Initial Study/Mitigated Negative Declaration

Eagle Meadows Residential Development

Prepared for:

City of Farmersville
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August 2023

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PROJECT INFORMATION

This document is the Initial Study/Mitigated Negative Declaration on the potential environmental effects of the City of Farmersville (City) Eagle Meadows Residential Project (Project). The City of Farmersville will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines. Copies of all materials referenced in this report are available for review in the project file during regular business hours at 909 W. Visalia Road, Farmersville, CA 93223.

Project title

Eagle Meadows Residential Project

Lead agency name and address

City of Farmersville
909 W. Visalia Road
Farmersville, California 93223

Contact person and phone number

Karl Schoettler, City Planner
City of Farmersville: (559) 734-8737

Project location

The City of Farmersville is located in Tulare County in the central part of the San Joaquin Valley, east of the City of Visalia (see Figure 1). The 48.9-acre Project site is located south of West Visalia Road and west of South Farmersville Boulevard (see Figure 2) and the site would occupy Assessor's Parcel Numbers (APNs) 130-040-020 and 130-040-014. State Route 198 runs east-west through Farmersville, approximately 2.4 miles north of the Project site.

Figure 1 – Location

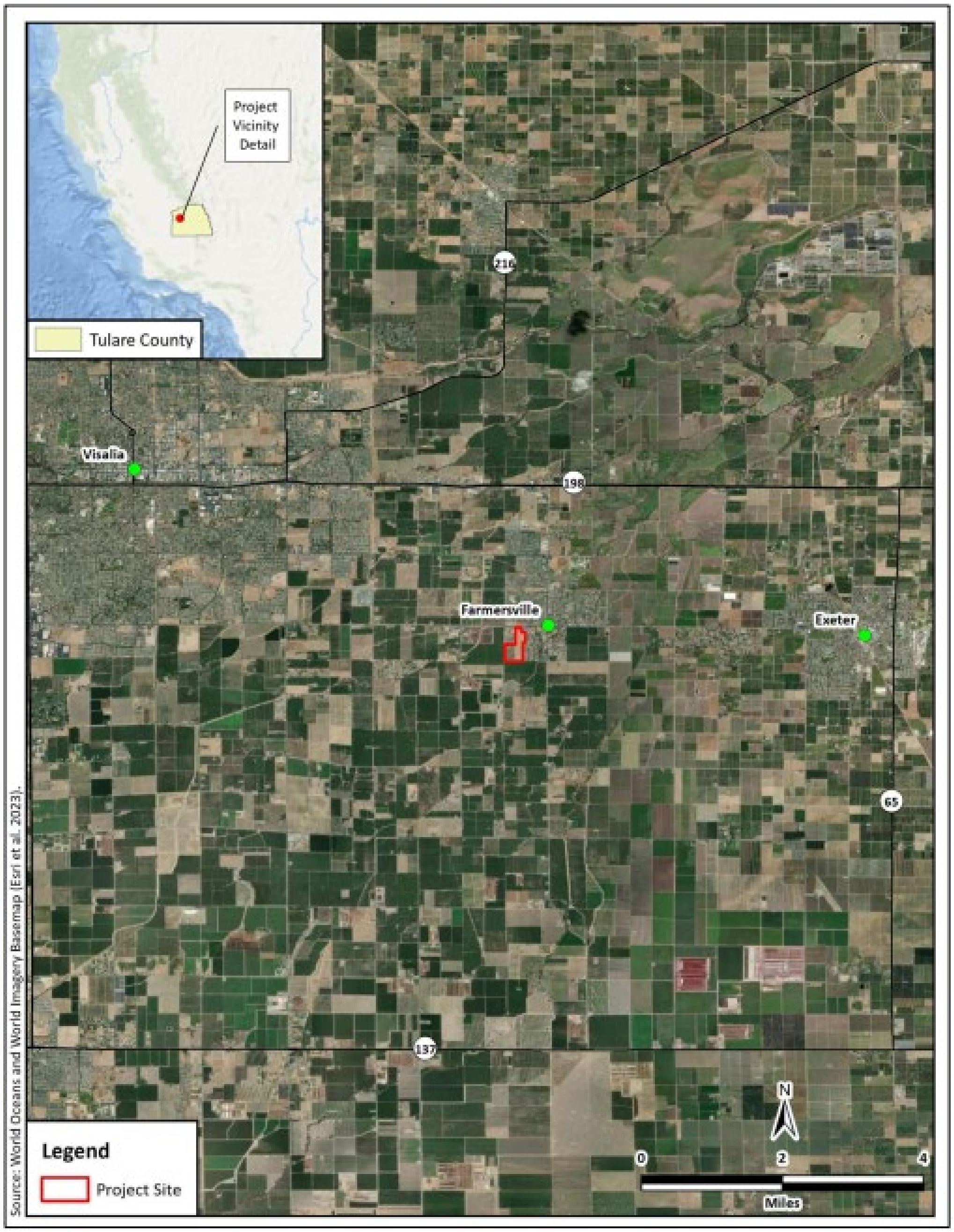


Figure 2 – Site Aerial

Project sponsor's name/address

Smee Homes
444 N. Prospect, Suite A
Porterville, CA 93257

General plan designation

Low Density Residential and Open Space

Zoning

R-1 (Single Family Residential) and P/QP (Public/Quasi Public)

Project Description

The proposed Eagle Meadows Residential Project (proposed Project) applicant is proposing to subdivide and develop approximately 48.9 acres of land into a planned community with 242 single-family residential units and two parks in the City of Farmersville.

The proposed Project consists of a change of land use and zone designation, Conditional Use Permit, and approval of a Tentative Subdivision Map to allow for the development. Specifically, the proposed Project includes:

- Approve a General Plan Amendment for the proposed 45.58-acre residential land parcels from "Medium Density Residential" to "Low Density Residential", and the two park areas of 3.32 acres to Open Space on the Farmersville General Plan land use map.
- Approve a Zone Change to:
  - Apply the (PD) "Planned Development" overlay zone to proposed residential portions of the site.
  - P-QP (Public/Quasi Public) for the two parks across 3.32 acres.
- Approve the Project's Tentative Subdivision Map.

Construction Schedule

The proposed Project construction will require site preparation activities such as site preparation/grubbing to remove the existing orchards and site grading activities. Construction is expected to occur over three years as determined by market demands and is anticipated to begin in October of 2023.

Site Circulation and Access

The site has been designed with nine points of ingress and egress. One of these points connects at Visalia Road along the northern edge of the project, two access points connect at Ventura Avenue to the east, two access points connect at Virginia Avenue to the west, and four access points connect at Tulare Street to the south. The Project will be responsible for construction of internal roadways as well as for improvements to surrounding roadways to accommodate the Project.

Infrastructure

The Project includes the construction of a 0.93-acre park/storm drain basin and a 2.39-acre park/storm drain basin, for a total of 3.32 acres of park/storm drain basins and will require connection to various City-operated systems such as sewer, water and storm drain facilities. The project will be responsible for the construction of connection points to the City's existing infrastructure. The project also includes improvements and landscaping along the frontage roads and within the site itself. A seven-foot block sound wall will be constructed along the entire project site frontage adjacent to Virginia Avenue and along Ventura Avenue between Harold Street and Sycamore Street.

Surrounding Land Uses/Existing Conditions

The proposed Project site currently consists of fallowed agricultural fields and orchards. An unnamed canal borders the western edge of the property. The property has vegetation cover of primarily annual grasses and forbs, as well as the cultivated trees in the orchard region. The site is highly disturbed.

Lands surrounding the proposed Project are described as follows:

- North: Vacant land zoned C-G (General Commercial) and a church, with single-family residences further north. There are also single family residences to the north along Qualls Court.
- South: Orchards and fallowed agricultural land.
- East: Single-family residences and several churches.

- West: Single-family residences, the Farmersville Volunteer Fire Department and a building supply store, with cultivated orchards lying further west.

Other Public Agencies Involved

- The adoption of a Mitigated Negative Declaration by the City of Farmersville
- Approval of a General Plan Amendment by the City of Farmersville
- Approval of a Zone Change by the City of Farmersville
- Approval of a Conditional Use Permit by the City of Farmersville
- Approval of a Tentative Subdivision Map by the City of Farmersville
- Approval of Building Permits by the City of Farmersville
- Approval of a Stormwater Pollution Prevention Plan by the Central Valley Regional Water Quality Control Board
- Dust Control Plan Approval letter from the San Joaquin Valley Air Pollution Control District
- Compliance with other federal, state and local requirements.

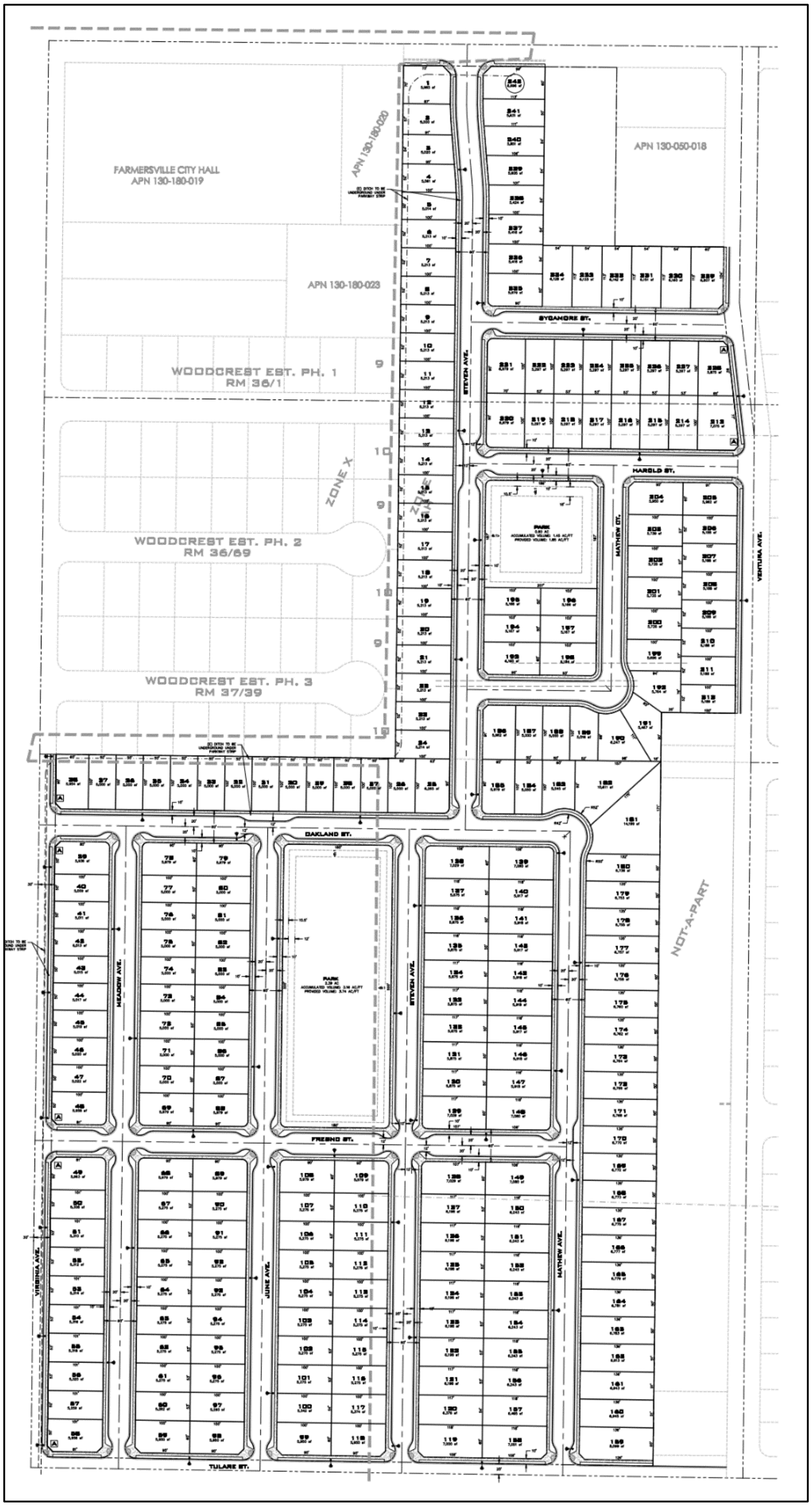
Tribal Consultation

ASM Affiliates, Inc. notified the following California Native American Tribes pursuant to AB 52 (Public Resources Code Section 21080.3.1, et seq.) on behalf of the City of Farmersville on March 21, 2022.

