are summarized in Table 1. All three alternatives would result in significant VMT impacts, though in the case of Alternative 1 (which has the least amount of population growth), the impact would be associated with employment rather than residential VMT. Overall, Alternative 3 would have the least impact, with nonresidential VMT meeting the significance threshold and residential VMT requiring the least amount of mitigation (8.2 percent). Given the uncertainty of being able to fully mitigate VMT for the Project and all three alternatives, the impacts would be considered significant and unavoidable.

Table 1 – VMT Summary

Land Use	Threshold	Project	Alt 1	Alt 2	Alt 3
Residential					
Home-Based VMT		29,062	3,168	20,735	16,119
Population		1,977	412	1,453	1,156
VMT per Capita	12.8[1]	14.7	7.7	14.3	13.9
Meets Threshold?		No	Yes	No	No
% VMT Reduction Needed		-12.9%	n/a	-10.3%	-8.2%
Nonresidential					
Home-Based Commute VMT		9,988	5,700	7,396	6,796
Employees		632	271	429	382
VMT per Employee	18.5[2]	15.8	21.0	17.2	17.8
Meets Threshold?		Yes	No	Yes	Yes
% VMT Reduction Needed		n/a	-12.0%	n/a	n/a

[1] Source: http://analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerCapita
[2] Source: http://analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerWorker

Mitigation Strategies

The VMT analysis indicates that new residential development facilitated through implementation of the plan would generally result in significant VMT impacts, while nonresidential development generally would not. VMT mitigation for residential uses is quite challenging, particularly for single-family and smaller multi-family development where VMT reductions strategies cannot easily be overseen by common ownership or management entities. These challenges are exacerbated by the Plan area's suburban context and regional location. Following are several key VMT reduction strategies and potential policies that may prove most effective for the Springs Specific Plan area.

Route 32 Subsidy

The most effective mitigation strategy in the Springs may be to continue providing no-cost bus rides on Sonoma County Transit Route 32 (the Sonoma Shuttle). Route 32 serves the Springs community, connecting to shopping, employment, school, and recreational uses within the Springs and the City of Sonoma, and providing transfers to other regional transit routes to Santa Rosa and Petaluma. While the route clearly does not serve all destinations, it serves many of the day-to-day destinations made by residents and plays an important role in VMT reduction. The subsidized route provides a valuable amenity for residents and employees both in terms of improving mobility and promoting equity, as those most likely to use a fare-free system are those with lower incomes and more heavily transit-dependent. As feasible, increasing the frequency of service on Route 32 as identified in Specific Plan Policy SC-3a would also increase its convenience and utility to those living and working in the Springs, helping to further reduce VMT.

The SCTA travel demand model accounts for the presence of transit routes but does not account for the current fare subsidy on Route 32. Methodologies outlined in the publication *Quantifying Greenhouse Gas Mitigation Measures*, California Air Pollution Control Officers Association (CAPCOA), 2010, were therefore used to estimate the potential VMT reductions associated with provision of free rides on the route. The calculated VMT reduction

is 5.9 percent. This level of VMT reduction is unlikely to be matched by any other mitigation strategy. Accordingly, it is recommended that the Springs Specific Plan document be updated to include the following policy:

Policy SC-3g: *Maintain fare-free service on the Sonoma County Transit local route serving the Springs area (currently Route 32 Sonoma Shuttle).*

While implementation of Policy SC-3g would reduce VMT by approximately 5.9 percent, additional VMT reduction measures will be required to achieve significance thresholds. Per CAPCOA, a slight "dampening" occurs as multiple mitigation strategies are combined. Accordingly, the assumed effectiveness of subsidized transit should be reduced by a percentage point to 4.9 percent. With the free transit subsidy, measures would therefore still be needed to reduce VMT per capita associated with future residential development in the Plan area by another 8.0 percent (12.9 percent minus the dampened 4.9 percent VMT reduction associated with the transit subsidy).

Transportation Demand Management

For many people in the Springs Specific Plan area, the automobile is the primary mode of travel. However, as the area continues to develop and more housing is built, traffic and parking demand will continue to increase, and the use of alternative modes is critical in providing greater mobility options. Transportation Demand Management (TDM) is typically categorized as a set of strategies aimed at encouraging transit use, walking, biking, and carpooling while reducing single occupant vehicle trips, vehicle miles traveled, and parking demand. TDM primarily focuses on programmatic elements as opposed to physical infrastructure to cost-effectively reduce congestion and address broader community concerns such as sustainability and equity goals.

The recommended approach for addressing VMT impacts associated with the Springs Specific Plan is to require a "foundational" level of TDM measures for development projects, excluding smaller projects that may be of insufficient size to feasibly implement measurable TDM benefits. A list of "additional" TDM strategies would also be identified, providing flexibility for individual projects. By adopting this approach, there will be a common goal of reducing vehicle traffic and parking demand while providing options for those developments that experience more acute transportation needs. It is recommended that the following policy be added to the Springs Specific Plan document:

Policy SC-1h: *Require implementation of travel demand management (TDM) measures for all residential development exceeding ten (10) units and any non-residential development exceeding 5,000 square feet.*

Additional information related to the structure and components of a TDM strategy is included in the "Transportation Demand Management Strategy Descriptions" section of this letter.

Physical Non-Auto Mode Improvements

The Springs Specific Plan includes extensive improvements to the area's pedestrian and bicycle network. Identified pedestrian improvements include enhanced crossings on Sonoma Highway incorporating elements such as warning lights, high-visibility markings, bulb-outs, shorter distances between crossings, and filling of gaps in the sidewalk network. Bicycle improvements include adding buffered bike lanes and green bike lane markings along Sonoma Highway, constructing new off-street bike paths that roughly parallel Sonoma Highway (as part of the Central Sonoma Valley Bikeway), and designating new on-street bicycle routes. Each of these improvements will enhance the walking and biking network, making travel by non-auto modes both more convenient and more appealing, thereby reducing auto travel and VMT.

Many of the pedestrian and bicycle improvements envisioned in the Specific Plan will need to be funded through private development. Individual development projects should be responsible for completing identified improvements within and abutting their sites; in addition to onsite improvements, developments could construct

offsite improvements as a means of reducing VMT impacts. Such offsite improvements can typically be expected to reduce a development's VMT by 1 to 3 percent.

Participation in Future VMT Reduction Programs

Effective VMT mitigation may require regional strategies in many locations and jurisdictions. Such strategies may include countywide TDM programs or ordinances, VMT-based impact fees, and/or VMT exchanges and mitigation banks. While these types of programs do not yet exist in Sonoma County, they may be implemented in the future, and would be applicable to future development in the Springs Specific Plan area.

VMT Significance Finding in Specific Plan EIR

Draft Mitigation Measure

Following is draft wording of the EIR mitigation measure for review by Staff.

Mitigation Measure 3.14-1 Transportation Demand Management

New development in the Plan area shall be required to reduce VMT through implementation of a Transportation Demand Management (TDM) plan; construction or funding of offsite pedestrian, bicycle, and transit infrastructure; and/or participation in future regional or countywide VMT reduction programs. Development projects shall be subject to the TDM conditions below, which require applicable projects to provide a foundational set of strategies plus one additional measure. This mitigation measure would be applicable to any residential development exceeding ten (10) units and any non-residential development exceeding 5,000 square feet.

A. Foundational Measures: Development projects must implement all of the following TDM measures at a minimum:

- On-site or contracted TDM coordinator
- TDM marketing
- Rideshare matching
- Onsite bicycle amenities
- Emergency Ride Home Program (applies to nonresidential uses)

B. Additional Measures: Development projects must implement at least one additional TDM measure to achieve vehicle miles traveled (VMT) and trip reduction goals. The measure must be approved by the County and can be chosen from the strategies below. The enumerated list does not preclude a project from implementing other TDM measures if desired or required by County Code.

<u>Nonresidential development</u>

- Transit/vanpool subsidies
- Parking cash-out
- VMT Mitigation Bank (if available)
- Off-Site Physical Non-Auto Mode Improvement(s)

<u>Residential development</u>

- Transit subsidies
- School-pool matching
- Unbundled parking
- VMT Mitigation Bank (if available)
- Off-Site Physical Non-Auto Mode Improvement(s)

Significance after Mitigation

Implementation of Mitigation Measure 3.14-1, in addition to Specific Plan Policy SC-3g (which would maintain fare-free service on the Sonoma Shuttle Route 32) and Specific Plan Policy SC-1h (specifying TDM requirements), would reduce the VMT generated by new development in the Springs, including residential home-based VMT per capita. Uncertainty remains, however, as to whether implementation of these measures can achieve the 12.0 percent reduction in residential VMT per capita required to reduce impacts to a level of less than significant. Continuation of subsidized rides on Route 32 in perpetuity would require a substantial funding commitment from the County of Sonoma or private development that may not realistically be achievable all years. Beyond the subsidized transit, the ability for residential development to achieve an additional 8.0 percent reduction in VMT per capita may also be infeasible, as the effectiveness of TDM can be limited outside of major urbanized areas, and some projects (particularly smaller developments) may be unable to fund offsite improvements to non-auto networks. Further, while regional strategies such as VMT mitigation fees, exchanges, and banks hold much promise, they have yet to be implemented and their structures and resulting effectiveness remain uncertain. As a result, impacts would remain significant and unavoidable.

Alternative 3 Assessment

As shown in Table 1, Specific Plan Alternative 3 would have less of a residential VMT impact than the Project. Residential development would need to reduce its VMT per capita by 8.2 percent to fall below the significance threshold. With continuation of subsidized Route 32 transit as specified in proposed Policy SC-3g, the required VMT reduction for residential developments would be 3.3 percent. This level of reduction would generally be achievable through TDM and construction of offsite non-auto mode improvements. However, the strategy still relies upon provision of subsidized transit service in perpetuity which as discussed above may be infeasible. Accordingly, while mitigation of residential VMT impacts under Alternative 3 is likely to be more achievable than with the Project, substantial uncertainty remains as to whether impacts can be fully alleviated, and the impact would remain significant and unavoidable.

Transportation Demand Management Strategy Descriptions

As noted above, TDM strategies are organized into two sections – foundational and additional measures. Foundational measures are those that would comprise a base TDM plan for all applicable development and represent some of the most basic and necessary elements of an effective TDM program. Additional measures are effective best practices that should be applied selectively based on needs, resources, project location, and project type.

Each measure should be weighed carefully against the objectives of the development and those to be implemented chosen as appropriate. Several measures described here can also be tailored to suit the project if desired.

Foundational TDM Measures

- **On-Site or Contracted TDM Coordinator.** TDM Coordinators are key resources in providing education, outreach, and marketing of TDM services for both residential and commercial land uses. A person can serve as a Coordinator full-time for a large population or this role can be part of the part-time duties of someone who is employed by the company, home-owners association (HOA), or other organization in question. The Coordinator performs a key role in marketing, implementing, and monitoring the various TDM strategies intended to reduce single-occupant vehicle trips and parking demand. The TDM Coordinator is in charge of providing up-to-date information to residents and employees regarding mobility options.

- **TDM Marketing.** The TDM Coordinator provides materials to residents and employees to increase awareness of programs available, including the benefits of trip and parking reduction, alternative mode options, and local street parking restrictions. Marketing materials include welcome packets to new residents and employees. An alternative mode kiosk to provide information about (1) transit routes and schedules, (2) carpooling and vanpooling, and (3) bicycle lanes, routes, paths and facilities can encourage residents, employees, and visitors to use alternative modes of transportation by reducing uncertainty in their travel. The Applicant may partner with a vendor, such as TransitScreen, to provide video screens displaying real-time arrival and departure times for nearby transit stops using a Google Transit feed. An example is shown in Plate 1. This information is typically maintained by the designated TDM Coordinator. Additionally, residents are provided with welcome packets that include information on transit passes, bike share options, transit maps and schedules, as well as contact information for the TDM Coordinator.

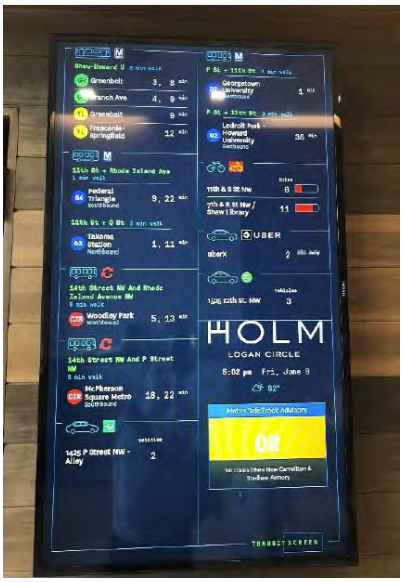


Plate 1 TransitScreen Display in Holm Apartments, Washington, D.C.

- **Rideshare Matching.** Carpooling and vanpooling are some of the most common and cost-effective alternative modes of transportation and are measures that both employees and residents can adopt. There are numerous benefits to ridesharing. Carpooling can reduce peak-period vehicle trips and increase commuters' travel choices. Further, it reduces congestion, road and parking facility costs and pollution emissions. Carpooling tends to have the lowest cost per passenger-mile of any motorized mode of transportation as it makes use of a vehicle seat that would otherwise be empty. Carpooling also provides financial savings to consumers by decreasing fuel and parking costs.

  The greatest barrier to carpooling is often simply being able to identify other employees or residents with the same travel route. The most effective approach is to create personalized trip planning information, regardless of mode, for employees and residents. However, personalized trip planning is often expensive. An alternative are services that can assist in ride-matching that are less customized. The most basic publicly available service is 511.org's free ridematching service, *Merge*. There are also various private ridematching providers (e.g., Zimride, RideAmigos, Via, Scoop) that can effectively create carpool networks while making them safe and convenient for their users. Information on a variety of programs is offered through *Go Sonoma* and 511.org.

- **Onsite Bicycle Amenities.** There are various kinds of facilities available to enhance bicycle use.

  a. **Bicycle Repair Station.** Bicycle repair stations, consisting of tools and amenities, make it convenient for residents and employees to repair bicycles on-site. These repair stations often provide basic amenities such as tire pumps and patches as shown in Plate 2.

b. **Long- and Short-Term Bicycle Storage.** Multifamily residential projects shall provide long-term bike parking, including facilities such as lockers or secure on-site parking areas. These sorts of storage provide a greater level of security for bicycle users traveling frequently and parking for longer periods of time. Nonresidential long-term bike parking shall be provided per Section 26-86-020 of the County zoning code. Short-term bicycle parking shall also be provided at multifamily and nonresidential uses and includes racks or other relatively simple facilities that allow users such as guests or visitors the opportunity to park their bikes for short periods using padlocks or other basic security measures. In general, bicycle storage has a minimal effect on trip generation and parking demand but supports the greater trip reduction program by providing opportunities for non-motorized travel. For reference, Table 2 lists sample bicycle parking requirements as recommended by the Association for Pedestrian and Bicycle Professionals.

Plate 2 Example of Bicycle Repair Station

Table 2 – Sample Bicycle Parking Requirements

Land Use	Long-Term Parking Requirement	Short-Term Parking Requirement
Multifamily Residential	0.5 spaces per bedroom	0.1 spaces per bedroom
Retail	1 space per 10,000 square feet	1 space per 5,000 square feet
Office	1.5 spaces per 10,000 square feet	1 space per 20,000 square feet

- **Emergency Ride Home Program.** Emergency Ride Home (ERH) is a program that provides a "back-up" ride to employees who use transit, carpooling, biking/walking, or other alternatives as their commute mode; in Sonoma County, it is provided by the SCTA free of charge. If an employee who carpools to work, so does not have their own vehicle, needs to leave work for an emergency, such as a sick child or other unexpected need, they will be redeemed for up to four ERH trips per year. This is an important supportive measure to encourage employees to not drive alone to work and often goes as a welcome, but unused benefit.

Additional TDM Measures

As described above, the following TDM strategies are best practices, but should be applied selectively based on needs and resources. The measures presented are intended to be used as a toolbox of additional strategies to manage transportation demand.

Transit and Bicycle Amenities

- **Subsidized Transit Passes.** To encourage transit use, residents and employees can be provided transit subsidies for use on transit operators such as Sonoma County Transit (SCT) through their HOA or employer. Benefits can be loaded onto a reusable Clipper Card that is eligible for service across multiple transit providers including SCT, Petaluma Transit, and Sonoma Marin Area Rail Transit (SMART). Such transit subsidies would cover additional routes beyond the Sonoma Shuttle (Route 32) which currently provides free rides.

Ridesharing Program

- **Vanpooling Program.** Vanpooling can provide several advantages. Vans are defined as vehicles able to carry at least six adults and in addition to reducing VMT by consolidating employee trips, can reduce the cost of

commuting for employees by removing the need for workers to put mileage on their own vehicles and, depending on the level of subsidy, they may not need to pay for gas. For tax purposes, employers may be able to deduct the costs of vans as a "qualified transportation fringe benefit."

- **School Pool Matching Program.** Residential uses generate a substantial amount of traffic associated with school pick-up and drop-off trips. A school pool program seeks to match families in carpools for these trips, thereby reducing school-related VMT. Such a program could be overseen by an HOA or potentially outsourced to a company that manages TDM programs. Although individual school pool matching programs can be implemented, a school pool matching program designed to connect project residents with others in the neighborhood would be expected to substantially increase participation.

Parking

- **Unbundled Parking.** Typically, the cost of parking that is provided with leased or owned residences is combined with the price of the unit. By doing so, it encourages auto-ownership since residents must pay for parking regardless of whether they are using it or not. In order to reduce auto-ownership and auto use, projects could "unbundle" the cost of parking from the price of residential units by charging separately for parking. In this way, residents can opt to pay for parking based on their need, in turn encouraging households with fewer vehicles to locate there based on its affordability.

- **Parking Cash-Out.** As noted above, many residential buildings offer free parking for residents and the same is often given as a fringe benefit to employees. This serves as a strong disincentive for employees to not drive to work. Instead, the project should both price parking for employees on a daily basis and offer a "cash-out" to those who do not drive to work. Under a parking cash-out program, an employer offers the cash value of the parking subsidy to any employee who does not drive to work. Offering employees the option of a "cash out" incentive to use an alternative mode of transportation (transit, bike, walk, or carpool to work) will help to reduce vehicle commute trips, emissions, and parking demand.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

Brian Canepa, TDM-CP
Principal

Zack Matley, AICP
Principal

JZM/bac/SOX933-1.L1

Appendix G

Utility Infrastructure
Needs Report

Utility Infrastructure Needs Report

For The Springs Specific Plan

County of Sonoma

September 23, 2019

EBA ENGINEERING

825 Sonoma Avenue
Santa Rosa, CA 95404
707-544-0787

EBA Project No. 16-2265

Table of Contents

1.0 - Introduction

EBA Engineering (EBA) has prepared this technical review to provide existing utility infrastructure information for use in developing The Springs Specific Plan (SSP). The intent of this document is to review the land use density increases proposed by the SSP and evaluate the infrastructure improvements for water distribution, sewer collection, and storm water conveyance to services within the SSP area. In addition, a cursory survey of available dry utilities including electric, gas, and telecommunications is included.

The SSP area consists of approximately 179 acres located in the County of Sonoma. The area is located just northwest of City of Sonoma. The information contained within this report is based on available information obtained from various agencies and municipalities servicing the area. These include the Valley of the Moon Water District (VOMWD), the Sonoma Valley County Sanitation District (SVCSD), Sonoma County Water Agency (SCWA), the County of Sonoma, PG&E, AT&T, Comcast, and the Sonoma County Department of Transportation and Public Works (SCDTPW).

The SSP Land Use Map and Springs Zoning Map, included in the greater Spring Specific Plan document as Figure 2 and Figure 3 respectively, delineates the proposed growth, boundaries, and zoning of parcels within the SSP.

Disclaimer

Dry utility information is based on mapping information provided by each supplier and field reconnaissance. This information is approximate and should be individually verified with each utility provider before any development proceeds.

1.1 - Existing Conditions

Existing Utility Infrastructure Location

EBA worked with the VOMWD, SVCSD, SCWA, SCDTPW, PG&E, AT&T, and Comcast to review the existing utility infrastructure within the limits of the SSP boundary; which included gathering base mapping, existing improvement plans, and existing master utility plans.

The following tables, found in Appendix A, summarize the compiled information:

Table 1-1 Existing Wet Utility Infrastructure Availability Summary (12/2016)

Table 1-2 Existing Water System Infrastructure Summary (12/2016)

Table 1-3 Existing Sewer System Infrastructure Summary (12/2016)

Table 1-4 Existing Storm Drain Infrastructure Summary (12/2016)

Table 1-1, Existing Wet Utility Infrastructure Availability Summary, provides a summary of the availability of water, sewer, and storm drain for each road located within the SSP boundary. Table 1-2, Existing Water System Infrastructure Summary, provides a summary of the size and material type of each water main for each road located within the SSP boundary. Table 1-3, Existing Sewer System Infrastructure Summary,

provides a summary of the size and material type of each sewer main for each road located within the SSP boundary. Table 1-4, Existing Storm Drain System Infrastructure Summary, provides a summary of the size and material type of each storm drain for each road located within the SSP boundary.

To further clarify the existing water, sewer, and storm drain infrastructure; base maps were prepared for each of these utilities and over laid onto a map with the SSP boundary outlined.

The following figures, found in Appendix A, summarize the compiled information:

Figure 1-1 Water System Base Map December 2016

Figure 1-2 Sanitary Sewer Base Map December 2016

Figure 1-3 Storm Drain Base Map December 2016

1.2 - General Overview of Infrastructure Needs

Based on the information reviewed, there appears to be wet utility infrastructure available to serve the area within the SSP Boundary. Water and sanitary sewer infrastructure is available within streets and/or easements adjacent to all parcels but there may be areas where this infrastructure will need to be upsized.

Storm drain infrastructure is available mainly along the State Highway 12 corridor, Donald Street, and Verano Avenue with some minor infrastructure available in other streets. Storm drain infrastructure will likely need to be extended to service parcels that do not have storm drain infrastructure readily available adjacent to their parcel. For the storm drain infrastructure it should be noted that there are areas along the westerly side of State Highway 12 corridor where topography will most likely require extensive storm drain infrastructure improvements.

Upon review of various dry utility information received, there appears to be an established network of services adequate to support the proposed SSP boundary. It is recommended that overhead utilities continue to be placed underground with future infill development projects. In addition, there may be streets where infrastructure upgrades are needed to meet demand requirements of the SSP.

1.3 – Special Concerns Related to Infrastructure Improvements

Potential Issues with Existing Utility Infrastructure:

Many streets with the Specific Plan Area are serviced by Asbestos Cement Pipe (ACP). Use of this product was abandoned in the 1970s and the installed pipe is believed to be approaching the end of its 50-year design lifespan. Replacement of the Existing ACP pipe is recommended on a project by project basis. The industry consensus is that ACP use does not pose a health risk to the public, but crushing, cutting, or removal of the pipe must meet applicable standards for hazardous waste.

ACP Pipe Replacement Methods

Three potential construction methods for ACP pipe replacement are evaluated in the following section.

Lining:
Upgrade consists of a new liner by trenchless construction methods which commonly uses a process called cured-in-place pipe (CIPP). A resin saturated felt tube is inverted or pulled through an existing main and cured to a hardened state by hot water or steam. This method is commonly used to rehabilitate sewer mains and large diameter water mains with few bends and service connections.