- Big Sandy Rancheria of Western Mono Indians
- Santa Rosa Indian Community of the Santa Rosa Rancheria
- Tule River Indian Tribe
- Wuksache Indian Tribe/Eshom Valley band

Tribes were provided 30 days, to request consultation pursuant to those statutes. The Santa Rosa Rancheria – Tachi Yokuts responded on March 31, 2022 and requested to be retained to perform a cultural presentation for all construction staff and to be informed of any and all discoveries made related to the Project. No other comments were received.

Figure 3 – Site Plan



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture Resources and Forest Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Energy
☐	Geology / Soils	☐	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials
☐	Hydrology / Water Quality	☐	Land Use / Planning	☐	Mineral Resources
☐	Noise	☐	Population / Housing	☐	Public Services
☐	Recreation	☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities / Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Karl Schoettler (signature) 8/21/2023

Karl Schoettler Date

City Planner

City of Farmersville

ENVIRONMENTAL CHECKLIST

I. AESTHETICS **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

RESPONSES

a. <u>Have a substantial adverse effect on a scenic vista?</u>

Less than Significant Impact. The Project applicant is proposing to subdivide and develop approximately 48.9 acres of land into a planned single-family residential community, with a maximum of 242 lots and two parks. The proposed Project also includes developments and improvements typically associated with a new residential development, including access roads, lighting and site landscaping. The structures will conform to design standards set forth by the City's General Plan and Zoning

Ordinance. The proposed Project site is located in an area that is partially surrounded by urban uses and will not result in a use that is visually incompatible with the surrounding area.

The City of Farmersville General Plan does not identify any scenic vistas within the Project area. A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area.

Construction activities will be visible from the adjacent roadsides; however, the construction activities will be temporary in nature and will not affect a scenic vista. The impact will be ***less than significant***.

Mitigation Measures: None are required.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. There are no state designated scenic highways within the immediate proximity to the Project site. California Department of Transportation Scenic Highway Mapping System identifies SR 198 east of SR 99 as an Eligible State Scenic Highway. This is the closest highway, located approximately 2.3 miles north of the Project site; however, the Project site is both physically and visually separated from SR 198 by intervening land uses. In addition, no scenic highways or roadways are listed within the Project area in the City of Farmersville's General Plan or Tulare County's General Plan. Based on the National Register of Historic Places (NRHP) and the City's General Plan, no historic buildings exist on the Project site. The proposed Project would not damage any trees, rock outcroppings or historic buildings within a State scenic highway corridor. Any impacts would be considered ***less than significant***.

Mitigation Measures: None are required.

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and regulations governing scenic quality?

Less Than Significant Impact. Site construction will include residences, internal access roads, lighting, site landscaping and additional related improvements. The residences will be single-family and will conform to design standards set forth by the City's General Plan and Zoning Ordinance. The proposed Project site is located in an area that is substantially surrounded by urban uses, including commercial, agricultural, and residential, and as such, will not result in a use that is visually incompatible with the surrounding area. The proposed Project will not substantially degrade the existing visual character or quality of the area or its surroundings.

The impact will be ***less than significant***.

Mitigation Measures: None are required.

d. <u>Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</u>

Less Than Significant Impact. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare and waste energy, and if designed incorrectly, could be considered unattractive. Light that falls beyond the intended area is referred to as "light trespass". Types of light trespass include spillover light and glare. Minimizing all these forms of obtrusive light is an important environmental consideration. A less obtrusive and well-designed energy efficient fixture would face downward, emit the correct intensity of light for the use, and incorporate energy timers.

Spillover light is light emitted by a lighting installation that falls outside the boundaries of the property on which the installation is sited. Spillover light can adversely affect light-sensitive uses, such as residential neighborhoods at nighttime. Because light dissipates as it travels from the source, the intensity of a light fixture is often increased at the source to compensate for the dissipated light. This can further increase the amount of light that illuminates adjacent uses. Spillover light can be minimized by using only the level of light necessary, and by using cutoff type fixtures or shielded light fixtures, or a combination of fixture types.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Glare can be reduced by design features that block direct line of sight to the light source and that direct light downward, with little or no light emitted at high (near horizontal) angles, since this light would travel long distances. Cutoff-type light fixtures minimize glare because they emit relatively low-intensity light at these angles.

Currently, the sources of light in the Project area are from streetlights, the vehicles traveling along West Visalia Road and nearby residential streets, and nighttime lighting from adjacent residences and churches. The Project would necessitate street and residential nighttime lighting and such lighting that would be subject to City standards. Accordingly, potential impacts would be considered ***less than significant***.

Mitigation Measures: None are required.

II. AGRICULTURE AND FOREST RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

RESPONSES

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The Project site is located in an area of the City considered *Farmland of Local Importance* and *Prime Farmland* by the State Farmland Mapping and Monitoring Program.[1] The majority of the Project site is within the City limits and is designated Residential by the General Plan. The entire site is within the City limits and is also designated Residential in the City's General Plan. As such, any potential conversion of Prime Farmland has been analyzed in the City's General Plan EIR (SCH# 2002071029). The proposed Project site is also included in the Available Residential Land Inventory as part of the Farmersville Housing Element 2016-2023.[2] Therefore, the proposed Project does not have the potential to result in the new conversion of Farmland to non-agricultural uses or forestland uses to non-forestland. There is ***no impact***.

Mitigation Measures: None are required.

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The proposed Project site is within the City of Farmersville and zoned and designated by the City's General Plan as Residential. The site is not under a Williamson Act Contract. There are ***no impacts.***

Mitigation Measures: None are required.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The Project is not zoned for forestland and does not propose any zone changes related to forest or timberland. There is ***no impact***.

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[1] California Department of Conservation Division of Land Resource Protection. Farmland Mapping and Monitoring Program. https://maps.conservation.ca.gov/DLRP/CIFF. Accessed May 2023.

[2] Map 6-1, Available Residential Land Inventory, Farmersville Housing Element 2016-2023. https://www.cityoffarmersville-ca.gov/DocumentCenter/View/389/Housing-Element. Accessed July 2023.

Mitigation Measures: None are required.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. No conversion of forestland, as defined under Public Resource Code or General Code, as referenced above, would occur as a result of the Project. There is ***no impact***.

Mitigation Measures: None are required.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. No Farmland conversion would occur on the Project site. Surrounding land uses include residential, commercial, and agriculture. The proposed Project site is designated for urban development by the Farmersville General Plan and as such, does not have the potential to result in the new conversion of Farmland to non-agricultural uses or forestland uses to non-forestland. There is ***no impact***.

Mitigation Measures: None are required.

III. AIR QUALITY

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d. Result in other emissions (such as those leading to odors or adversely affecting a substantial number of people)?	☐	☐	☒	☐

The following information was provided by an Air Quality, Health Risk Analysis, Greenhouse Gas, and Energy Technical Memorandum that was performed on behalf of the proposed Project by Johnson, Johnson & Miller Air Quality Consulting Services, report date June 23, 2023. The report can be read in its entirety in Appendix A.

RESPONSES

a. <u>Conflict with or obstruct implementation of the applicable air quality plan?</u>

Less than Significant Impact. Air Quality Plans (AQPs) are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the Air Basin can reach attainment for the ambient air quality standards. The proposed Project site is located within the jurisdictional boundaries of the SJVAPCD. To show attainment of the standards, the SJVAPCD analyzes the growth projections in the Valley, contributing factors in air pollutant emissions and formations, and existing and adopted emissions controls. The SJVAPCD then formulates a control strategy to reach attainment that includes both State and SJVAPCD regulations and other local programs and measures. For projects that include stationary sources of emissions, the SJVAPCD relies on project compliance with Rule 2201—New and Modified Stationary Source Review to ensure that growth in stationary source emissions would not interfere with the applicable AQP. Projects exceeding the offset thresholds included in the rule are required to purchase offsets in the form of Emission Reduction Credits (ERCs).

The CEQA Guidelines indicate that a significant impact would occur if the project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI indicates that projects that do not exceed SJVAPCD regional criteria pollutant emissions quantitative thresholds would not conflict with or obstruct the applicable AQP.

Contribution to Air Quality Violations

As discussed in Impact III(b) below, emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ associated with the proposed Project would not exceed the SJVAPCD's significance thresholds during the construction phase (see Table 1). Similarly, emissions of ROG, NO_X, CO, SO_X, $PM_{2.5}$ or PM_{10} during operations would not exceed any applicable threshold of significance (see Table 2). Therefore, regarding this criterion, the Project would be considered less than significant.

Air Quality Plan Control Measures

The AQP contains a number of control measures that are enforceable requirements through the adoption of rules and regulations. The following rules and regulations are relevant to the Project:

Rule 4201—Particulate Matter Concentration. This rule shall apply to any source operation that emits or may emit dust, fumes, or total suspended particulate matter.

Rule 4601—Architectural Coatings. The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling. Only compliant components are available for purchase in the San Joaquin Valley.

Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641. This regulation is enforced on the asphalt provider.

Rule 4702—Internal Combustion Engines. The purpose of this rule is to limit the emissions of NO_X, carbon monoxide (CO), VOC, and sulfur oxides (SO_X) from internal combustion engines. If the project includes emergency generators, the equipment is required to comply with Rule 4702.

Regulation VIII—Fugitive PM_{10} Prohibitions. This regulation is a control measure that is one main strategies from the 2006 PM_{10} for reducing the PM_{10} emissions that are part of fugitive dust. Projects over 10 acres are required to file a Dust Control Plan (DCP) containing dust control practices sufficient to comply with Regulation VIII. Rule 8021 regulates construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

Rule 9510–Indirect Source Review. This rule reduces the impact of NO_X and PM_{10} emissions from growth within the SJVAB. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site District-administered projects, or a combination of the two.