Pipebursting/Reaming:
Upgrades consist of pulling a bursting device through the existing pipeline and at the same pulling a new pipeline into place. Since pipebursting would leave all ACP materials in place, the U.S Environmental Protection Agency has determined that this process could create an active asbestos waste disposal site. Therefore, pipebursting is not recommended for use within the SSP Boundary.

Open Cut Excavation:
There are two options for the construction of a new water main by open cut excavation. One option consists of the removal and proper disposal of the existing ACP water main and replacement with a new water main in the same trench. The other option is to construct a new parallel water main and abandon the existing ACP water main in place.

2.0 - Water Distribution Collection Facilities

EBA Engineering (EBA) reviewed existing reports and studies relevant to the Springs Specific Plan (SSP) boundary along with available assessor's parcel data and compiled mapping information. The following information served as the basis of this evaluation:

- County of Sonoma. Sonoma County Assessor's Parcel Data & GIS
- County of Sonoma. General Plan and Existing Zoning Maps
- Valley of the Moon Water District (VOMWD). Standard Plans, 2015.
- Valley of the Moon Water District. 2015 Urban Water Management Plan (UWMP), June 2016.
- Valley of the Moon Water District. 2015 Urban Water Management Plan Water Demand
- Valley of the Moon Water District. 2019 Water Master Plan, April 2019.
- Analysis and Water Conservation Measures Update (UWMP), July 2015.
- Valley of the Moon Water District. Urban Water Shortage Contingency Plan (UWSCP), 2014.
- Sonoma Local Agency Formation Commission (LAFCO), Municipal Services Review (MSR), November 2004.
- Maddaus Water Management Inc. Springs Specific Plan Water Supply Assessment, August 2019.

Existing Infrastructure Summary

Water to the SSP Area is supplied to the VOMWD by the SCWA, a regional wholesaler, through the Sonoma Aqueduct. Turnout points are spread out along the Highway 12 corridor where the water is supplied by metered connections to VOMWD. In addition, VOMWD owns six wells of which five are in operation and support their supply. The VOMWD system is comprised of water mains ranging in size from 4" to 12" diameter.

Existing Supply Connections and Municipal Production Wells within or adjacent to the SSP area:

Hanna Turnout – 10" SCWA meter at 16" SCWA Aqueduct

Agua Caliente Turnout – 6" SCWA meter at 16" SCWA Aqueduct

Altimira Turnout – 6" SCWA meter at 16" SCWA Aqueduct

Boyes Boulevard Turnout – 6" SCWA meter at 16" SCWA Aqueduct

Verano and Main Turnout – 6" SCWA meter at 16" SCWA Aqueduct

Verano and Fifth Turnout– 6" SCWA meter at 16" SCWA Aqueduct

Agua Caliente – Well and pump station (active, 120 gpm)

Park Avenue – Well (active, 90gpm)

Mountain Avenue – Well (not in service)

Donald Street – Well, tanks, and pump station (active)

Appendix A, Table 1-2 provides a summary of the existing water infrastructure available within each public street of the SSP Boundary. This table summarizes pipe sizes and materials information, based on

information from VOMWD, 12/2016. Further verification should be performed on a project by project basis before new infrastructure design is performed.

According to the Urban Water Management Plan a significant number of smaller mains have been replaced in the last 10 years due to aggressive capital improvement programs, which are ongoing. Most properties within the SSP Boundary are supplied from the Sonoma Aqueduct's pressure, with parcels located at higher elevation are served by one of the twelve VOMWD pressure zones.

2.1 – Water Demand Projections

The Water Supply Assessment (WSA) created by Maddaus Water Management Inc., dated August 2019, documents the projected net increase in demand by connection type resulting from the SSP, as summarized in the following table:

Table 2-1 Actual and Projected Water Demand per Customer Connection

Connection Type	Net Increase in New Dwelling Units	Net Increase in Non-Residential Sq. Feet	Projected Net Increase in New Water Connections	Net Increase in Water Demand
Neighborhood Commercial	**8**	**53,390**	**15**	**17 afy**
Live Work/Mixed Use	*8*		*1*	
Commercial Use		*32,034*	*8*	
Office Use		*21,356*	*6*	
Commercial	**120**	**72,245**	**82**	**39 afy**
Commercial Use		*58,721*	*15*	
Hotel Room	*120*		*63*	
Office Use		*13,524*	*4*	
Commercial Irrigation			**6**	**9 afy**
Mixed Use	**138**	**123,621**	**50**	**50 afy**
Single Family	*8*		*8*	
Live Work/Mixed Use	*130*		*11*	
Commercial Use		*76,275*	*19*	
Office Use		*47,346*	*12*	
Mixed Use Irrigation			**3**	**5 afy**
Recreational	***-3***	**26,648**	**3**	**9 afy**
Single Family	*-3*		-3	
Recreational Use		*26,648*	6	
Medium Density Residential	***232***		**131**	**45 afy**
Single Family	*119*		119	
Multi Family	*113*		12	
High Density Residential	***310***		**31**	**35 afy**
Multi Family	*310*		31	
		Total Projected Net Increased Demand:		**209 afy**

The complete buildout of the SSP is estimated to demand 209 acre-feet per year, (AFY), of additional water. This assumes buildout of the Springs Project according to the following schedule: 25 percent between 2020 and 2025, 25 percent between 2025-2030, 25 percent between 2030-2035, and 25 percent between 2035-2040. These demand projections take into account active and passive

conservation as detailed in the WSA. The WSA states that, “there will continue to be sufficient supplies to meet all projected demand, including the additional demand generated from the proposed projects in all conditions until year 2040.”

2.2 – Water Infrastructure Needs

The Valley of the Moon Water District has summarized the recommended capital improvement projects (CIPs) needed within their service area boundary in the 2019 Water Master Plan (WMP). The recommended CIPs are defined to solve supply and storage deficiencies, hydraulic capacity deficiencies, and replace infrastructure that has reached the end of its useful life to facilitate the SSP. Five of the 24 connections associated with recommended CIP P1 of the 2019 WMP will be replaced within the SSP area. Table 2-2 summarizes the recommended capital improvement projects located within the SSP area.:

Table 2-2 Recommended Water Infrastructure Utility Capital Improvement Projects (2019 WMP)

Project #	Project	Improvement Description	Priority	Recommended Pipe Diameter (in)	Pipe Length (Linear Feet)
Pipeline Projects					
CIP-2967	Boyes Blvd. Bridge Pipeline Replacement	Existing District CIP with a total remaining 5-year budget of $375,000	1	--	--
Portion of P-1	Steel Pipe Replacement	Repacement of one 2" and one 6" steel water main and conversion of steel laterals to customer service connections at three locations	1	--	--
P-3	East Thomson Avenue Commercial Fire Flow Improvement	Replace existing 4-inch steel water mains with new 8-inch PVC water mains, and replace one existing fire hydrant along East Thomson Avenue	1	8	200
P-18	Arroyo Road Commercial Fire Flow Improvement	Install new 8-inch PVC water main between HWY 12 and Madera Road along Arroyo Road.	3	8	200
P-19	Hooker Avenue Fire Flow Improvement	Install new 8-inch PVC water main between HWY 12 and Hooker Ave.	3	8	550
P-20	Lomita Avenue Commercial Fire Flow Improvement	Replace existing 6-inch ACP water main with new 12-inch PVC water main along Lomita Avenue, replace two service connections, and replace one hydrant.	3	12	300

2.3 - CONCLUSION

Existing water utility infrastructure generally appears adequate to support the increased density of the SSP Land Use over the next twenty-years. The VOMWD has evaluated their water system, identified recommended capital improvement projects, and produced cost estimates on a CIP project by project basis in their 2019 WMP for the district as a whole. The recommended project data for CIP's relevant to the SSP area are summarized in this report based on the data in the 2019 WMP.

Design Criteria

In general, water system facilities will be designed in accordance with accepted engineering principles and will conform to the Valley of the Moon Water Districts' Standard Plans and Specifications.

Recommendations

Upgrades to existing aging pipe networks and appurtenances should be considered along with future capital improvement projects and with individual developments.

Table 2-3 summarizes further recommendations and notes where existing infrastructure is adequate or where new infrastructure should be considered to adequately service the proposed land use plan. As development occurs throughout the SSP, each project will need to be analyzed on a project by project basis to determine the extents of water infrastructure upgrades needed. Factors that will determine the extents of the improvements will include at a minimum:

- The type and size of the project;
- Any known pressure issues associated with the greater area where a project is proposed;
- The location of the project in relation to the existing infrastructure; and
- The capacity of the existing infrastructure to account for the planned development.

Table 2-3 Suggested Water Infrastructure Improvements

Street Name	Proposed Improvements	Notes
Agua Caliente Road	• The 8" Water main in road is adjacent to the Specific Plan Boundary. Assess Condition of ACP main and develop replacement strategy for future failures.	2
Academy Lane	• The 6" ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Balsam Avenue		3
Bernhard Avenue	• No service available on Bernhard Avenue withing the Specific Plan boundary. Suggest connection between Hwy 12 and Balsam Street be installed with future buildout to complete grid distribution system.	1, 2
Bonita Way		2
Calle Del Monte	• The 8" ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Cedar Street	• The ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Central Avenue		
Depot Road		2
Donald Street	• The ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	
Encinas Lane		2
Fairview Lane	• The portion of ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Abbreviations: ACP = Asbestos Cement, PVC = Polyvinyl Chloride, N/A = Not Available, UNK = Unknown DIP = Ductile Iron Pipe, PSI = Pound Per Square Inch		
Notes: 1) Infrastructure improvements may require the extension of existing infrastructure to developed location. Extents of improvements will be determined based on project type and location. 2) Pressure data not availavle, within the Specific Plan area, at the time of this evaluation. 3) Low pressure my be encountered depending a variety of factors. Private deveopment to install booster pumps or possible CIP to increase system pressure.		

Table 2-3 cont. Suggested Water Infrastructure Improvements

Street Name	Proposed Improvements	Notes
Fetters Avenue		2
First Avenue	• The portion of ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Greger Street		2
Harley Street		2
Hawthorne Avenue		2
Johnson Avenue	• The 6" ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Keaton Avenue		2
Litchenberg Avenue		2
Lomita Avenue	• The portion of ACP main located in the road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Madera Road		2
Main Street		2
Malek Road		2
Manzanita Road		
Marin Avenue		2
Monterey Avenue		2
Mountain Avenue	• The 8" ACP main located in Mountain Avenue is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Mulford Lane		2
Old Maple Lane	• The 6" ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Robinson Road	• The 6" ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	

Abbreviations:
ACP = Asbestos Cement, PVC = Polyvinyl Chloride, N/A = Not Available, UNK = Unknown
DIP = Ductile Iron Pipe, PSI = Pound Per Square Inch

Notes:
1) Infrastructure improvements may require the extension of existing infrastructure to developed location. Extents of improvements will be determined based on project type and location.
2) Pressure data not availavle, within the Specific Plan area, at the time of this evaluation.
3) Low pressure my be encountered depending a variety of factors. Private deveopment to install booster pumps or possible CIP to increase system pressure.

Table 2-3 cont. Suggested Water Infrastructure Improvements

Street Name	Proposed Improvements	Notes
Sierra Drive	• The 6" ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Siesta Way	• The portion of ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
State Highway 12	• The portion of ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	3
Sunnyside Avenue		2
Vailetti Drive	• The 6" ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2
Vallejo Avenue		2
Verano Avenue		
Waterman Avenue	• The 6" ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	3
West Thomson Ave.	• The portion of ACP main located in thg road is nearing the end of its design lifespan. Assess Condition of ACP and develop replacement strategy for future failures/ upgrades. Recommend replacement with PVC C-900 or equal.	2

Abbreviations:

ACP = Asbestos Cement, PVC = Polyvinyl Chloride, N/A = Not Available, UNK = Unknown

DIP = Ductile Iron Pipe, PSI = Pound Per Square Inch

Notes:

1) Infrastructure improvements may require the extension of existing infrastructure to developed location. Extents of improvements will be determined based on project type and location.

2) Pressure data not availavle, within the Specific Plan area, at the time of this evaluation.

3) Low pressure my be encountered depending a variety of factors. Private deveopment to install booster pumps or possible CIP to increase system pressure.

3.0 - Sanitary Sewer Collection Facilities

EBA Engineering (EBA) reviewed existing reports and studies relevant to the Springs Specific Plan (SSP) area along with available assessor's parcel data and compiled mapping information. The following information served as the basis of this evaluation:

- County of Sonoma. Sonoma County Assessor's Parcel Data & GIS.
- County of Sonoma. Sonoma County General Plan and Existing Zoning Maps.
- Sonoma Valley County Sanitation District (SVCSD). Sanitation Code, December 2013.
- SVCSD. Sewer System Management Plan (SSMP), June 2016.
- SVCSD. Sanitary Sewer Capacity Assessment and Master Plan Final Report (MPFR), April 2016.
- SVCSD. Sphere of Influence (SOI) Expansion Master Plan, December 2013.
- Sonoma Local Agency Formation Commission (LAFCO). Municipal Services Review (MSR), November 2004.
- Sonoma County Water Agency (SCWA). Design and Construction Standards for Sanitation Facilities, updated February 2009.
- SCWA. Capital Projects Plan FY 2016/2017 - 2020/2021, 2016.
- SCWA, SVCSD, RRCSD, & OCSD. Sewer System Overflow Emergency Response Plan, June 2016.
- SCWA. Collection System Hydraulic Modeling Support, February 2019.

Existing Infrastructure Summary

The SSP area is located with the Urban Services Area of the Sonoma Valley Sanitation District (SVCSD).

The SVCSD treatment plant is located south of the City of Sonoma in Schellville. The plant is currently treating an Average Dry Weather Flow (ADWF) of 2.7 million gallons per day (mgd), and a winter average Wet Weather Maximum Flow (WWMF) of 11 mgd.

Inflow and Infiltration

The SVCSD has indicated that they have issues with Inflow & Infiltration (I&I) in their existing sewer infrastructure throughout the Sonoma Valley, including areas within the limits of the SSP.

Per the SCVSD many of the pipes in the SSP area are more than 50 years old. During heavy rain events the system overloads and sewage can flow into local creeks. One of the major contributing factors to sewer system overflow is I&I of storm water runoff and groundwater through seepage into existing deteriorated laterals and sewer mains, resulting in an increase in the amount of water flowing to the SCVSD treatment facility.

According to the Sonoma Valley County Sanitation District Sanitary Sewer Capacity Assessment and Master Plan Final Report (MPFR) created by RMC Water and Environment Inc., dated April 2016, the existing collection system base wastewater flow, (BWF), estimate for peak flow on a non-rainfall wintertime day including groundwater infiltration is 4.9 mgd and peak wet weather flow for a 10-year 24-hour design storm event is approximately 20.7 mgd.

Under current conditions, during wet weather flow, sewer often overflows into creeks that flow into San Pablo Bay. As a result, the SVCSD was required to create the 2016 MPFR and include a System Evaluation and Capacity Assurance Plan (SECAP) as part of the SSMP. The MPFR updated the SECAP element of the SSMP and the SVCSD now has a Private Sewer Lateral Ordinance from the District Board

of Directors. The ordinance, which went into effect on March 8, 2017, helps address I&I from private homes and businesses. The Private Sewer Lateral Ordinance requires property owners of homes and businesses that are 30 years or older to have private sewer laterals inspected and repaired if necessary to prevent sewer overflows. Under the ordinance, the SVCSD facilitates free inspections of private sewer laterals, rebates of up to $1,000 for repairs, and a low interest loan program to aid property owners in paying for repairs.

3.1 – Analysis

The SSP growth estimates for the SSP area were analyzed and documented by Woodard and Curran in the Sonoma County Water Agency Collection System Hydraulic Modeling Support technical memorandum (SHMS), dated March, 2019. Table 3-1 summarizes their projected 'Net Growth Within the Springs Specific Plan Area' as calculated and summarized in the SHMS:

Table 3-1 Net Growth within the Springs Plan Area

Development Type	Single Family	Multi-Family	Mixed-Use	Commercial	Hotel	Office	Recreation
Unit Flow Factors	200 GPD/Unit	160 GPD/Unit	160 GPD/Unit	0.19 GPD/SF	100 GPD/Room	0.076 GPD/SF	N/A
Net Growth SSP[2]	+124 Units	+423 Units	+138 Units	+167,030 SF	+120 Units	+82,226 SF	+26,648 SF
Boyes Food Center Modifications			+15 Units	+1,002 SF		-975 SF	
Other Growth in Model[3]		+100 Units	+2 Units			+2,315 SF	

1. Unit flow factors are based on Exhibit A of the SVCSD Sanitation Rate Ordinance

2. Net growth over existing conditions according to Springs Specific Plan. This growth replaces any future growth attributed to the relevant parcels in the 2016 Master Plan.

3. Growth on parcels previously included in the 2016 Master Plan future scenario, but not included in SSP, that was identified by Water Agency staff as recently constructed or under construction. This growth remains in the model.

4. Recreational uses assumed to be non-contributing

Table 3-2 compares the estimated future development loads resulting from the 2016 SVCSD MPFR and the future Development Plan, which includes the SSP growth as documented in the 2019 SHMS:

Table 3-2 System-Wide Comparison of Estimated Future Development Loads

Description	Residential Flow[1] (GPD)	Non-Residential Flow[1] (GPD)
2016 MPFR Development	372,000	336,000
2019 SHMS Development (includes SSP)	489,000	360,000
Total Change in Flow[2]	117,000	24,000
% Change in Flow	+31%	+7%

1. System-wide flows attributed to future development (net over existing)

2. Change in flow results from SSP growth, per Table 3-1, but also removes previously attributed future growth on select parcels within the SSP area.

The sewer system model previously analyzed in the 2016 SVCSD MPFR was used to analyze the SSP area in the 2019 CSHMS. The sewer system model analyzed existing and future system capacity needs for a 10-year, 24-hour design storm event under peak dry weather flow (PDWF) and peak wet weather flow (PWWF) conditions.

According to the 2016 SVCSD MPFR no deficiencies were identified within the system under PDWF conditions, but several recommended Capital Improvement Projects (CIPs), were proposed to correct capacity deficiencies identified under PWWF conditions. Of the recommended CIP projects identified, #'s 1, 3, 4, 5, and 14 are within the vicinity of the SSP area.

The 2019 CSHMS technical memo analyzed the system under the future scenario conditions which included additional growth due to the SSP. No deficiencies were found under future PDWF conditions. Under future PWWF conditions no new deficiencies were identified with minor exception to CIP Project #5. Deficiencies associated with CIP project #5, has now been identified as impacting 164 additional feet of pipe for a total impact of 1144 feet of the system.

The following table lists the capital improvement projects that were originally identified in the 2016 SVCSD MPFR and updated in the 2019 CSHMS as being necessary to accommodate future buildout of the SSP area under future growth conditions, including the SSP:

Table 3-3 Proposed SVCSD Capital Improvement Projects

Project ID	Priortity /Phase	Project Name	U/S MH ID	D/S MH ID	Description
P1	6	Depot Road Diversion	M67-4	M66-4	Install 280 lf of new 10" pipe in Depot Rd. from Mountain Ave. to Malek Rd.
P3	5	Boyes Boulevard Diversion	M86-4	M79-9	Replace 414 lf of 8" pipe with 10" pipe in Sonoma Hwy. and install ~1,330 lf of 10" pipe in Boyes Blvd. from Sonoma Hwy. to Mulberry Ave.
P4	4	Fairview Lane	M104-10	M103-15	Replace 1,100 lf of 8" pipe with 10" and 12" pipe in Fairview Lane and easement west of Sonoma Hwy.
P5	6	West Spain Street	M126-13	M126-3	Replace 980 lf of 10" pipe with 15" pipe on north side of West Spain St. from Junipero Serra Dr. to Broadway; abandon 8" sewer on south side of West Spain St., reconnect laterals and install ~70 lf of 8" pipe to divert flow to new sewer.
P5 Extension	6	Junipero Serra Dr.	M126-14	M126-13	Replace 164 lf of 10" pipe with 15" pipe on the southern portion of Junipero Serra Dr.
P14	5	5th Street West	M127-11	M136-10	Replace 570 lf of 6" pipe with 8" pipe in 5th Street West from W. Spain St. to W. Napa St.

3.3 - Conclusion

The sewer system Capital Improvement Projects (CIPs) scheduled/identified within the SSP Area in the 2016 SVCSD MPFR were sized to accommodate the projected growth at that time. The subsequent 2019 CSHMS analysis of the SSP area, under a future growth scenario from the SSP, confirmed that the recommended MPFR CIP #'s 1, 3, 4, 5, and 14 within the SSP area with an additional extension to CIP #5, will be sufficient to accommodate the increased flow from buildout of the SSP.

Limited research indicates the SVCSD's Wastewater Treatment Plant had adequate capacity to accept increased flows from the SSP. This should be confirmed with the SCWA and SVCSD prior to the SSP land use plan finalization.

As development occurs throughout the SSP, each project will need to be analyzed on a project by project basis to determine the extents of the localized sanitary sewer infrastructure upgrades needed. Factors that will determine the extents of the improvements will include at a minimum:

- Age and type of existing laterals/infrastructure;
- The type and size of the project;
- Any known I&I issues associated with the greater area where a project is proposed;
- The location of the project in relation to the existing infrastructure; and
- The capacity of the existing infrastructure to account for the planned upstream development.

In general, sewer system conveyance shall be designed in accordance with accepted engineering principles and will conform to the Sonoma County Valley Sanitation District's Standard Plans and specifications. Per SVCSD and SCWA Sanitation Code and Design and Construction Standards public sewer main size shall be a minimum eight (8) inches diameter.

4.0 - Storm Drain Infrastructure and Collection Facilities

EBA Engineering (EBA) reviewed existing reports and studies relevant to the Springs Specific Plan (SSP) area along with USGS topographic information, assessor's parcel data and complied land use information. The following information served as the basis of this evaluation:

- U.S. Geological Survey. Sonoma, CA 7.5 Minute Quadrangle Map, 2015.
- Sonoma County Water Agency. Flood Control Design Criteria manual, November 1966 revised August 1983.
- Sonoma Valley Storm Water Management and Groundwater Recharge Scoping Study, October 2011.
- Sonoma County Water Agency. Boyes Springs/ Agua Caliente Master Drainage, June 1987.
- County of Sonoma Department of Transportation and Public Works. Drainage Report for the State Route 12 Corridor Improvement Project Phase II Stage 2, October 2011.
- Federal Emergency Management Agency. Flood Insurance Study - Volume 3, Study Number 06097CV003A, December 2008.
- National Flood Insurance Program. Flood Insurance Rate Map (FIRM) 06097C0930E, 06097C0936E, December 2008.

The Sonoma County Department of Transportation and Public Works (SCDTPW) is responsible for constructing and maintaining drainage channels, storm drains, inlets, and culverts located and related to all County roadways. Storm drainage facilities, within the Highway 12 right of way is under the responsibility of the State of California and The California Department of Transportation. In general, the County of Sonoma is not responsible for drainage problems occurring on private property.

The SSP area is located within the Phase 2, Term 1 National Pollutant Discharge Elimination System (NPDES) boundary. This boundary indicates the area is subject to NPDES storm water requirements to improve water quality through the use of Low Impact Development post-construction best management practices (LID BMPS). The greater watershed is regulated by the San Francisco Bay Regional Water Quality Control Board and (LID) design should be implemented complying with County requirements and the Bay Area Stormwater Management Agencies Association's (BASMAA) Post-Construction Manual. The BASMAA manual provides design guidance for storm water treatment and engineered controls that, in general, closely mimic pre-development hydrology and utilize on-site natural features.