Conclusion

The Project would comply with all applicable CARB and SJVAPCD rules and regulations. Therefore, the Project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan with regards to this criterion.

The Project's regional operational emissions would not exceed any applicable SJVAPCD prior to the incorporation of mitigation measures (see Impact III(b)). Therefore, the Project would be considered consistent with the existing AQPs.

Based on the findings above, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. The impact would be ***less than significant***.

Mitigation Measures: None are required.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. To result in a less than significant impact, emissions of nonattainment pollutants must be below the SJVAPCD's regional significance thresholds. This is an approach recommended by the SJVAPCD's in its GAMAQI. The SJVAB is in nonattainment for ozone, PM_{10} (State only), and $PM_{2.5}$. Ozone is a secondary pollutant that can be formed miles from the source of emissions, through reactions of ROG and NO_X emissions in the presence of sunlight. Therefore, ROG and NO_X are termed ozone precursors. As such, the primary pollutants of concern during project construction and operation are ROG, NO_X, PM_{10}, and $PM_{2.5}$.

Since the SJVAB is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, it is considered to have an existing significant cumulative health impact without the project. When this occurs, the analysis considers whether the project's contribution to the existing violation of air quality standards is cumulatively considerable. The SJVAPCD regional thresholds for NO_X, ROG/VOC, PM_{10}, or $PM_{2.5}$ are applied as cumulative contribution thresholds. The SJVAPCD GAMAQI adopted in 2015 contains thresholds for CO, NO_X, ROG, SO_X, PM_{10}, and $PM_{2.5}$. Air pollutant emissions have both regional and localized effects. The Project's regional emissions are compared to the applicable SJVAPCD regional thresholds below to address if the Project would result in a cumulatively considerable net increase of any criteria pollutant (including ozone precursors) of concern.

Criteria Pollutant Emission Estimates

Construction Emissions (Regional)

Construction emissions associated with the development envisioned for the proposed Project are shown in Table 1 prior to the incorporation of any mitigation.

Table 1

Summary of Construction-Generated Emissions of Criteria Air Pollutants – Unmitigated[3]

Emissions Source	Emissions (Tons/Year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Site Work (2023)	0.13	1.30	1.14	< 0.01	0.29	0.14
Site Work (2024)	0.11	0.90	0.90	< 0.01	0.18	0.07
Home Construction (2023)	0.03	0.21	0.27	< 0.01	0.02	0.01
Home Construction (2024)	0.27	1.97	2.68	< 0.01	0.23	0.10
Home Construction (2025)	0.22	1.63	2.33	< 0.01	0.19	0.08
Home Construction (2026)	1.63	0.79	1.18	< 0.01	0.11	0.04
Total Construction Duration						
Project Total	**2.39**	**6.80**	**8.50**	**< 0.01**	**1.02**	**0.44**
Significance Thresholds	**10**	**10**	**100**	**27**	**15**	**15**
Exceed Significance Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**
Notes: *PM_{10} and $PM_{2.5}$ emissions are from the mitigated output to reflect compliance with Regulation VIII—Fugitive PM_{10} Prohibitions.* *Source of Emissions: Modeling Assumptions and CalEEMod Output Files (Attachment A of Appendix A).*						

[3] Eagle Meadows Residential Project in Farmersville. Air Quality, Health Risk Analysis, Greenhouse Gas, and Energy Technical Memorandum. Johnson Johnson and Miller Air Quality Consulting Services. Prepared on June 23, 2023. Appendix A.

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.

As shown in Table 1 above, emissions from construction activities associated with the proposed Project would fall below the significance thresholds. Therefore, regional and cumulative impacts associated with construction of the proposed Project are less than significant.

Operational Emissions (Regional)

Operational emissions occur over the lifetime of the project. The SJVAPCD considers permitted and non-permitted emission sources separately when making significance determinations. In addition, the annual operational emissions are also considered separately from construction emissions. Operational emissions associated with the proposed Project are shown in Table 2. Operational emissions were estimated using a full buildout scenario in the earliest year of operations (2024), which provides a conservative estimate of emissions and resulting potential impacts.

Table 2

Summary of Operational Emissions of Criteria Air Pollutants – Unmitigated[4]

Source	Emissions (tons/year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	2.13	0.09	1.27	< 0.01	0.01	0.01
Energy	0.02	0.41	0.17	< 0.01	0.03	0.03
Mobile (Automobiles)	1.68	2.12	17.23	0.04	3.37	0.87
Annual Total (2024)	**3.83**	**2.62**	**18.67**	**0.04**	**3.41**	**0.91**
Significance Thresholds	**10**	**10**	**100**	**27**	**15**	**15**
Exceed Significance Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

Emissions were quantified using CalEEMod based on project details and earliest operational year for the proposed Project.

Source: Modeling Assumptions and CalEEMod Output Files (Attachment A of Appendix A).

As shown in Table 2, operational emissions would not exceed the applicable SJVAPCD thresholds of significance for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. Therefore, the impact from operations of the Project would be ***less than significant***.

[4] Ibid.

Conclusion

As shown in Table 1, the Project's regional emissions would not exceed the applicable regional criteria pollutant emissions quantitative thresholds during Project construction. During operations, the Project would not exceed the applicable regional criteria pollutant emissions quantitative thresholds (see Table 2). Therefore, the impact would be ***less than significant***.

Mitigation Measures: None are required.

c. Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact with Mitigation. Emissions occurring at or near the Project have the potential to create a localized impact that could expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. The SJVAPCD considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

The closest existing sensitive receptors to the Project site include residential receptors, the closest of which include existing single-family homes located within approximately 50 feet east of the Project boundary and single-family homes located within approximately 50 feet west of the northern third of the Project site. See Attachment B (Construction Health Risk Assessment and Operational Health Risk Screening) of Appendix A for a graphical representation of the sensitive receptor locations within approximately ¼-mile of the Project site.

Localized Impacts

Emissions occurring at or near the project have the potential to create a localized impact also referred to as an air pollutant hotspot. Localized emissions are considered significant if when combined with background emissions, they would result in exceedance of any health-based air quality standard. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard. The pollutants of concern for localized impact in the SJVAB are NO_2, SO_X, and CO.

The SJVAPCD has provided guidance for screening localized impacts in the GAMAQI that establishes a screening threshold of 100 pounds per day of any criteria pollutant. If a project exceeds 100 pounds per day of any criteria pollutant, then ambient air quality modeling would be necessary. If the project does not exceed 100 pounds per day of any criteria pollutant, then it can be assumed that it would not cause a violation of an ambient air quality standard.

Construction: Localized Concentrations of PM_{10}, $PM_{2.5}$, CO, SO_X, and NO_X

Local construction impacts would be short-term in nature lasting only during the duration of construction. As shown in Table 3 below, on-site construction emissions would be less than 100 pounds per day for each of the criteria pollutants. To present a conservative estimate, on-site emissions for on-road construction vehicles were included in the localized analysis. Based on the SJVAPCD's guidance, the construction emissions would not cause an ambient air quality standard violation.

Operation: Localized Concentrations of PM_{10}, $PM_{2.5}$, CO, SO_X, and NO_X

Localized impacts could occur in areas with a single large source of emissions such as a power plant or with multiple sources concentrated in a small area such as a distribution center. The maximum daily operational emissions would occur at project buildout, which was modeled for the year 2024 (the earliest year of operations). Operational emissions include those generated on-site by area sources such as consumer products and landscape maintenance, energy use from natural gas combustion, and motor vehicles operation at the project site. Motor vehicle emissions are estimated for on-site operations using trip lengths for on-site travel and ¼-mile of off-site emissions.

As shown in Table 4 below, operational modeling of on-site emissions for the Project indicate that the Project would not exceed 100 pounds per day for each of the criteria pollutants. Therefore, based on the SJVAPCD's guidance, the operational emissions would not cause an ambient air quality standard violation. As such, impacts would be less than significant.

Table 3

Localized Concentrations of PM_{10}, $PM_{2.5}$, CO, and NO_X for Construction – Unmitigated[5]

Emission Source	On-site Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2023						
Highest Daily Construction Site Work (2023)	4.03	39.83	35.84	0.06	10.85	5.74
Highest Daily Construction Home Construction (2023)	1.80	13.32	16.17	0.03	1.03	0.60
Highest Combined Construction	5.83	53.15	52.01	0.09	11.88	6.34
2024						
Highest Daily Construction Site Work (2024)	3.61	34.53	30.66	0.06	6.42	2.90
Highest Daily Construction Home Construction (2024)	3.06	20.54	25.90	0.04	1.75	0.95
Highest Combined Construction	6.67	55.07	56.56	0.1	8.17	3.85
2025						
Highest Daily Construction Home Construction (2025)	1.67	11.81	15.79	0.03	0.90	0.48
2026						
Highest Daily Construction Home Construction (2026)	57.10	12.05	16.66	0.03	1.25	0.49
Total Construction Duration						
Highest Daily Maximum	**57.10**	**55.07**	**56.56**	**0.10**	**11.88**	**6.34**
Significance Thresholds	**—**	**100**	**100**	**100**	**100**	**100**
Exceed Significance Thresholds?	**—**	**No**	**No**	**No**	**No**	**No**

Note: Overlap of construction activities is based on the construction schedule shown in Appendix A.

Source of Emissions: Modeling Assumptions and CalEEMod Output Files (Attachment A). Maximum daily emissions represent the maximum daily emissions between the Summer and Winter scenarios.

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.

[5] Ibid.

Table 4

Localized Concentrations of PM_{10}, $PM_{2.5}$, CO, and NO_X for Operations[6]

Source	On-site Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	9.10	3.29	23.14	0.01	0.84	0.23
Energy	12.41	2.01	14.53	0.01	0.17	0.17
Mobile (Automobiles)	0.13	2.23	0.95	0.01	0.18	0.18
Total	**21.64**	**7.53**	**38.62**	**0.03**	**1.19**	**0.58**
Significance Thresholds	—	**100**	**100**	**100**	**100**	**100**
Exceed Significance Thresholds?	—	**No**	**No**	**No**	**No**	**No**

Source of Emissions: Modeling Assumptions and CalEEMod Output Files (Attachment A of Appendix A).

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.

Toxic Air Contaminants

Construction – Health Risk Analysis

Project construction would involve the use of diesel-fueled vehicles and equipment that emit DPM, which is considered a TAC. The SJVAPCD's current threshold of significance for TAC emissions is an increase in cancer risk for the maximally exposed individual of 20 in a million (formerly 10 in a million). The SJVAPCD's 2015 GAMAQI does not currently recommend analysis of TAC emissions from project construction activities, but instead focuses on projects with operational emissions that would expose sensitive receptors over a typical lifetime of 70 years. In addition, the most intense construction activities of the project's construction would occur during site preparation and grading phases over a short period. There are no conditions unique to the project site that would require more intense construction activity compared to typical development. Examples of situations that would warrant closer scrutiny may include sites that would require extensive excavation and hauling due to existing site conditions. Building construction typically requires limited amounts of diesel equipment relative to site clearing activities.

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[6] Ibid.