All construction sites disturbing 1 or more acres of soil must obtain an NPDES General Permit for Discharges of Storm Water Associated with Construction Activity from the State Water Resources Control Board (SWRCB). Construction activities that are subject to this permit include clearing, grading and ground disturbances.

Existing Infrastructure Summary

The existing storm drain infrastructure and collection facilities contained within the limits of the SSP area consist of a mixture of roadside ditches and swales, drain inlets, culverts, underground drainage facilities, and creeks; which collects and routes sheet flow storm water flowing in a northeast to southwest direction and into Sonoma Creek. The existing infrastructure is distributed throughout the limits of the SSP and appears to have been installed as development occurred within the area. The areas where the majority of the existing infrastructure is present include the corridor directly adjacent to Highway 12, the area

directly adjacent to Boyes Boulevard, and the areas directly adjacent to Donald Street and Verano Avenue. Even though these areas contain drainage infrastructure, they appear to have been planned to improve drainage for the existing development conditions within the area at the time of their construction. With potential build out of the area and current drainage regulations and ordinances; such as Phase 2, Term 1 NPDES and LID, the existing infrastructure appears to be inadequate for potential future development conditions within the Specific Plan.

Table 4-1 provides a summary of the existing storm drain infrastructure available to each of the watersheds delineated in Figure 4-1. In addition, a more general street by street summary of the existing infrastructure can be found in Appendix A, Table 1-4. This information is based on record plan information and field reconnaissance. Further verification should be performed on a project by project basis before new infrastructure design is performed.

FEMA Flood Areas

The Springs Specific Plan area is generally located outside of the FEMA 100 year floodplain defined as Floodway Areas in Zone AE per FIRM 06097C0930E and 06097C0936E. However, parcels located along Aqua Caliente Creek, south of Encinas Lane and Meadowbrook Avenue, but north of Donald Street are flood prone areas subject to periodic inundation (1% Annual Chance Flood). These parcels are currently occupied by mobile homes and any redevelopment in this area will require special review and possible federal permitting.

4.1 - Analysis

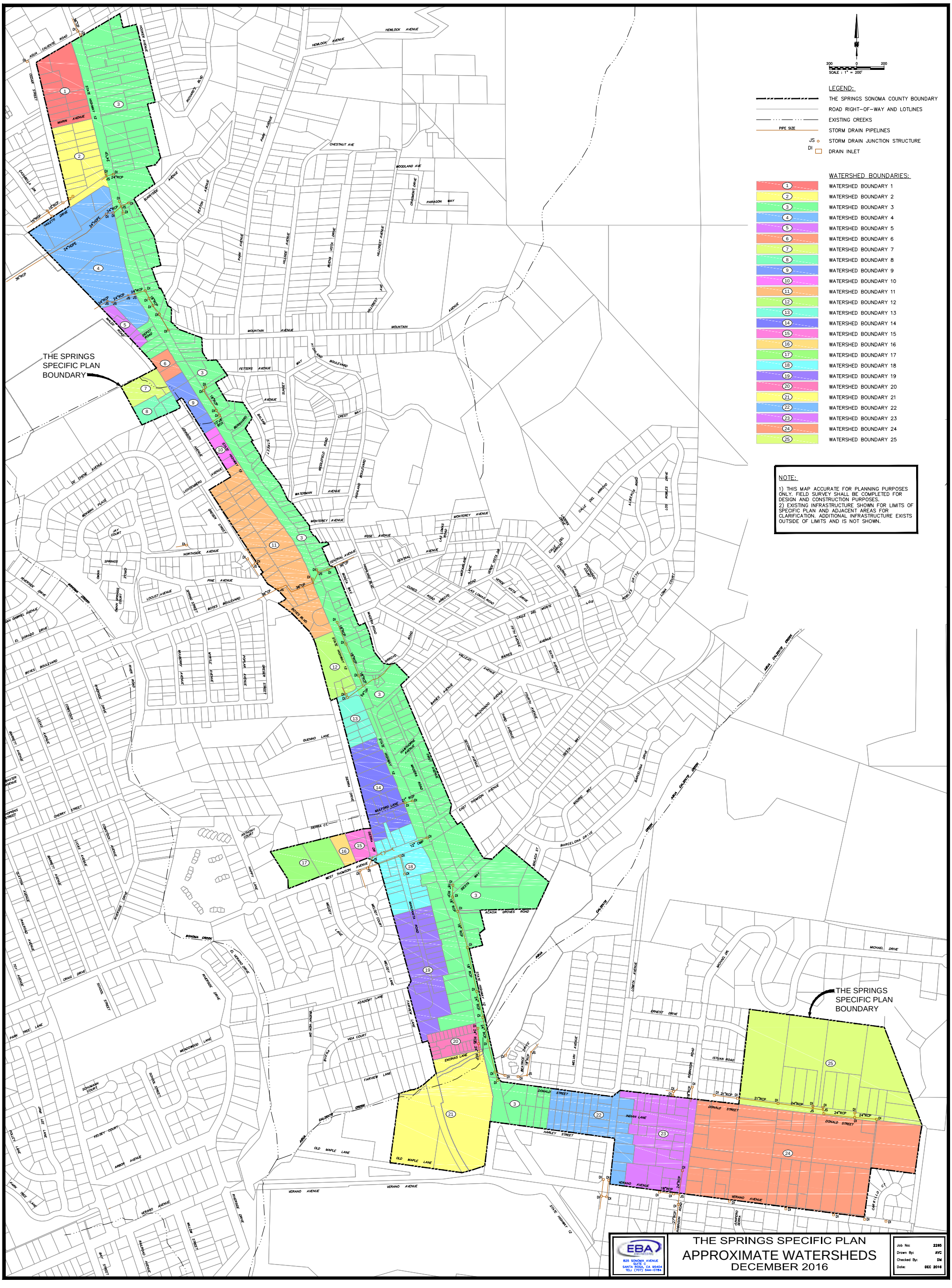
Using available existing hydrology, hydraulic calculations, and record improvement drawing information obtained from the County of Sonoma Permit and Resource Management Department (PRMD) and the Sonoma County Department of Transportation and Public Works (SCDTPW), EBA reviewed and analyzed the existing drainage infrastructure within the SSP. By using the record drawing information and performing field reconnaissance, EBA was able to determine approximate watershed boundaries, to locate existing infrastructure within those watersheds, and provide general recommendations for future storm drainage infrastructure and collection facility improvements that would support the SSP.

Watershed Delineation

To establish a base condition for the SSP, a review of each watershed was performed to analyze existing site conditions (current conditions) for the SSP. Figure 4-1 provides a graphical representation of each of the watersheds which was used to analyze the existing storm drain infrastructure. These watersheds are based on existing infrastructure available in which new infrastructure could be developed to adequately service the SSP. The watersheds depicted in Figure 4-1 are for graphical representation and should not be used for a basis of future hydrology and hydraulic design calculations.

In general the majority of watersheds are substantially developed, with most of the area being gently sloping/ flat with a range of 5 to 15 percent slopes. The majority of current storm water conveyance is by sheet flow across multiple private properties to the Public Right of Way. Storm water is then transported by limited storm drain piping or road side ditches to existing outfalls at Sonoma Creek or its tributaries.

Figure 4-1


THE SPRINGS SPECIFIC PLAN BOUNDARY
THE SPRINGS SPECIFIC PLAN BOUNDARY
200 0 200
SCALE : 1" = 200'
LEGEND:
THE SPRINGS SONOMA COUNTY BOUNDARY
ROAD RIGHT-OF-WAY AND LOTLINES
EXISTING CREEKS
PIPE SIZE
STORM DRAIN PIPELINES
JS STORM DRAIN JUNCTION STRUCTURE
DI DRAIN INLET
WATERSHED BOUNDARIES:
WATERSHED BOUNDARY 1
WATERSHED BOUNDARY 2
WATERSHED BOUNDARY 3
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WATERSHED BOUNDARY 25
NOTE:
1) THIS MAP ACCURATE FOR PLANNING PURPOSES ONLY. FIELD SURVEY SHALL BE COMPLETED FOR DESIGN AND CONSTRUCTION PURPOSES.
2) EXISTING INFRASTRUCTURE SHOWN FOR LIMITS OF SPECIFIC PLAN AND ADJACENT AREAS FOR CLARIFICATION. ADDITIONAL INFRASTRUCTURE EXISTS OUTSIDE OF LIMITS AND IS NOT SHOWN.
EBA ENGINEERING
825 SONOMA AVENUE
SUITE C
SANTA ROSA, CA 95404
TEL: (707) 544-0784
THE SPRINGS SPECIFIC PLAN
APPROXIMATE WATERSHEDS
DECEMBER 2016
Job No: 2285
Drawn By: AVC
Checked By: DM
Date: DEC 2016

Table 4-1 Available Storm Drain Infrastructure

Watershed Area	Nearest Available Location
1	Existing underground storm drain system located at the northeast corner of the intersection of Agua Caliente Road and Cedar Street.
2	Existing underground storm drain system located at the northeast corner of the intersection of Vailetti Drive and Cedar Street.
3	Existing underground storm drain systems located at multiple locations along Highway 12.
4	Existing underground public and private storm drain systems located on private property.
5	Existing underground private storm drain system located within Rancho Drive.
6	Fetters Creek drainage located on adjacent private parcel towards the west.
7	Fetters Creek drainage located within parcel.
8	Fetters Creek drainage located at the easterly side of the parcel.
9	Fetters Creek drainage located on the westerly side of parcels
10	Existing underground storm drain system located at the northeast corner of De Chene Avenue and Northside Avenue
11	Existing underground storm drain system located near Greger Street and Northside Avenue, which connects to an existing underground storm drain
12	Existing underground storm drain system located within private parcel.
13	Existing underground storm drain system located near the intersection of Highway 12 and Sierra Drive.
14	Existing unnamed drainage channel located near the intersection of Mulford Lane and Sierra Drive.
15	Existing unnamed drainage channel located near the intersection of Mulford Lane and Sierra Drive.
16	Existing underground storm drain system located near the intersection of Sierra Drive and West Thompson Avenue.
17	Existing unnamed drainage channel located on the westerly side of APN 056-433-027.
18	Existing underground storm drain system located near the intersection of Manzanita Road and West Thompson Avenue.
19	Agua Caliente Creek drainage located south of Fairview Lane.
20	Existing underground storm drain system located within Encinas Lane.
21	Agua Caliente Creek drainage located on the northerly side of the parcels.
22	Existing underground storm drain system located near the intersection of Verano Avenue and Lomita Avenue.
23	Existing underground storm drain system located near the intersection of Verano Road and Robinson Road.
24	Existing underground storm drain system located within Verano Avenue.
25	Existing underground storm drain system located within Donald Street.

Table 4-1 cont. Available Storm Drain Infrastructure

Notes:
1) Watershed boundaries as shown and described were determined from field observations and may vary from actual conditions. Topographic surveys and design calculations should be compiled to determine actual boundaries for final design of any future storm drain infrastructure.
2) Available hydrology/hydraulic calculations on existing drainage infrastructure is minimal and may require additional calculations to determine capacities of the existing infrastructure.

4.2 - CONCLUSION

Storm drainage facilities within the SSP area should be designed to prevent localized flooding by collecting surface runoff through properly sized inlets and conveyance systems. Storm water ditches, swales and pipes should discharge to existing outfalls at natural waterways wherever possible.

Design Criteria

Storm drain facilities shall be designed in accordance with accepted engineering principles and shall conform to the Sonoma County Water Agency's Flood Control Design Criteria manual, Sonoma County Construction Standards, and applicable NPDES and California State Water Resources Control Board (SWRCB) requirements.

Recommendations

Recommended infrastructure improvements for the SSP are described in Table 4-2. These recommendations summarize areas where existing infrastructure appears to be adequate and areas where new infrastructure is suggested to adequately service the SSP. As development occurs throughout the SSP, each project will need to be analyzed on a project by project basis to determine the extents of the new infrastructure needed to develop the project. Factors that will determine the extents of the improvements will include, at a minimum:

- The type and size of the project;
- The amount of impervious and pervious surfaces associated with the project;
- The location of the project in relation to the existing infrastructure; and
- The capacity of the existing infrastructure to account for the planned development.

Table 4-2 SSP - Recommended Storm Drain Infrastructure Improvements

Watershed Area	Recommended Improvements	Notes
1	• Public underground drainage infrastructure as required within Cedar Avenue and Marin Avenue. • Connection to existing drainage infrastructure near the intersection of Agua Caliente Road and Cedar Street.	1, 4, 5, 6
2	• Public underground drainage infrastructure as required within Cedar Avenue and Marin Avenue. • Connection to existing drainage infrastructure located near the intersection of Vailetti Drive and Cedar Street.	1, 4, 5, 6
3	• Extension of existing underground drainage systems as required within Highway 12, Sunnyside Avenue, Keaton Avenue, Mountain Avenue, Fetters Avenue, Bernhard Avenue, Vallejo Avenue, Arroyo Avenue Hawthorn Avenue, Siesta Way, and Donald Street. • Connect to existing drainage infrastructure at various locations along Highway 12.	1, 3, 4, 5, 6
4	• Area considered to be built out. • Existing private and public drainage infrastructure serving the area.	3, 4, 5
5	• Public/private underground drainage infrastructure as required within Malek Road. • Drainage easement(s) with connection to existing private drainage infrastructure within Rancho Drive.	1, 4, 5, 6
6	• Private underground drainage infrastructure as required. • Drainage easement(s) through neighboring parcel(s) with new outlet(s) into Fetters Creek as required.	1, 2, 4, 5, 6
7	• Private underground drainage infrastructure as required. • New outlet(s) into Fetters Creek as required.	1, 2, 4, 5, 6
8	• Private underground drainage infrastructure as required. • Drainage easements through neighboring parcel(s) with new outlet(s) into Fetters Creek as required.	1, 2, 4, 5, 6
9	• Private underground drainage infrastructure as required. • New outlet(s) into Fetters Creek as required.	1, 2, 4, 5
10	• Public underground drainage infrastructure as required within Lichtenberg Avenue and De Chene Avenue. • Connection to existing drainage infrastructure located near the intersection of De Chene Avenue and Northside Avenue.	1, 4, 5
11	• Public/private underground drainage infrastructure as required within Greger Street and Boyes Boulevard. • Connection to existing public drainage infrastructure within Greger Street and Boyes Boulevard.	1, 4, 5
12	• Area considered to be built out. • Existing private and public drainage infrastructure serving the area.	

Table 4-2 cont. SSP - Recommended Storm Drain Infrastructure Improvements

Watershed Area	Recommended Improvements	Notes
13	• Public underground drainage infrastructure as required within Sierra Dr. • Connection to existing drainage infrastructure located near the intersection of Sierra Drive and Highway 12.	1, 4, 5
14	• Public underground drainage infrastructure as required within Sierra Drive and Mulford Lane. • New outlet(s) into unnamed drainage channel near the Mulford Lane.	1, 2, 4, 5
15	• Public underground drainage infrastructure as required within Sierra Drive. • New outlet into unnamed drainage channel near the Mulford Lane.	1, 4, 5
16	• Public underground drainage infrastructure as required within West Thompson Avenue. • Connection to existing drainage infrastructure located within West Thompson Avenue.	1, 4, 5
17	• Public underground drainage infrastructure as required within West Thompson Lane and/or private underground infrastructure located on private property. • Drainage easement(s) with new outlet(s) to an unnamed drainage channel located on the westerly side of APN 056-433-027.	1, 2, 4, 5, 6
18	• Public underground drainage infrastructure as required within Manzanita Road. • Connection to existing public drainage infrastructure located near the intersection of Manzanita Road and West Thompson Avenue.	1, 4, 5
19	• Public underground drainage infrastructure as required within Manzanita Road and Fairview Lane. • New outlet into Agua Caliente Creek through a drainage easement across APN 056-611-045.	1, 2, 4, 5, 6
20	• Area considered to be built out. • Existing private drainage infrastructure serving the area.	
21	• Private underground drainage infrastructure as required. • Drainage easements through neighboring parcel(s) with new outlet(s) into Agua Caliente Creek as required.	1, 2, 4, 5, 6
22	• Curent land use for this area is low density residential and drainage infrastructure is considered to be adequate for this area.	
23	• Public underground drainage infrastructure as required within Donald Street, Robinson Road, and Verano Avenue. • Connection to existing drainage infrastructure located near the intersection of Verano Avenue and Robinson Road.	1, 4, 5, 6
24	• Public underground drainage infrastructure as required within Robinson Road, and Verano Avenue. • Connection to existing drainage infrastructure located in Verano Avenue.	1, 4, 5, 6
25	• Current land use for this area is low density residential and drainage infrastructure is consider to be adequate for this area.	

Table 4-2 cont. SSP - Recommended Storm Drain Infrastructure Improvements

Notes:
1) Drainage infrastructure improvements may require the extension of existing infrastructure to developed location. Extents of improvements will be determined based on project type and location within the drainage watershed.
2) Drainage infrastructure improvements will require new outfall into existing creek/drainage channel and may require permitting agency permitting.
3) Hydrology/hydraulic information on existing drainage infrastructure is available.
4) Topographic survey will be required to determine watershed boundaries.
5) Hydrology/hydraulic calculations will be required to determine capacity of proposed and existing storm drain infrastructure.
6) Drainage easements may be required depending upon the extents of the development.

5.0 – Dry Utility Infrastructure and Facilities

EBA Engineering (EBA) reviewed existing utility information supplied by the utility service providers within the SSP area. The following information served as the basis of this review:

- AT&T. External Map Request for EBA Engineering, March 2016.
- Comcast. Facility Request Project SR-12, Agua Caliente to Fetters ASAG/ Sonoma, March 2016.
- Comcast. Facility Request Project SR-12, Fetters to Hawthorne ASAE/ Sonoma, March 2016.
- Comcast. Facility Request Project SR-12, Hawthorne to Verano ASAD/ Sonoma, March 2016.
- Comcast. Facility Request Project SR-12, Lomita to 5th Street West ASAC/ Sonoma, March 2016.
- Pacific Gas & Electric Company. Springs SP Sonoma Electric Distribution Maps 1-4, March 2016.
- Pacific Gas & Electric Company. Springs Specific Plan, Sonoma County Index 8399 Gas Maps, March 2016.

Dry utility facilities within the SSP area should be extended/upgraded to provide complete coverage of services at area buildout. It is anticipated that existing facilities will need to be extended/upgraded on a project by project basis to meet the demands of the SSP with input of the utility service providers. The utility service providers within the SSP are PG&E (electric and gas), AT&T (communications), and Comcast (communications/cable).

Existing Infrastructure Summary

The existing AT&T utility infrastructure and facilities contained within the limits of the SSP consist of a mixture of underground and aerial transmission lines. The existing infrastructure is distributed throughout the limits of the SSP area and appears to have been installed as development occurred within the area.

An existing Comcast underground fiber line is located within the Highway 12 right of way with overhead lines servicing the remaining SSP area.

Pacific Gas & Electric Company's (PG&E) main electrical transmission lines are located underground within the Highway 12 corridor with overhead lines servicing the remaining SSP area.

Pacific Gas & Electric Company's (PG&E) main gas transmission lines are located underground within Highway 12, W. Agua Caliente Road, Manzanita Road, Donald Street, Lomita Avenue, and Verano Avenue. Distribution mains can be found in the majority of other streets with service lines branching to individual parcels.

Table 5-1 provides a summary of the existing infrastructure available to each street. This information is based on record plan information and field reconnaissance. Further verification should be performed on a project by project basis before new infrastructure design is performed.

5.1 - Analysis

In the existing, pre-buildout condition of the SSP area, the majority of parcels are substantially developed and have already received dry utility services. The SSP will increase intensity of dry utility service demand at select locations, including the area along Highway 12 just south of Aqua Caliente Road which will increase in density from low density (single family) residential to High Density

Residential, and a pocket south of Donald Street just west of Robinson Road which will increase in density from low density residential to high density residential.

5.2 - Conclusion

In general, existing PG&E (gas and electric), AT&T, and Comcast infrastructure is available to service the buildout of the SSP. Upgrades to existing infrastructure will need to be considered on a project by project basis with each utility service provider evaluating the extents of improvements required to service the development.

Recommendations

The following recommendations summarize areas where existing infrastructure upgrades should be evaluated along with general recommendations. However, this list is cursory overview and should not be considered all inclusive.

- Project developer shall contact each utility provider to discuss infrastructure improvements required to service their project;
- The location of future projects in relation to existing infrastructure should be evaluated with each service provider;
- The capacity of the existing infrastructure to account for the planned development as well as the future development of the surrounding area should be considered;
- Landlocked parcel should be provided private connections to relevant services as area build out occurs;
- Parcels without services should be provided private connection points to relevant services as area build out occurs and infrastructure is extended or upgraded.

Table 5-1 Existing Dry Utility Infrastructure

Street Name	Electric	Gas	Cable	Telecom.
Academy Lane	1, partial	✓	✓	1, partial
Agua Caliente Road	✓	✓	✓	N/A
Arroyo Road	✓	1, partial	✓	tbd
Balsam Avenue	✓	✓	✓	tbd
Bernhard Avenue	✓	✓	✓	tbd
Bonita Way	1, partial	✓	✓	tbd
Boyes Boulevard	1, partial	tbd		tbd
Calle Del Monte	✓	✓	✓	tbd
Cedar Street	1, partial	✓	✓	✓
Central Avenue	✓	tbd	✓	tbd
Depot Road	1, partial	tbd	tbd	✓
Donald Street	✓	✓	✓	✓
East Thomson Avenue	✓	✓	✓	✓
Encinas Lane	1	tbd	✓	tbd
Fairview Lane	1, partial	✓	tbd	tbd
Fetters Avenue	✓	✓	✓	✓
First Avenue	✓	✓	✓	tbd
Greger Street	✓	✓	tbd	✓
Harley Street	✓	✓	✓	✓
Hawthorne Avenue	✓	✓	✓	tbd
Hooker Avenue	✓	✓	✓	✓
Johnson Avenue	1, partial	tbd	✓	✓
Keaton Avenue	1, partial	✓	✓	✓
Litchenberg Avenue	✓	1, partial	✓	✓
Lomita Avenue	✓	✓	tbd	✓
Madera Road	✓	✓	✓	tbd
Main Street	1, partial	✓	✓	✓
Malek Road	✓	✓	1, partial	1, partial
Manzanita Road	✓	✓	✓	✓
Marin Avenue	✓	1	1, partial	1
Monterey Avenue	✓	✓	✓	tbd
Mountain Avenue	✓	✓	tbd	✓
Mulford Lane	✓	tbd	tbd	tbd
Old Maple Lane	✓	✓	✓	tbd
Robinson Road	✓	✓	tbd	✓
Sierra Drive	✓	✓	✓	tbd
Siesta Way	✓	✓	✓	✓
State Highway 12	✓	✓	✓	✓
Sunnyside Avenue	✓	✓	✓	✓
Vailetti Drive	1, partial	tbd	✓	tbd
Vallejo Avenue	✓	✓	✓	tbd
Verano Avenue	1, partial	✓	1, partial	1, partial
Waterman Avenue	✓	✓	✓	tbd
West Thomson Avenue	✓	✓	✓	tbd

✓ = Available, N/A = Not Available

1) Utiltiy is not existing in street; utility may not be needed due to service connection point.