Nonetheless, a construction Health Risk Analysis (HRA) was prepared as part of this analysis. In addition, the analysis includes an evaluation of potential health impacts from construction and operations of the project considered together, over a 70-year exposure scenario.

The results of the HRA prepared for Project construction for cancer risk and long-term chronic cancer risk are summarized below. Construction emissions were estimated assuming adherence to all applicable rules, regulations, and Project design features. The construction emissions were assumed to be distributed over the Project area with a working schedule of eight hours per day and five days per week. Emissions were adjusted by a factor of 4.2 to convert for use with a 24-hour-per-day, 365 day-per-year averaging period. Health risk calculations were completed using HARP2. Detailed parameters and complete calculations are included in Attachment B of Appendix A.

The estimated health and hazard impacts at the Maximally Exposed Receptor (MER) from the Project's construction emissions are provided in Table 5.

Table 5

Summary of the Health Impacts from Unmitigated Construction of the Project[7]

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
Risks and Hazards at the MER			
Risks and Hazards at the MER	28.47	0.0153	0.0000
Significance Threshold	**20**	**1**	**1**
Threshold Exceeded in Any Scenario?	**Yes**	**No**	**No**

MER = Maximally Exposed Receptor
Eagle Meadows Residential Project Unmitigated Construction MER: Receptor #158 (36°17'42.5"N 119°12'41.9"W)
Source: Construction Health Risk Assessment and Operational Health Risk Screening (Attachment B of Appendix A).

As shown in Table 5, estimated health risks from elevated DPM concentrations during construction of the proposed Project would exceed the applicable cancer risk significance threshold in at least one scenario. This represents a potentially significant construction TAC exposure impact. Therefore, mitigation is required to reduce the impact during the construction period to below a level of significance.

Mitigation measure AIR-1 requires the Project applicant, project sponsor, or construction contractor to provide documentation to the City of Farmerville that all off-road diesel-powered construction equipment greater than 50 horsepower meet EPA or CARB Tier 4 Interim off-road emissions standards

[7] Ibid.

or will utilize Level 3 filters. Table 6 shows the health risks and non-cancer hazard index for construction with implementation of mitigation measure AIR-1.

Table 6

Summary of the Health Impacts from Mitigated Construction of the Project[8]

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
Risks and Hazards at the MER—Tier 4 Interim Equipment Scenario			
Risks and Hazards at the MER	4.98	0.0027	0.0000
Risks and Hazards at the MER—Level 3 Filters Scenario			
Risks and Hazards at the MER	6.23	0.0034	0.0000
Highest Risks and Hazards at the MER after Incorporation of MM AIR-1			
Risks and Hazards at the MER	6.23	0.0034	0.0000
Significance Threshold	**20**	**1**	**1**
Threshold Exceeded in Any Scenario?	**No**	**No**	**No**
MER = Maximally Exposed Receptor *Eagle Meadows Residential Project Unmitigated Construction MER: Receptor #158 (36°17'42.5"N 119°12'41.9"W)* *Source: Construction Health Risk Assessment and Operational Health Risk Screening (Attachment B of Appendix A).*			

As noted in Table 6, calculated health metrics from the proposed Project's construction DPM emissions would not exceed the cancer risk significance threshold or non-cancer hazard index significance threshold at the MEI with incorporation of mitigation measure AIR-1. Therefore, the proposed Project would not result in a significant impact on nearby sensitive receptors from TACs during construction.

<u>Operations</u>

Unlike warehouses or distribution centers, the daily vehicle trips generated by the proposed residential project would be primarily generated by passenger vehicles. Passenger vehicles typically use gasoline engines rather than the diesel engines that are found in heavy-duty trucks. Gasoline-powered vehicles do emit TACs in the form of toxic organic gases, some of which are carcinogenic. Compared to the combustion of diesel, the combustion of gasoline had relatively low emissions of TACs. Thus, residential projects typically produce limited amounts of TAC emissions during operation. Nonetheless, it is anticipated that there would be some heavy-duty trucks visiting the Project site during operations.

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[8] Ibid.

Consistent with SJVAPCD guidance, an operational prioritization screening analysis was completed for the proposed Project.

Operational DPM emissions from diesel trucks were estimated using EMFAC 2021 emission factors and estimated truck travel and idling at the Project site. The emissions were entered into the SJVAPCD Prioritization Screening Tool to determine the risk scores, with complete calculations and assumptions included as part of Attachment B of Appendix A. The results of the screening analysis are provided in Table 7.

Table 7

Prioritization Tool Health Risk Screening Results[9]

Impact Source	Cancer Risk Score	Chronic Risk Score	Acute Risk Score
Diesel Trucks	3.622	0.007	0.000
Total Risk from Project Operations	**3.622**	**0.007**	**0.000**
Screening Risk Score Threshold	**10**	**1**	**1**
Screening Thresholds Exceeded?	**No**	**No**	**No**
Source: Construction Health Risk Assessment and Operational Health Risk Screening (Attachment B of Appendix A)			

As shown in Table 7, the Project would not exceed the cancer risk or chronic hazard screening threshold levels during project operations. The primary source of the emissions responsible for chronic risk are from diesel trucks. DPM does not have an acute risk factor. Since the Project does not exceed the applicable SJVAPCD screening thresholds for cancer risk, acute risk, or chronic risk, this impact would be less than significant.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The San Joaquin Valley is considered an endemic area for Valley fever. The San Joaquin Valley is considered an endemic area for Valley fever. During 2000–2018, a total of 65,438 coccidioidomycosis cases were reported in California; median statewide annual incidence was 7.9 per 100,000 population and varied by region from 1.1 in Northern and Eastern California to 90.6 in the Southern San Joaquin Valley,

[9] Ibid.

with the largest increase (15-fold) occurring in the Northern San Joaquin Valley. Incidence has been consistently high in six counties in the Southern San Joaquin Valley (Fresno, Kern, Kings, Madera, Tulare, and Merced counties) and Central Coast (San Luis Obispo County) regions.[10] California experienced 7,517 new probable or confirmed cases of Valley fever in 2022. A total of 319 suspect, probable, and confirmed Valley fever cases were reported in Tulare County in 2022.[11]

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
2) Old (prehistoric) Indian campsites near fire pits
3) Areas with sparse vegetation and alkaline soils
4) Areas with high salinity soils
5) Areas adjacent to arroyos (where residual moisture may be available)
6) Packrat middens
7) Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils
8) Sandy, well-aerated soil with relatively high water-holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

1) Cultivated fields
2) Heavily vegetated areas (e.g., grassy lawns)
3) Higher elevations (above 7,000 feet)
4) Areas where commercial fertilizers (e.g., ammonium sulfate) have been applied
5) Areas that are continually wet
6) Paved (asphalt or concrete) or oiled areas
7) Soils containing abundant microorganisms

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[10] Centers for Disease Control and Prevention (CDC). 2020. Regional Analysis of Coccidioidomycosis Incidence—California, 2000–2018. Website: https://www.cdc.gov/mmwr/volumes/69/wr/mm6948a4.htm?s_cid=mm6948a4_e. Accessed June 16, 2023.

[11] California Department of Public Health (CDPH). 2021. Coccidioidomycosis in California Provisional Monthly Report January – April 2023 (as of April 30, 2023). Website: https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciinCA ProvisionalMonthlyReport.pdf. Accessed June 16, 2023.

8) Heavily urbanized areas where there is little undisturbed virgin soil.[12]

The Project is situated on a site previously disturbed that does not provide a suitable habitat for spores. Specifically, the Project site had been previously cultivated and has vegetation cover in the form of agricultural uses including orchards. Therefore, implementation of the proposed Project would have a low probability of the site having *C. immitis* growth sites and exposure to the spores from disturbed soil.

Although conditions are not favorable, construction activities could generate fugitive dust that contains *C. immitis* spores. The Project will minimize the generation of fugitive dust during construction activities by complying with SJVAPCD's Regulation VIII. Therefore, this regulation, combined with the relatively low probability of the presence of *C. immitis* spores would reduce Valley fever impacts to less than significant.

During operations, dust emissions are anticipated to be relatively small because most of the Project area where operational activities would occur would be occupied by the proposed residential subdivision and related homes, pavement, and internal streets. This condition would lessen the possibility of the Project site providing habitat suitable for *C. immitis* spores and for generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

Naturally Occurring Asbestos

Review of the map of areas where naturally occurring asbestos in California are likely to occur found no such areas in the immediate project area. Therefore, development of the project is not anticipated to expose receptors to naturally occurring asbestos.[13] Impacts would be less than significant.

Operations—The Project's Potential to Locate Sensitive Receptor Near Existing Sources of TACs

As a residential project, the Project would locate sensitive receptors (future residents) to a site where future project residents could be subject to existing sources of TACs at the project site. However, the California Supreme Court concluded in *California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)* that agencies subject to CEQA are not required to analyze the

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[12] United States Geological Survey (USGS). 2000. Operational Guidelines (Version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever), 2000, Open-File Report 2000-348. Website: https://pubs.usgs.gov/of/2000/0348/pdf/of00-348.pdf. Accessed June 16, 2023.

[13] U.S. Geological Survey. 2011. Van Gosen, B.S., and Clinkenbeard, J.P. California Geological Survey Map Sheet 59. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California. Open-File Report 2011-1188 Website: https://pubs.usgs.gov/of/2011/1188/. Accessed May 20, 2023.

impact of existing environmental conditions on a project's future users or residents. Therefore, this impact will not be further addressed in this document.

Impact Analysis Summary

In summary, the Project would not exceed SJVAPCD localized emission daily screening levels for any criteria pollutant. The Project is not a significant source of TAC emissions during construction or operation. The Project is not in an area with suitable habitat for Valley fever spores and is not in area known to have naturally occurring asbestos. Therefore, the Project would not result in significant impacts to sensitive receptors. MM AIR-1 is required to reduce the Project's potential impacts during construction to ***less than significant.***

Mitigation Measures:

MM AIR-1:

Before a construction permit is issued for the proposed project, the project applicant, project sponsor, or construction contractor shall submit documentation demonstrating reasonably detailed compliance with one of the following requirements to the City of Farmersville:

- **Option 1:** Where portable diesel engines are used during construction, all off-road equipment with engines greater than 50 horsepower shall have engines that meet or exceed either United States Environmental Protection Agency (EPA) or California Air Resources Board (CARB) Tier 4 Interim off-road emission standards except as otherwise specified herein. If engines that comply with Tier 4 Interim or Tier 4 Final off-road emission standards are not commercially available, then the construction contractor shall use the next cleanest piece of off-road equipment (e.g., Tier 3) that is commercially available. For purposes of this Project design feature, "commercially available" shall mean the equipment at issue is available taking into consideration factors such as (i) critical-path timing of construction; and (ii) geographic proximity to the project site of equipment. If the relevant equipment is determined by the Project applicant to not be commercially available, the contractor can confirm this conclusion by providing letters from at least two rental companies for each piece of off-road equipment that is at issue.
- **Option 2:** Prior to the issuance of any demolition, grading, or building permits (whichever occurs earliest), the Project applicant and/or construction contractor shall prepare a construction operations plan that, during construction activities, requires all off-road equipment with engines greater than 50 horsepower to meet either the particulate matter emissions standards for Tier 4 Interim engines or be equipped with Level 3 diesel

particulate filters. Tier 4 Interim engines shall, at a minimum, meet EPA or CARB particulate matter emissions standards for Tier 4 Interim engines. Alternatively, use of CARB-certified Level 3 diesel particulate filters on off-road equipment with engines greater than 50 horsepower can be used in lieu of Tier 4 Interim engines or in combination with Tier 4 Interim or better engines. The construction contractor shall maintain records documenting its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information shall include, but are not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number. The Project applicant and/or construction contractor shall submit the construction operations plan and records of compliance to the City of Farmersville.

d. <u>Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?</u>

Less than Significant Impact. Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Although the Project is less than one mile from the nearest sensitive receptor, the Project is not expected to be a significant source of odors. The screening levels for these land use types are shown in Table 8.