Appendix A

EBA Engineering reviewed existing reports and studies relevant to the Springs Specific Plan area along with available assessor's parcel data and compiled mapping information. The following information served as the basis of this evaluation:

Tables – Existing Wet Utility Infrastructure

Figures – Base Maps

Table 1-1 Existing Wet Utility Infrastructure Availability Summary (12/2016)

Street Name	Water	Sewer	Storm Drain	Notes
Agua Caliente Road	✓	✓	✓	
Arroyo Road	✓	✓	✓	
Balsam Avenue	✓	✓	N/A	
Bernhard Avenue	✓	✓	N/A	
Bonita Way	✓	✓	N/A	
Boyes Boulevard	✓	✓	N/A	
Calle Del Monte	✓	✓	✓	
Cedar Street	✓	N/A	✓	
Central Avenue	✓	✓	✓	
Depot Road	✓	✓	N/A	
Donald Street	✓	✓	✓	
East Thomson Avenue	✓	✓	N/A	
Encinas Lane	✓	✓	N/A	
Fairview Lane	✓	✓	N/A	
Fetters Avenue	✓	✓	✓	
First Avenue	✓	✓	N/A	
Greger Street	✓	✓	✓	
Harley Street	✓	✓	N/A	
Hawthorne Avenue	✓	N/A	N/A	
Hooker Avenue	✓	✓	N/A	
Johnson Avenue	✓	✓	N/A	
Keaton Avenue	✓	✓	✓	
Litchenberg Avenue	✓	✓	N/A	
Lomita Avenue	✓	✓	✓	
Madera Road	N/A	✓	N/A	
Main Street	✓	✓	✓	
Malek Road	✓	✓	N/A	
Manzanita Road	✓	✓	N/A	
Marin Avenue	✓	N/A	N/A	
Monterey Avenue	✓	N/A	N/A	
Mountain Avenue	✓	✓	✓	
Mulford Lane	✓	✓	N/A	
Old Maple Lane	✓	✓	N/A	
Robinson Road	✓	✓	✓	
Sierra Drive	✓	✓	N/A	
Siesta Way	✓	✓	✓	
State Highway 12	✓	✓	✓	
Sunnyside Avenue	✓	✓	✓	
Vailetti Drive	✓	✓	✓	
Vallejo Avenue	✓	✓	✓	
Verano Avenue	✓	✓	✓	
Waterman Avenue	✓	✓	N/A	
West Thomson Avenue	✓	✓	✓	
✓ = Available, N/A = Not Available				

Table 1-2 Existing Water System Infrastructure Summary (12/2016)

Street Name	Size	Pipe Type	Notes
Agua Caliente Road	8”	ACP	
Arroyo Road	6”	DIP	
Balsam Avenue	UNK	UNK	
Bernhard Avenue	N/A	N/A	No water available in street within Specific Plan Area.
Bonita Way	6”	PVC	
Boyes Boulevard	6”	ACP	
Calle Del Monte	8”	ACP	
Cedar Street	Varies 4”-6”	ACP	Refer to Water System Base Map for approximate locations.
Central Avenue	6”	PVC	
Depot Road	6”	PVC	
Donald Street	Varies 6”-8”	ACP	Refer to Water System Base Map for approximate locations.
East Thomson Avenue	6”	ACP	Refer to Water System Base Map for approximate locations.
Encinas Lane	8”	PVC	
Fairview Lane	6”	ACP PVC	Refer to Water System Base Map for approximate locations.
Fetters Avenue	8”	PVC	
First Avenue	Varies 6”-8”	ACP (6”) PVC (8”)	Refer to Water System Base Map for approximate locations.
Greger Street	6”	ACP	
ACP = Asbestos Cement, PVC = Polyvinyl Chloride, N/A = Not Available DIP = Ductile Iron Pipe, UNK = Unknown			

Table 1-2 cont. Existing Water System Infrastructure Summary (12/2016)

Street Name	Size	Pipe Type	Notes
Harley Street	6”	DIP PVC	Refer to Water System Base Map for approximate locations.
Hawthorne Avenue	6”	PVC	
Hooker Avenue	6”	PVC ACP	Refer to Water System Base Map for approximate locations.
Johnson Avenue	6”	ACP	
Keaton Avenue	6”	DIP	
Litchenberg Avenue	6”	ACP	
Lomita Avenue	6”	ACP PVC	Refer to Water System Base Map for approximate locations.
Madera Road	N/A	N/A	Units are served off either State Highway 12 or First Avenue.
Main Street	12”	PVC	
Malek Road	3”	UNK	
Manzanita Road	6”	PVC	
Marin Avenue	6”	PVC	
Monterey Avenue	6”	PVC	
Mountain Avenue	8”	ACP	
Mulford Lane	6”	PVC	
Old Maple Lane	6”	ACP	
Robinson Road	6”	ACP	
Sierra Drive	6”	ACP	
Siesta Way	Varies 6” – 10”	ACP (6”) PVC (10”)	
State Highway 12	Varies 6” – 12”	ACP (6”) PVC (12”)	
Sunnyside Avenue	6”	DIP	
Vailetti Drive	6”	ACP	
Vallejo Avenue	6”	PVC	
Verano Avenue	8”	PVC ACP	
Waterman Avenue	6”	ACP	
West Thomson Avenue	6”	ACP PVC	
ACP = Asbestos Cement, PVC = Polyvinyl Chloride, N/A = Not Available DIP = Ductile Iron Pipe, UNK = Unknown			

Table 1-3 Existing Sewer System Infrastructure Summary (12/2016)

Street Name	Size	Pipe Type	Notes
Agua Caliente Road	6”	VCP	Refer to Sanitary Sewer Base Map for approximate location.
Arroyo Road	6”	VCP	
Balsam Avenue	6”	VCP	
Bernhard Avenue	6”	VCP	
Bonita Way	6”	VCP	
Boyes Boulevard	6”	VCP	
Calle Del Monte	6”	VCP	
Cedar Street	N/A	N/A	Units adjoining street frontage are serviced through backyard sewer.
Central Avenue	6”	VCP	
Depot Road	6”	VCP	
Donald Street	6”	ACP/VCP	Refer to Sanitary Sewer Base Map for approximate location.
East Thomson Avenue	6”	VCP	
Encinas Lane	8”	PVC	
Fairview Lane	6”	ACP	Refer to Sanitary Sewer Base Map for approximate location.
Fetters Avenue	6”	VCP	
First Avenue	6”	VCP	Refer to Sanitary Sewer Base Map for approximate location.
Greger Street	6”	VCP	Refer to Sanitary Sewer Base Map for approximate location.
Harley Street	6”	VCP	
Hawthorne Avenue	N/A	N/A	No sewer available in street within Specific Plan Area.
Hooker Avenue	6”	ACP	
Johnson Avenue	6” & 18”	VCP (6”) RCP (18”)	18” is trunk main. Existing sewer lateral connections are to 6”.
Keaton Avenue	6”	VCP	
Litchenberg Avenue	18”	RCP	Trunk main. No sewer lateral connections.
Lomita Avenue	6”	VCP	
Madera Road	6”	VCP	Refer to Sanitary Sewer Base Map for approximate location.
VCP = Vitrified Clay Pipe, ACP = Asbestos Cement Pipe, N/A = Not Available			

Table 1-3 cont. Existing Sewer System Infrastructure Summary (12/2016)

Street Name	Size	Pipe Type	Notes
Main Street	6”	VCP	
Malek Road	6” & (2)18”	VCP (6”) RCP (18”)	18” are trunk main & bypass. Existing sewer later connections
Manzanita Road	6”	VCP	
Marin Avenue	N/A	N/A	No sewer available in street within Specific Plan Area.
Monterey Avenue	N/A	N/A	No sewer available in street within Specific Plan Area.
Mountain Avenue	8”	VCP	
Mulford Lane	6”	VCP	
Old Maple Lane	6”	VCP	
Robinson Road	6”	ACP	
Sierra Drive	6”	VCP	
Siesta Way	Varies 6” – 8”	PVC/VCP	Refer to Sanitary Sewer Base Map for approximate location.
State Highway 12	Varies 6” – 8”	VCP	Refer to Sanitary Sewer Base Map for approximate location.
Sunnyside Avenue	6”	VCP	
Vailetti Drive	8”	VCP	
Vallejo Avenue	6”	VCP	
Verano Avenue	Varies 6” – 8”	ACP/ VCP	Refer to Sanitary Sewer Base Map for approximate location.
Waterman Avenue	6”	VCP	
West Thomson Avenue	6”	VCP	
Misc. Easements	6” & 18”	VCP (6”) ACP (6”) RCP (18”)	Refer to Sanitary Sewer Base Map for approximate location.
VCP = Vitrified Clay Pipe, ACP = Asbestos Cement Pipe, N/A = Not Available			

Table 1-4 Existing Storm Drain Infrastructure Summary (12/2016)

Street Name	Size	Pipe Type	Notes
Agua Caliente Road	UNK	UNK	Roadside ditches w/ (2) catch basins located of the easterly side of intersection with State Highway 12.
Arroyo Road	UNK	UNK	Roadside ditches w/ (1) catch basin located of the southeasterly side of intersection with State Highway 12.
Balsam Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Bernhard Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area
Bonita Way	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Boyes Boulevard	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Calle Del Monte	UNK	UNK	Mainly sheet flow conditions with (1) catch basin located near the intersection with State Highway 12.
Cedar Street	UNK	UNK	Mainly sheet flow conditions with (2) catch basin located near the intersection with Vailetti Drive.
Central Avenue	36”	RCP	36” underground storm drain and (3) catch basins located near the intersection with State Highway 12.
Depot Road	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Donald Street	Varies 18”-24”	RCP	Refer to Storm Drain Base Map for approximate locations.
East Thomson Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Encinas Lane	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Fairview Lane	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Fetters Avenue	UNK	UNK	Mainly sheet flow conditions with (1) catch basin located near the intersection with State Highway 12.
First Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Greger Street	UNK	UNK	Mainly sheet flow conditions with (1) catch basin located near the intersection with Pine Avenue.
Harley Street	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.

N/A = Not Available, UNK = Unknown, RCP = Reinforced Concrete Pipe

Table 1-4 cont. Existing Storm Drain Infrastructure Summary (12/2016)

Street Name	Size	Pipe Type	Notes
Hawthorne Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Hooker Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Johnson Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Keaton Avenue	UNK	UNK	Roadside ditches w/ (1) catch basin located of the northeasterly side of intersection with State Highway 12.
Litchenberg Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Lomita Avenue	UNK	UNK	Roadside ditches w/ (2) catch basins located of the northerly side of intersection with Verano Avenue
Madera Road	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Main Street	UNK	UNK	Curb and gutter w/ (1) catch basin located of the northeasterly side of intersection with Verano Avenue
Malek Road	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Manzanita Road	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Marin Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Monterey Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Mountain Avenue	UNK	UNK	Roadside ditches w/ (1) catch basin located of the southeasterly side of intersection with State Highway 12.
Mulford Lane	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Old Maple Lane	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Robinson Road	UNK	UNK	Roadside ditches w/ (2) catch basins located of the northerly side of intersection with Verano Avenue and Donald Street.
Sierra Drive	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
Siesta Way	UNK	UNK	Curb and gutter w/ (2) catch basin located near the intersection with State Highway 12.

N/A = Not Available, UNK = Unknown, RCP = Reinforced Concrete Pipe

Table 1-4 cont. Existing Storm Drain Infrastructure Summary (12/2016)

Street Name	Size	Pipe Type	Notes
State Highway 12	Varies	Varies	Refer to Storm Drain Base Map for approximate locations.
Sunnyside Avenue	UNK	UNK	Roadside ditches w/ (2) catch basins located of the easterly side of intersection with State Highway 12.
Vailetti Drive	Varies	Varies	Refer to Storm Drain Base Map for approximate locations.
Vallejo Avenue	UNK	UNK	Sheet flow with (1) catch basin located of the southeasterly side of intersection with State Highway 12.
Verano Avenue	Varies	Varies	Refer to Storm Drain Base Map for approximate locations. Need further record drawings for unknown area.
Waterman Avenue	N/A	N/A	No known underground storm drain available in street within Specific Plan Area.
West Thomson Avenue	UNK	UNK	Underground drainage system present near the intersection with State Highway 12.
N/A = Not Available, UNK = Unknown, RCP = Reinforced Concrete Pipe			

Figure 1-1

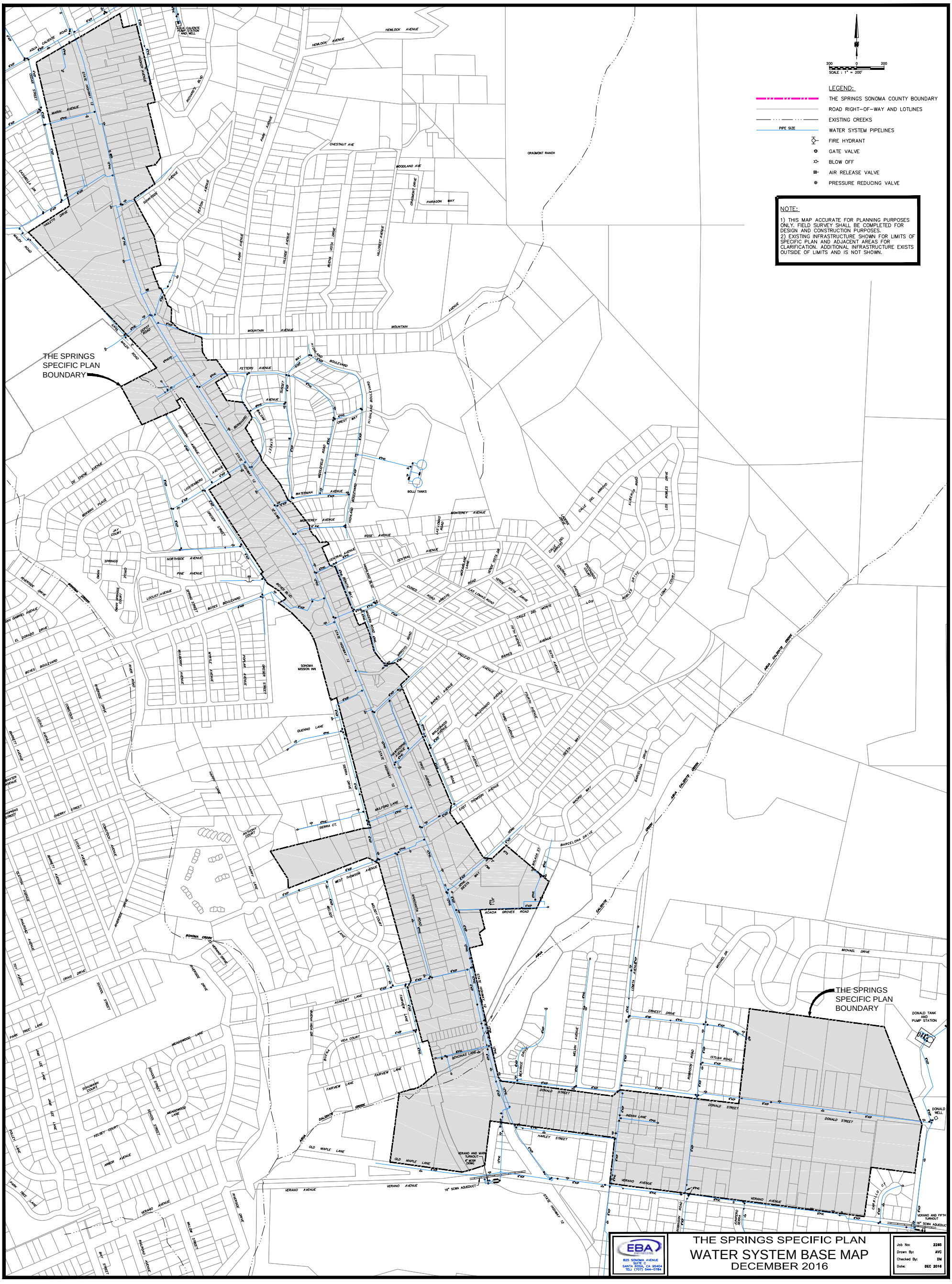
THE SPRINGS SPECIFIC PLAN BOUNDARY
THE SPRINGS SPECIFIC PLAN BOUNDARY
SCALE : 1" = 200'
LEGEND:
THE SPRINGS SONOMA COUNTY BOUNDARY
ROAD RIGHT-OF-WAY AND LOTLINES
EXISTING CREEKS
WATER SYSTEM PIPELINES
FIRE HYDRANT
GATE VALVE
BLOW OFF
AIR RELEASE VALVE
PRESSURE REDUCING VALVE
NOTE:
1) THIS MAP ACCURATE FOR PLANNING PURPOSES ONLY. FIELD SURVEY SHALL BE COMPLETED FOR DESIGN AND CONSTRUCTION PURPOSES.
2) EXISTING INFRASTRUCTURE SHOWN FOR LIMITS OF SPECIFIC PLAN AND ADJACENT AREAS FOR CLARIFICATION. ADDITIONAL INFRASTRUCTURE EXISTS OUTSIDE OF LIMITS AND IS NOT SHOWN.
SONOMA MISSION INN
CRAGMONT RANCH
BOLLI TANKS
DONALD TANK AND PUMP STATION
DONALD WELL
16" SCWA AQUEDUCT
VERANO AND MAIN TURNOUT
VERANO AND FIFTH TURNOUT
EBA ENGINEERING
825 SONOMA AVENUE SUITE C SANTA ROSA, CA 95404 TEL: (707) 544-0784
THE SPRINGS SPECIFIC PLAN
WATER SYSTEM BASE MAP
DECEMBER 2016
Job No: 2285
Drawn By: AVC
Checked By: DM
Date: DEC 2016

Figure 1-2


THE SPRINGS SPECIFIC PLAN BOUNDARY
THE SPRINGS SPECIFIC PLAN BOUNDARY
SCALE : 1" = 200'
LEGEND:
THE SPRINGS SONOMA COUNTY BOUNDARY
ROAD RIGHT-OF-WAY AND LOTLINES
EXISTING CREEKS
SANITARY SEWER PIPELINES AND DIRECTION OF FLOW
SANITARY SEWER MANHOLE
SANITARY SEWER CLEAN-OUT
SANITARY SEWER SERVICE CONNECTION
NOTE:
1) THIS MAP ACCURATE FOR PLANNING PURPOSES ONLY. FIELD SURVEY SHALL BE COMPLETED FOR DESIGN AND CONSTRUCTION PURPOSES.
2) EXISTING INFRASTRUCTURE SHOWN FOR LIMITS OF SPECIFIC PLAN AND ADJACENT AREAS FOR CLARIFICATION. ADDITIONAL INFRASTRUCTURE EXISTS OUTSIDE OF LIMITS AND IS NOT SHOWN.
EBA ENGINEERING
825 SONOMA AVENUE SUITE C SANTA ROSA, CA 95404 TEL: (707) 544-0784
THE SPRINGS SPECIFIC PLAN
SANITARY SEWER BASE MAP
DECEMBER 2016
Job No: 2285
Drawn By: AVC
Checked By: DM
Date: DEC 2016

Figure 1-3


THE SPRINGS SPECIFIC PLAN BOUNDARY
THE SPRINGS SPECIFIC PLAN BOUNDARY
SCALE : 1" = 200'
LEGEND:
THE SPRINGS SONOMA COUNTY BOUNDARY
ROAD RIGHT-OF-WAY AND LOTLINES
EXISTING CREEKS
WATER SYSTEM PIPELINES
FIRE HYDRANT
GATE VALVE
BLOW OFF
AIR RELEASE VALVE
PRESSURE REDUCING VALVE
NOTE:
1) THIS MAP ACCURATE FOR PLANNING PURPOSES ONLY. FIELD SURVEY SHALL BE COMPLETED FOR DESIGN AND CONSTRUCTION PURPOSES.
2) EXISTING INFRASTRUCTURE SHOWN FOR LIMITS OF SPECIFIC PLAN AND ADJACENT AREAS FOR CLARIFICATION. ADDITIONAL INFRASTRUCTURE EXISTS OUTSIDE OF LIMITS AND IS NOT SHOWN.
EBA ENGINEERING
825 SONOMA AVENUE
SUITE C
SANTA ROSA, CA 95404
TEL: (707) 544-0784
THE SPRINGS SPECIFIC PLAN
STORM DRAIN BASE MAP
DECEMBER 2016
Job No: 2285
Drawn By: AVC
Checked By: DM
Date: DEC 2016

Appendix B

Sonoma County Water Agency Sanitary Sewer – Sanitary Area Flow Characteristics

SCWA Standard Drawing Number 138

EFFECTIVE JANUARY 1, 2009

SANITATION AREA ZONE or DISTRICT	A PEOPLE PER ESD	B FLOW per ESD gpd	C ADWF per ESD	D PDWF PER ESD	E PEAK TO AVERAGE RATIO	F CONNECTED ESD LOAD	G ESTIMATED EQUIVALENT POPULATION
AIRPORT SZ	2.50	280	280	790	2.82	3,613.42	9,034
GEYSERVILLE SZ	2.30	200	200	574	2.87	344.03	791
PENNGROVE SZ	2.50	180	180	432	2.74	512.49	1,281
SEA RANCH SZ	2.50	200	200	542	2.71	572.60	1,432
OCCIDENTAL CSD	2.30	66	66	193	2.92	283.09	651
RUSSIAN RIVER CSD	2.30	120	120	277	2.31	3,185.74	7,327
SONOMA VALLEY CSD	2.60	200	200	388	1.94	17,282.74	44,935
SOUTHPARK CSD	2.60	233	233	522	2.24	4,012.76	10,433

A. THIS PLAN IS BASED UPON NUMBERS FOUND IN THE 2000 U.S. CENSUS.

B. THIS IS THE FLOW FOUND IN THE BILLING BASIS TABLES FOR EACH SANITATION AREA.

C. THIS IS THE AVERAGE DRY WEATHER FLOW PER ESD BASED UPON FLOW RECORDS.

D. THE PEAK DRY WEATHER FLOW IS DETERMINED BY MULTIPLYING THE ADWF (C) BY THE PEAK TO AVERAGE RATIO (E).

E. THE PEAK TO AVERAGE RATIO WAS DETERMINED BY MULTIPLYING THE ADWF (C) BY A CONSTANT K PRODUCED BY THE FORMULA:
$K=5.453/P^{0.0963}$ WHERE P=ESTIMATED POPULATION

F. THIS NUMBER COMES FROM THE AGENCY'S MASTER LIST OF BILLING RECORDS AND IS THE TOTAL NUMBER OF ESDs LISTED FOR EACH SANITATION AREA.

G. THIS IS ARRIVED AT BY MULTIPLYING THE NUMBER OF PEOPLE PER ESD (A) TIMES THE CONNECTED ESD LOAD (F)

H. PDWF PLUS 800 GALLONS PER ACRE PER DAY RAINFALL DERIVED INFLOW AND INFILTRATION PRODUCES THE DESIGN PEAK WET WEATHER FLOW (DWWF).

NOTES:

1. THE NUMBERS AND FORMULAS USED IN THIS TABLE ARE SUBJECT TO CHANGE.

2. PDWF PLUS 800 GALLONS PER ACRE PER DAY RAINFALL DERIVED INFLOW AND INFILTRATION PRODUCES THE DESIGN PEAK WET WEATHER FLOW (PWWF).

SCALE: NONE

SANITARY SEWER - SANITARY AREA FLOW CHARACTERISTICS

DATE: 02/03/09	REVIEWED BY:	APPROVED:	SONOMA COUNTY WATER AGENCY	DRAWING NUMBER: 138

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