Table 8

Screening Levels for Potential Odor Sources[14]

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Wastewater Treatment Facilities	2 miles
Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.	

Construction

During construction, various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and intermittent, which would decrease the likelihood of the odors concentrating in a single area or lingering for any notable period of time. As such, these odors would likely not be noticeable for extended periods of time beyond the Project's site boundaries. The potential for odor impacts from construction of the proposed Project would, therefore, be less than significant.

Operations

Project as a Potential Odor Generator

The development of the proposed Project would not substantially increase objectionable odors in the area and would not introduce any new sensitive receptors to the area that could be affected by any

[14] Eagle Meadows Residential Project in Farmersville. Air Quality, Health Risk Analysis, Greenhouse Gas, and Energy Technical Memorandum. Johnson Johnson and Miller Air Quality Consulting Services. Prepared on June 23, 2023. Appendix A.

existing objectionable odor sources in the area. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, asphalt batch plants, rendering plants, and other land uses outlined in Table 8.

The proposed residential Project would not engage in any of these activities. Minor sources of odors that would be associated with typical single-family residential projects, such as exhaust from mobile sources (including diesel-fueled vehicles), are known to have temporary and less concentrated odors. Considering the low intensity of potential odor emissions, the proposed Project's operational activities would not expose receptors to objectionable odor emissions. Therefore, the proposed Project would not be considered to be a generator of objectionable odors during operations. As such, impacts would be less than significant.

Project as a Receptor

With the *CBIA v. BAAQMD* ruling, analysis of odor impacts on receivers is not required for CEQA compliance unless the project would exacerbate the impact. As discussed above, the project is residential in nature and would not be considered a major source of odors during construction or operation. Therefore, the following analysis is provided for informational purposes only, while the significance determination for the odor is determined based on whether the project would be a generator of objectionable odors during operations.

As a residential development, the project has the potential to place sensitive receptors near existing and new odor sources. The Project area was reviewed for major odor-generating sources (as listed in Table 8) within screening distance of the Project site. Results of this review found that the Project site could be within the screening distances of the following potential sources of odor: Farmersville Wastewater Treatment Plant, recycling facility/possible compositing facility, painting/coating operations (e.g., auto body shop) and Blue Grass Dairy. Public record requests were filed with the SJVAPCD to obtain the most recent 3-year odor complaint history for the potential odor generators within the vicinity of the Project site. Based on the responses from the SJVAPCD, there are no land uses within the screening distances shown in Table 8 that have received one (1) or more confirmed complaints per year for the most recent 3-year period or three (3) of more unconfirmed complaints for the most recent 3-year period.

The evaluation of potential sources of odors within the Project vicinity are provided below in Table 9.

Table 9

Evaluation of Potential Odor Sources Near the Project Site

Odor Generator	Screening Distance	Facilities Near the Project Site	Proximity of the Nearest Source to the Project Site	More than One (1) Confirmed Complaints per Year?	More than Three (3) Unconfirmed Complaints per Year?
Wastewater Treatment Facilities	2 miles	Farmersville Wastewater Treatment Plant	Approximately 0.36 mile south of the project site	No	No
Sanitary Landfill	1 mile	None	> 1 mile	Not Applicable	Not Applicable
Transfer Station	1 mile	WM - Tulare County	2.65 miles southwest of the project site	Not Applicable	Not Applicable
Composting Facility	1 mile	Regals Recycling (Recycling Facility that may also serve as a transfer station and/or a composting facility—accepts green waste)	0.31 mile east of the project site	No	No
Petroleum Refinery	2 miles	None	> 2 mile	Not Applicable	Not Applicable
Asphalt Batch Plant	1 mile	None	> 1 mile	Not Applicable	Not Applicable
Chemical Manufacturing	1 mile	Processtec (Manufacturer) 345 E Tulare Ave Suite E Visalia, CA 93277	4.34 miles northwest of the project site	Not Applicable	Not Applicable
Fiberglass Manufacturing	1 mile	None	> 1 mile	Not Applicable	Not Applicable
Painting/Coating Operations (e.g., auto body shop)	1 mile	Jesse's Auto Garage	0.40 mile east of the project site	No	No
		G & H Auto Repair	0.52 mile east, slightly northeast of the project site	No	No
		Pioneer Paint & Body	0.56 mile east, slightly northeast of the project site	No	No
		Jesse's Automotive	0.59 mile east, slightly northeast of the project site	No	No
		Tapia's Auto Body & Paint Shop	0.61 mile east, slightly northeast of the project site	No	No

Odor Generator	Screening Distance	Facilities Near the Project Site	Proximity of the Nearest Source to the Project Site	More than One (1) Confirmed Complaints per Year?	More than Three (3) Unconfirmed Complaints per Year?
		C&J Auto Body & Paint	0.67 mile east of the project site	No	No
Food Processing Facility	1 mile	Milk Specialties Global	6.01 miles northwest of the project site	Not Applicable	Not Applicable
		Advanced Food Products LLC (assumed could be a possible food processor)	4.14 miles northwest of the project site		
Feed Lot/Dairy	1 mile	Blue Grass Dairy (36°17'12.50"N, 119°13'27.38"W)	0.82 mile southwest of the project site	No	No
Rendering Plant	1 mile	None	> 1 mile	Not Applicable	Not Applicable
Source of Types of Major Odor Generator Land Uses: See Table 8.					

As shown in Table 9, there are no major odor-generating sources that have received complaints to an extent that would exceed SJVAPCD-recommended thresholds for assessing odor impacts from odor generators. Furthermore, there are existing residential uses located within the screening distances for all the potential sources in the Project vicinity.

As shown in the dispersion modeling general parameters included in the Health Risk Assessment (HRA) prepared for the Project in Attachment B of Appendix A, the predominant wind direction in Project area is northwesterly. The northwesterly winds blow from the northwest towards the southeast direction. Because the Farmersville Wastewater Treatment Plant is located south of the Project site, future residents would not be placed downwind of the potential odor source. Regals Recycling is considered a possible odor generator because it may accept green waste and could be considered a compost facility. This possible odor generator is located at 873 S Farmersville Boulevard, Farmersville, CA 93223. The Project site is not located downwind of this recycling facility. Furthermore, there are existing residents located closer to the recycling facility than the proposed Project. Considering this information, the uses in the vicinity of the Project would not result in substantial odor impacts to the Project. Impacts would be ***less than significant***.

Mitigation Measures: None are required.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any 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 Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have 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 Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c. Have 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?	☐	☐	☒	☐
d. Interfere substantially 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?	☐	☒	☐	☐

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The Project site is currently vacant, consisting of fallowed agricultural fields and cultivated orchards. An unnamed canal borders the western edge of the site. A Biological Resource Evaluation was performed on behalf of the Project by Colibri Ecological Consulting in May of 2023. The BRE report can be found in its entirety in Appendix B.

Desktop Review

An official USFWS species list was obtained for the Project. In addition, the California Natural Diversity Database and the CNPS Inventory of Rare and Endangered Plants was searched for records of special-status plant and animal species from the vicinity of the Project site. Regional lists of special-status species were compiled using USFWS, CNDDB, and CNPS database searches confined to the Exeter 7.5-minute United States Geological Survey (USGS) topographic quadrangle, which encompasses the Project site, and the eight surrounding quadrangles (Woodlake, Lindsay, Rocky Hill, Cairns Corner, Visalia, Tulare, Monson, and Ivanhoe). A local list of special-status species was compiled using CNDDB records from within 5 miles of the Project site. Species that lack a CEQA-recognized special-status designation by state or federal regulatory agencies or public interest groups were omitted from the list and species for which the Project site does not provide habitat were eliminated from further consideration (see Table 10). Additional resources included aerial imagery from Google Earth (Google 2022) and other sources, USGS topographic maps, the Web Soil Survey (NRCS 2022), the National Wetlands Inventory (USFWS 2022b), and relevant literature.

Table 10

Federally and State-Listed Endangered or Threatened Species[15]

Species	Status[1]	Habitat	Potential to Occur[2]
Federally and State-Listed Endangered or Threatened Species			
California jewelflower (*Caulanthus californicus*)	FE, SE, 1B.1	Chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland at 150–3300 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
Greene's tuctoria (*Tuctoria greenei*)	FE, 1B.1	Vernal pools in open grasslands below 3445 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Hoover's spurge (*Euphorbia hooveri*)	FT, 1B.2	Vernal pools and depressions below 750 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Kaweah brodiaea (*Brodiaea insignis*)	SE, 1B.2	Valley and foothill grassland, meadows, and cismontane woodlands with granitic or clay soils.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	FT, SE, 1B.1	Grassland and bare dark clay at 300–2700 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover and lacked clay soils.
San Joaquin valley orcutt grass (*Orcuttia inaequalis*)	FT, SE, 1B.1	Vernal pools at or below 2700 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Striped adobe-lily (*Fritillaria striata*)	ST, 1B.1	Adobe clay soils at or below 3280 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover and lacked clay soils.
Crotch bumble bee (*Bombus crotchii*)	SC	Nests or overwinters in open grassland and scrub habitats with *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum* as food plants.	**None.** Habitat lacking; the Project site lacked *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* or *Eriogonum.*
Monarch California overwintering population	FC	Groves of trees within 1.5 miles of the ocean that produce suitable micro-climates for	**None.** Habitat lacking; the Project site is not within 1.5 miles of the ocean.

[15] Biological Resource Evaluation for the Farmersville Residential Development Project in Tulare County, California. Prepared on May 2023 by Colibri Ecological Consulting, LLC. See Appendix B, Table 1.

Species	Status[1]	Habitat	Potential to Occur[2]
(*Danaus plexippus*)		overwintering such as high humidity, dappled sunlight, access to water and nectar, and protection from wind.,	
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	Elderberry (*Sambucus* sp.) plants with stems > 1-inch diameter at ground level.	**None.** Habitat lacking; the Project site lacked elderberry plants and is outside the current known range of this species.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Vernal pools and ponds.	**None.** Habitat lacking; the Project site lacked vernal pools or ponds.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Vernal pools, clay flats, alkaline pools, and ephemeral stock tanks.	**None.** Habitat lacking; the Project site is outside the current known range of this species.
Blunt-nosed leopard lizard (*Gambelia sila*)	FE, SE	Upland scrub and sparsely vegetated grassland with small mammal burrows below 2400 feet elevation.	**None.** Habitat lacking; the Project site is outside current known range of this species.
California tiger salamander (*Ambystoma californiense*)	FT, ST	Vernal pools or seasonal ponds for breeding; small mammal burrows for upland refugia in natural grassland or oak woodland.	**None.** Habitat lacking; the Project site consisted of agricultural land cover and is outside the current known local range of this species.
Foothill yellow-legged frog (*Rana boylii*)	SE, SSSC	Perennial streams and rivers with rocky substrates, and with open, sunny banks may be in forests, chaparral, or woodlands.	**None.** Habitat lacking; Deep Creek on the Project site is not a perennial stream and lacked rocky substrates; the Project site is outside the current known local range of this species.
California condor (Gymnogyps californianus)	FE, SE	Mountain and foothill rangeland with cliffs for nesting and grassland and open woodland for foraging.	**None.** Habitat lacking; the Project site is about 6 miles west of potential foothill habitat.
Swainson's hawk (*Buteo swainsoni*)	ST	Large trees for nesting with adjacent grasslands, alfalfa fields, or grain fields.	**Low.** The Project site lacked nesting habitat, but provided potential foraging habitat; potential nest trees were within 0.5 miles of the Project site.

Species	Status[1]	Habitat	Potential to Occur[2]
Tricolored blackbird (*Agelaius tricolor*)	ST	Large freshwater marshes with dense stands of cattails or bulrushes or areas with thorny or prickly vegetation for nesting.	**None.** Habitat lacking; Deep Creek on the Project site lacked dense stands of cattails or bulrushes, and the site lacked prickly or thorny vegetation.
Western yellow-billed cuckoo[3] (*Coccyzus americanus occidnetalis*)	FT, SE	Open woodlands with dense, low vegetation along waterways, orchards, and dense leafy groves and thickets.	**None.** Habitat lacking; the Project site lacked waterways with associated riparian vegetation. The occurrence from within 5 miles is from 1919 and presumed extirpated.
Buena Vista Lake ornate shrew (*Sorez ornatus relictus*)	FE, SSSC	Grassland or desert scrub near water sources with deep leaf litter, cattails, or fallen logs.	**None.** Habitat lacking; the Project site lacked grassland or desert scrub near water sources with deep leaf litter, cattails, or fallen logs.
San Joaquin kit fox[3] (*Vulpes macrotis mutica*)	FE, ST	Grassland and fallowed agricultural lands adjacent to natural grasslands or upland scrub.	**None.** Habitat lacking; a portion of the Project site consisted of fallowed agricultural land cover but lacked adjacent natural grassland or upland scrub; all occurrence records from within 5 miles are from 1975.
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	FE, SE	Grassland and upland scrub with sparse to moderate shrub cover and saline soils; also fallowed agricultural fields adjacent to natural grasslands or upland scrub.	**None.** Habitat lacking; the Project site lacked adjacent natural grassland or upland scrub and is outside the current known local range of this species.
State Species of Special Concern			
Northern leopard frog (*Lithobates pipiens*)	SSSC	Wet meadows, canals, bogs, marshes, and reservoirs in grassland, forest, and woodland.	**None.** Habitat lacking; the Project site is outside the current known local range of this species.
Northern California legless lizard[3] (*Anniella pulchra*)	SSSC	Moist warm loose soil with plant cover in beach dunes, chaparral, pine-oak woodlands, sandy areas and stream terraces.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.

Species	Status[1]	Habitat	Potential to Occur[2]
Northwestern pond turtle[3] (*Actinemys marmorata*)	SSSC	Ponds, rivers, marshes, streams, and irrigation ditches, usually with aquatic vegetation and woody debris for basking and adjacent natural upland areas for egg laying.	**None.** Habitat lacking; Deep Creek on the Project site was dry and lacked aquatic vegetation and woody debris.
Western spadefoot (*Spea hammondii*)	SSSC	Rain pools for breeding and small mammals burrows or other suitable refugia for nonbreeding upland cover.	**None.** Habitat lacking; vernal pools or other ephemeral pools were absent from the Project site.
Burrowing owl (*Athene cunicularia*)	SSSC	Grassland and upland scrub with friable soil; some agricultural or other developed and disturbed areas with ground squirrel burrows.	**Low.** Ground squirrel burrows were present along the banks of Deep Creek.
American badger[3] (*Taxidea taxus*)	SSSC	Open areas including meadows, grasslands, and chaparral with less than 50% plant cover.	**None.** Habitat lacking; the Project site consisted of heavily managed agricultural fields and lacked adjacent natural grassland or meadow habitats; the most recent occurrence from within 5 miles was from 1994.
Pallid bat[3] (*Antrozous pallidus*)	SSSC	Arid or semi-arid locations in rocky areas and sparsely vegetated grassland near water. Rock crevices, caves, mine shafts, bridges, building, and tree hollows for roosting.	**Low.** Residential buildings within the survey area could provide roosting habitat.
Western mastiff bat (*Eumops perotis californicus*)	SSSC	Roosts in crevices in face cliffs, high buildings, trees, and tunnels in open semi-arid habitats.	**Low.** Residential buildings within the survey area could provide roosting habitat.
California Rare Plants			
Alkali-sink goldfields[3] (*Lasthenia chrysantha*)	1B.1	Vernal pools and wet saline flats below 320 feet elevation.	**None.** Habitat lacking; the Project site is above the known elevational range of this species.

Species	Status[1]	Habitat	Potential to Occur[2]
Brittlescale[3] (*Atriplex depressa*)	1B.2	Alkaline or clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools below 1000 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover. The occurrence record from within 5 miles was from 1881.
Calico monkeyflower (*Diplacus pictus*)	1B.2	Bare, sunny, shrubby areas around granite outcrops in the southern Sierra Nevada mountains at 442–4100 feet elevation.	**None.** Habitat lacking; the Project site is below the known elevational range of this species.
California alkali grass (*Puccinellia simplex*)	1B.2	Scrub, meadows, seeps, grassland, vernal pools, saline flats, and mineral springs below 3000 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover and lacked vernal pools.
California satintail[3] (*Imperata brevifolia*)	2B.1	Moist to wet sites in arid desert canyons, or rocky slopes, near seeps, springs, and streams below 1700 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	1B.1	Saltmarsh, playas, and vernal pools below 4000 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Earlimart orache (*Atriplex cordulata* var. *erecticaulis*)	1B.2	Saline or alkaline soils in Central Valley and foothill grassland below 230 feet elevation.	**None.** Habitat lacking; the Project site is above the known elevational range of this species.
Lesser saltscale (*Atriplex minuscula*)	1B.1	Sandy alkaline soils in chenopod scrub, playa, and grassland in the San Joaquin Valley below 328 feet elevation.	**None.** Habitat lacking; the Project site is above the known elevational range of this species.
Recurved larkspur (*Delphinium recurvatum*)	1B.2	Poorly drained, fine, alkaline soils in chenopod scrub, cismontane woodland, and valley and foothill grassland at 10–2800 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
Sanford's arrowhead (*Sagittaria sanfordii*)	1B.2	Ponds, sloughs, and ditches at sea level to 650 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover; Deep Creek on the Project site was dry and based on historical aerial imagery

Species	Status[1]	Habitat	Potential to Occur[2]
			(Google 2022) is typically dry.
Spiny-sepaled button-celery[3] (*Eryngium spinosepalum*)	1B.2	Vernal pools and swales in valley and foothill grassland at 330–4200 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools and swales.
Subtle orache (*Atriplex subtilis*)	1B.2	Saline depressions below 230 feet elevation.	**None.** Habitat lacking; the Project site is above the known elevational range of this species.
Vernal pool smallscale (*Atriplex persistens*)	1B.2	Alkaline vernal pools in the Central Valley below 377 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Winter's sunflower (*Helianthus winteri*)	1B.2	Steep, south-facing grassy slopes, rock outcrops, and road cuts at 590–1509 feet elevation.	**None.** Habitat lacking; the Project site is below the known elevational range of this species.

Status[1]	**Potential to Occur[2]**	
FE = Federally listed Endangered	None:	Species or sign not observed; conditions unsuitable for occurrence.
FT = Federally listed Threatened	Low:	Neither species nor sign observed; conditions marginal for occurrence.
SE = State listed Endangered	Moderate:	Neither species nor sign observed; conditions suitable for occurrence.
ST = State listed Threatened	High:	Neither species nor sign observed; conditions highly suitable for occurrence.
SSSC = State Species of Special Concern	Present:	Species or sign observed; conditions suitable for occurrence.

CNPS California Rare Plant Rank[1]:	**Threat Ranks[1]:**
1B – plants rare, threatened, or endangered in California and elsewhere.	0.1 – seriously threatened in California (> 80% of occurrences).

CNPS California Rare Plant Rank[1]:	**Threat Ranks[1]:**
2B – plants rare, threatened, or endangered in California but more common elsewhere.	0.2 – moderately threatened in California (20-80% of occurrences).
3 – plants about which more information is needed.	0.3 – not very threatened in California (<20% of occurrences).
4 – plants have limited distribution in California.	

[3] *Record from within 5 miles of the Project site.*

Reconnaissance Survey

A field reconnaissance survey was performed at the Project site on February 9, 2022. The Project site and a 50-foot buffer surrounding the Project site were walked and thoroughly inspected to evaluate and document the potential for the area to support state- or federally protected resources. All plants except those under cultivation or planted in residential areas and all vertebrate wildlife species observed within the survey area were identified and documented. The survey area was evaluated for the presence of regulated habitats, including lakes, streams, and other waters using methods described in the *Wetlands Delineation Manual* and regional supplement (USACE 1987, 2008) and as defined by the CDFW (https://www.wildlife.ca.gov/conservation/lsa) or under the Porter-Cologne Water quality Control Act. An additional buffer of 0.5 miles around the Project site was inspected for potential roosting sites for special-status raptors. The 0.5-mile buffer was surveyed by driving public roads and identifying the presence of large trees or other potentially suitable substrates for nesting raptors.

RESPONSES

a. Have a substantial adverse effect, either directly or through habitat modifications, on any 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 Game or U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation. The Project could adversely affect four special-status animal species that could occur on or near the Project site, as demonstrated in Table 8.

Swainson's hawk

Swainson's hawk is a state listed as threatened raptor in the family Accipitridae. It is a migratory breeding resident of Central California. It uses open areas including grassland, sparse shrubland, pasture, open woodland, and annual agricultural fields such as grain and alfalfa to forage on small mammals, birds, and reptiles. After breeding, it eats mainly insects, especially grasshoppers (Bechard et al. 2020). Swainson's hawks build small to medium-sized nests in medium to large trees near foraging habitat. The nesting season begins in March or April in Central California when this species returns to its breeding grounds from wintering areas in Mexico and Central and South America. Nest building commences within one to two weeks of arrival to the breeding area and lasts about one week (Bechard et al. 2020). One to four eggs are laid and incubated for about 35 days. Young typically fledge in about 38–46 days and tend to leave the nest territory within 10 days of fledging (Bechard et al. 2020). Swainson's hawks depart for the non-breeding grounds between August and September.

There are several recent CNDDB records of Swainson's hawks from within 10 miles of the Project site (CDFW 2023). The fallow fields of the Project site provide potential foraging habitat for Swainson's hawk, and several potential nest trees were observed within 0.5 miles of the Project site. However, the mostly dense urban and orchard surroundings minimize the potential use of the Project site for foraging by Swainson's hawk. Therefore, the potential for this species to occur on or near the Project site is low.[16]

Burrowing Owl

Burrowing owl is a member of the family Strigidae recognized as a species of special concern by the CDFW (CDFW 2023. Burrowing owl depends on burrow systems excavated by other species such as California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*) (Poulin et al. 2020). Burrowing owl uses burrows for protection from predators, weather, as roosting sites, and dwellings to raise young (Poulin et al. 2020). It commonly perches outside burrows on mounds of soil or nearby fence posts. Prey types include insects, especially grasshoppers and crickets, small mammals, frogs, toads, and lizards (Poulin et al. 2020). The nesting season begins in March, and incubation lasts 28–30 days. The female incubates the eggs while the male forages and delivers food items to the burrow-nest; young then fledge between 44 and 53 days after hatching (Poulin et al. 2020). Adults can live up to 8 years in the wild.

Although there are no CNDDB occurrence records from within 5 miles of the Project site (CDFW 2023), the banks of the unnamed canal adjacent to the Project site contained ground squirrel burrows that could support this species (Figure 9). The fallowed fields on the Project site could also provide foraging habitat. However, the habitat is routinely disturbed, and the number of burrows was low. Therefore, the potential for this species to occur on the Project site is low.

Pallid bat

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[16] Biological Resource Evaluation for the Farmersville Residential Development Project in Tulare County, California. Prepared on May 2023 by Colibri Ecological Consulting, LLC. See Appendix B, Page 26.

Pallid bat is a member of the family Vespertilionidae and is recognized as a species of special concern by the CDFW (CDFW 2023). It is widespread in the western United States from southern British Columbia, Canada to northern Baja California, Mexico (Hermanson and O'Shea 1983). In California, pallid bat is locally common year-round at low elevations, where it occupies dry, open areas in grassland, shrubland, woodland, and forest (Zeiner et al. 1988–1990). Pallid bat is nocturnal and roosts during the day in caves, crevices in rocky outcrops, mines, and occasionally tree hollows and buildings; night roosts tend to be in more open areas including porches (Zeiner et al. 1988–1990). It forages almost exclusively on the ground, where it preys on insects, arachnids, beetles, moths, and scorpions; few prey items are taken aerially (Zeiner et al. 1988–1990). Pallid bat hibernates during winter, usually near a day roost that it occupies in summer (Hermanson and O'Shea 1983).

The survey area supported potential day roost habitat in the form of adjacent residential buildings, and open areas on the Project site may provide foraging habitat. However, there are no CNDDB records from within 5 miles of the Project site (CDFW 2023). Therefore, the species has a low potential to occur on the Project site.

Western mastiff bat

The western mastiff bat is most common in the southern half of California, but its range extends almost to the Oregon border (Cockrum 1960). This species forages in large, open areas in habitats such as desert washes, floodplains, conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and agricultural lands (Cockrum 1960; Ross 1961). Roosts include the undersides of large slabs or boulders, cliff faces, and cracks in buildings (Howell 1920; Dalquest 1946; Barbour and Davis 1969). This species prefers a roost high above the ground that allows a vertical drop of at least 10 feet to initiate flight (Howell 1920).

The Project site is not within 5 miles of any CNDDB occurrences for western mastiff bat (CDFW 2023). However, roosting habitat in the form of adjacent residential buildings were present within the survey area, and the fallowed fields on the Project site may provide foraging habitat. Therefore, this species could occur on or near the Project site.

Construction activities such as excavating, trenching, or using other heavy equipment that disturbs or harms a special-status species could constitute a significant impact. Incorporation of Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4 will reduce the potential impacts to a ***less than significant*** level.

Mitigation Measures:

BIO-1: Protect nesting Swainson's hawks.

1. To the extent practicable, construction shall be scheduled to avoid the Swainson's hawk nesting season, which extends from March through August.
2. If it is not possible to schedule construction between September and February, a qualified biologist shall conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee's *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Appendix D of Appendix B). These methods require six surveys, three in each of the two survey periods, prior to project initiation. Surveys shall be conducted within a minimum 0.5-mile radius around the Project site.
3. If an active Swainson's hawk nest is found within 0.5 miles of the Project site, and the qualified biologist determines that Project activities would disrupt the nesting birds, a construction-free buffer or limited operating period shall be implemented in consultation with the CDFW.

BIO-2: Compensate for loss of Swainson's hawk foraging habitat.

1. Compensate for loss of Swainson's hawk foraging habitat (i.e., the fallow fields on the Project site) in accordance with the CDFW Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (Appendix E of Appendix B). The CDFW requires that projects adversely affecting Swainson's hawk foraging habitat provide Habitat Management (HM) lands to the department. Projects within 1 mile of an active nest shall provide one acre of HM lands for each acre of development authorized (1:1 ratio). Projects within 5 miles of an active nest but greater than 1 mile from the nest shall provide 0.75 acres of HM lands for each acre of urban development authorized (0.75:1 ratio). And projects within 10 miles of an active nest but greater than 5 miles from an active nest shall provide 0.5 acres of HM lands for each acre of urban development authorized (0.5:1 ratio). No compensation is required if an active nest is not found within 10 miles of the Project site. The nearest nest is determined using methods identified in Mitigation Measure BIO-1 during the nesting season before or during construction.

BIO-3: Protect burrowing owls.

1. Conduct focused burrowing owl surveys to assess the presence/absence of burrowing owl in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and Burrowing Owl Survey Protocol and Mitigation Guidelines (CBOC 1997). These involve conducting four pre-construction survey visits.
2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, guano, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project

activities would disrupt the owl(s), a construction-free buffer, limited operating period, or passive relocation shall be implemented in consultation with the CDFW.

BIO-4: Protect roosting pallid bats and western mastiff bats.

1. A pre-construction clearance survey shall be conducted by a qualified biologist to ensure that no roosting pallid bats or western mastiff bats will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential roosting habitat in and immediately adjacent to the impact areas. If an active roost is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the roost. If work cannot proceed without disturbing the roosting bats, work may need to be halted or redirected to other areas until the roost is no longer in use.

b. <u>Have 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 Game or U.S. Fish and Wildlife Service?</u>

c. <u>Have 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?</u>

Less Than Significant Impact. This Project, which will result in temporary and permanent impacts to agricultural land cover, will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS as no riparian habitat or other sensitive natural community was present in the survey area. The proposed Project will not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (criterion g) as no impacts to wetlands will occur.

As such, any impacts would be ***less than significant.***

Mitigation Measures: None are required.

d. Interfere substantially 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?

Less than Significant Impact. The Project could impede the use of nursery sites for native birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC). Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered a take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant impact. Mitigation Measure BIO-5 (below) will reduce the potential effect to a ***less than significant*** level.

Mitigation Measures:

BIO-5: Protect nesting birds.

1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August.
2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. The City of Farmersville's General Plan includes various policies for the protection of biological resources. The proposed Project would not conflict with any of the adopted policies and any impacts would be considered ***less than significant***.

Mitigation Measures: None are required.

f. <u>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</u>

No Impact. There are no adopted habitat conservation plans that apply to the proposed Project site. There is no impact.

Mitigation Measures: None are required.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

RESPONSES

a. <u>Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</u>

Less than Significant Impact with Mitigation. A Class III Inventory/Phase I Cultural Survey was performed on behalf of the Project by ASM Affiliates, Inc. in April of 2022 (provided as Appendix C). The subsequent archival records search conducted at the SSJVIC indicated that only a small portion of the Project area had previously been surveyed and that no cultural resources are known to exist within it. Eight previous studies had been completed for locations within a half mile radius of the site, and four previously recorded resources were known to exist within that same radius. The search results indicated that one previous study had covered small portions of the study area on the north. No cultural resources of any kind are known to exist within it. An additional eight previous studies had been completed within 0.5-mi of the study area, resulting in the recordation of four historic cultural resources within that outer radius. These resources include a single-family property, a canal and two historic bridges.

A Sacred Lands File (SLF) request was also submitted to the NAHC on March 17, 2022. The SLF indicated that no tribal cultural resources were known to exist within the Project area. Outreach letters were sent on March 21, 2022 to tribal organizations on the NAHC contact list requesting additional information about the Project site. The Santa Rosa Rancheria – Tachi Yokuts responded on March 31, 2022 and requested to be retained to perform a cultural presentation for all construction staff and to be informed of any and all discoveries made related to the Project. Follow-up emails were also sent to the remaining tribal organizations in April 2022; however, no additional responses have been received.

The Class III inventory/Phase I survey fieldwork was conducted in May 2023 with the entire 48.82- acre proposed Project area walked by an archaeological crew. While no archaeological or built environment resources were identified within the area, subsurface construction activities associated with the proposed Project could potentially damage or destroy previously undiscovered historic resources. This is considered a potentially significant impact; however, implementation of Mitigation Measure CUL-1 will ensure that significant impacts remain ***less than significant with mitigation incorporation.***

Mitigation Measures:

CUL-1: The following measures shall be implemented:

- Before initiation of construction or ground-disturbing activities associated with the Project, the City shall require all construction personnel to be alerted to the possibility of buried cultural resources, including historic, archeological and paleontological resources;
- The general contractor and its supervisory staff shall be responsible for monitoring the construction Project for disturbance of cultural resources; and
- If a potentially significant historical, archaeological, or paleontological resource, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains or trash deposits are encountered during subsurface construction activities (i.e., trenching, grading), all construction activities within a 100-foot radius of the identified potential resource shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) forms. The archaeologist shall determine whether the item requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under California Environmental Quality Act, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public Resources Code section 21083.2. The City of Farmersville shall implement said measures.

b. <u>Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</u>

Less than Significant Impact with Mitigation. The possibility exists that subsurface construction activities may encounter undiscovered archaeological resources. This would be a potentially significant impact. Implementation of Mitigation Measure CUL-1 would require inadvertent discovery practices to be implemented should previously undiscovered archeological resources be located. As such, impacts to undiscovered archeological resources would be ***less than significant with mitigation incorporation.***

c. Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact with Mitigation. There are no unique geological features or known fossil-bearing sediments in the vicinity of the proposed Project site. However, there remains the possibility for previously unknown, buried paleontological resources or unique geological sites to be uncovered during subsurface construction activities. Therefore, this would be a potentially significant impact. Mitigation is proposed requiring standard inadvertent discovery procedures to be implemented to reduce this impact to a level of ***less than significant with mitigation incorporation***.

Mitigation Measures:

CUL-2: The Project applicant shall incorporate into the construction contract(s) a provision that in the event a fossil or fossil formations are discovered during any subsurface construction activities for the proposed Project (i.e., trenching, grading), all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the Project applicant, who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the City shall implement those measures, which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code section 21083.2.

VI. ENERGY

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

The following information was provided by an Air Quality, Health Risk Analysis, Greenhouse Gas, and Energy Technical Memorandum that was performed on behalf of the proposed project by Johnson, Johnson & Miller Air Quality Consulting Services, report date June 23, 2023. The report can be read in its entirety in Appendix A.

The energy requirements for the proposed project were determined using the construction and operational estimates generated from the Air Quality Analysis (refer to Attachment A of Appendix A for related CalEEMod output files). The calculation worksheets for diesel fuel consumption rates for off-road construction equipment and on-road vehicles are provided in Attachment C (Energy Consumption Calculations) of Appendix A.

RESPONSES

a. <u>Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?</u>

Less Than Significant Impact.

This impact addresses energy consumption from the short-term construction and long-term operations, discussed separately below.

Short-Term Energy Demand - Construction

<u>Off-Road Equipment</u>

Table 11 provides estimates of the Project's construction fuel consumption from off-road construction equipment for the entire Project, categorized by construction activity.

Table 10

Construction Off-Road Fuel Consumption[17]

Project Component	Construction Activity	Fuel Consumption (gallons)
Eagle Meadows Residential Project (On-site, Off-road Equipment Use)	**Site Work for the Project Site and Paving of Internal Streets**	
	Site Preparation	2,736
	Grading	9,677
	Paving	1,395
	Home Construction	
	Building Construction	29,224
	Paving	1,395
	Architectural Coating	161
Construction Total		**44,588**
Source: Energy Consumption Calculations (Attachment C of Appendix A).		

As shown in Table 11, use of off-road equipment associated with construction of the proposed Project is estimated to consume approximately 44,588 gallons of diesel fuel over the entire construction duration. There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the City of Farmersville, the larger Tulare County region, or other parts of California. Therefore, it is expected that construction fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

On-Road Vehicles

On-road vehicles for construction workers, vendors, and haulers would require fuel for travel to and from the site during construction. Table 12 provides an estimate of the total on-road vehicle fuel usage during construction. There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of the Tulare County region or the state. Therefore, it is expected that construction fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

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[17] Eagle Meadows Residential Project in Farmersville. Air Quality, Health Risk Analysis, Greenhouse Gas, and Energy Technical Memorandum. Johnson Johnson and Miller Air Quality Consulting Services. Prepared on June 23, 2023. Appendix A.

Table 11

Construction On-Road Fuel Consumption[18]

	Project Component	Total Annual Fuel Consumption (gallons)
Eagle Meadows Residential Project (On-site, Off-road Equipment Use)	**Site Work for the Project Site and Paving of Internal Streets**	
	Site Preparation	203
	Grading	2,690
	Paving	331
	Home Construction	
	Building Construction	31,134
	Paving	414
	Architectural Coating	371
Total Construction On-Road Fuel Consumption		**35,143**
Source: Energy Consumption Calculations (Attachment C of Appendix A).		

Other Energy Consumption Anticipated During Project Construction

Other equipment could include construction lighting, field services (office trailers), and electrically driven equipment such as pumps and other tools. The Project site is located in the City of Farmersville. As construction activities would occur primarily during daylight hours; it is anticipated that the use of construction lighting would be minimal. Singlewide mobile office trailers, which are commonly used in construction staging areas, generally range in size from 160 square feet to 720 square feet. A typical 720-square-foot office trailer would consume approximately 38,145 kWh during the approximate 2.75-year construction phase (Attachment C of Appendix A).

As summarized in Table 11 and Table 12, the proposed Project would require 44,588 gallons of diesel fuel for construction off-road equipment and 35,143 gallons of gasoline and diesel for on-road vehicles during construction. There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or other parts of the state. In addition, the overall construction schedule and process is already designed to be efficient in order to avoid excess monetary costs. For example, equipment and fuel are not typically used wastefully due to the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, it is expected that construction fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region, and as such, impacts would be ***less than significant***.

[18] Ibid.

Long-Term Operations

Building Energy Demand

As shown in Table 13 and Table 14, the proposed Project is estimated to demand 2,150,524 kilowatt-hours (KWhr) of electricity and 8,835,662 1,000-British Thermal Units (kBTU) of natural gas, respectively, on an annual basis.

Table 12

Long-Term Electricity Usage[19]

Land Use	Total Electricity Demand (KWhr/year)
Single-family Housing	**2,150,524**
Source: Energy Consumption Calculations (Attachment C of Appendix A).	

Table 13

Long-Term Natural Gas Usage[20]

Land Use	Total Natural Gas Demand (kBTU/year)
Single-family Housing	**8,835,662**
Source: Energy Consumption Calculations (Attachment C of Appendix A).	

Buildings and infrastructure constructed pursuant to the proposed Project (including the proposed single-family homes) would comply with the versions of CCR Titles 20 and 24, including California Green Building Standards (CALGreen), that are applicable at the time that building permits are issued. The proposed Project is estimated to demand 2,150,524 KWhr of electricity per year and 8,835,662 kBTU of natural gas per year. As the Project site is currently undeveloped and used for agriculture purposes, this would represent an increase in demand for electricity and natural gas.

It would be expected that building energy consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than for any other similar buildings in the City of Farmersville or the larger Tulare County region. Current state regulatory requirements for new building construction contained in the 2022 CALGreen and Title 24 standards would increase energy efficiency

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[19] Ibid.

[20] Ibid.

and reduce energy demand in comparison to most existing development, and therefore would reduce actual environmental effects associated with energy use from the proposed Project. Additionally, the CALGreen and Title 24 standards have increased efficiency standards through each update. The most recent 2022 standards became effective January 1, 2023 and will be updated in the next cycle that will become effective at the start of 2026. Therefore, while the proposed Project would result in increased electricity and natural gas demand, electricity and natural gas would be consumed more efficiently than most existing development due to compliance with the latest building standards.

Based on the above information, the proposed Project would not result in the inefficient or wasteful consumption of electricity or natural gas, and impacts would be less than significant.

Transportation Energy Demand

Table 15 provides an estimate of the daily and annual fuel consumed by vehicles traveling to and from the proposed Project. These estimates were derived using the same assumptions used in the operational air quality analysis for the proposed Project.

Table 14

Long-Term Operational Vehicle Fuel Consumption[21]

Vehicle Type	Percent of Vehicle Trips	Annual VMT	Average Fuel Economy (miles/ gallon)	Total Daily Fuel Consumption (gallons)	Total Annual Fuel Consumption (gallons)
Passenger Cars (LDA)	52.77	5,007,286	30.14	455.1	166,120
Light Trucks (Pickups) and Medium Vehicles	43.21	4,100,148	22.05	509.4	185,946
Light-Heavy to Medium-Heavy Diesel Trucks	0.98	92,991	11.56	22.0	8,047
Heavy-heavy Trucks	2.14	203,062	5.96	93.3	34,070
Motorcycles	0.25	23,722	41.76	1.6	568
Other	0.65	61,678	7.56	22.4	8,161
Total	**100**	**9,488,887**	**—**	**1,104**	**402,912**

Notes:
VMT = vehicle miles traveled
Percent of Vehicle Trips and VMT provided by CalEEMod.
"Other" consists of buses and motor homes.
Source: Energy Consumption Calculations (Attachment C of Appendix A).

[21] Ibid.

As shown above, annual vehicular fuel consumption is estimated to be 402,912 gallons of gasoline and diesel fuel combined. Using rates calculated for the 2024 operational year, daily consumption is estimated at approximately 1,104 gallons of fuel (see Attachment C of Appendix A).

The daily vehicular fuel consumption is estimated to be 1,104 gallons of combined gasoline and diesel fuel. Annual consumption is estimated at 402,912 gallons. In addition, the proposed Project would constitute development within an established community and would not be opening a new geographical area for development. As such, the proposed Project would not result in unusually long trip lengths for future residents, visitors, or deliveries to the proposed single-family homes. The property is located near other residential land uses, including adjacent single-family homes to the east of the Project site and to the west of the north half of the Project site. The proposed Project would be well-positioned to accommodate an existing community and provide housing for planned growth. Vehicles accessing the site would be typical of vehicles accessing similar residential uses in the City of Farmersville, Tulare County, and surrounding areas. For these reasons, vehicular fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than for any other similar land use activities in the region, and impacts would be ***less than significant***.

Mitigation Measures: None are required.

b. <u>Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</u>

Less Than Significant Impact.

The Project proposes the construction of new residential development that would be built in accordance with all applicable rules and regulations. Compliance with established and applicable regulations would ensure that the Project would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency. Moreover, compliance with Title 24 standards would ensure that the proposed Project would not conflict with any energy conservation policies related to the proposed Project's building envelope, mechanical systems, and indoor and outdoor lighting. Notably, the applicable Title 24 standards require the project to include on-site renewable energy to serve the future project occupants and residents.

In addition, the proposed Project would constitute development within an established community. Specifically, the Project site is adjacent to built-up areas of the City of Farmersville. As such, the Project would not be opening a new geographical area for development such that it would not result in unusually long trip lengths for future project residents or visitors. In addition, the proposed residential development is specifically designed for increased walkability, facilitated by the proposed pedestrian connectivity throughout the Project site.

For the above reasons, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be ***less than significant***.

Mitigation Measures: None are required.

VII. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be 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 landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?	☐	☐	☒	☐

e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

RESPONSES

a-i. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The proposed Project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone[22]. Since no known surface expression of active faults are believed to cross the site, fault rupture through the site is not anticipated. ***No impacts*** would occur.

Mitigation Measures: None are required.

a-ii. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Less Than Significant Impact. There are no known active earthquake faults in the City of Farmersville. The proposed Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no known faults cut through the local soil at the site. The closest known faults likely to affect the community are the Independence fault and Owens Valley fault, located about 65 miles to the east along the base of the Sierra Nevada in the Owens Valley, and the San Andreas fault located about 70 miles to the southwest in the coastal range. According to the Five County Seismic Safety Element (FCSSE), Farmersville is located in the V-1 zone, defined as an area "of hard rock alluvium on valley floors." The FCSSE further states that,

[22] California Earthquake Hazards Zone Application, California Department of Conservation. https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed May 2023.

"The distance to either of the faults expected to be a source of shaking is sufficiently great that shaking should be minimal and the requirements of the Uniform Building Code Zone II should be adequate for normal facilities."[23]

Therefore, the impact is ***less than significant***.

Mitigation Measures: None are required.

a-iii. <u>Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?</u>

Less Than Significant Impact. Tulare County has extremely low seismic activity levels, although shaking may be felt from earthquakes whose epicenter lie to the south and west. The proposed Project would comply with existing building code standards or design and construction, which would minimize any impacts resulting from ground shaking or liquefaction. Due to the relatively flat topography of the proposed Project area, impacts associated with landslides are not anticipated. Impacts would be ***less than significant.***

Mitigation Measures: None are required.

a-iv. <u>Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?</u>

Less than Significant Impact. The City of Farmersville sits on the floor of the San Joaquin Valley. The City is nearly flat which precludes the occurrence of landslides. Any potential impact is ***less than significant***.

Mitigation Measures: None are required.

b. <u>Result in substantial soil erosion or the loss of topsoil?</u>

Less than Significant Impact. The City of Farmersville sits on top of the alluvial fans of the Kaweah River and its distributaries. The soil in the proposed Project area is characterized as moderately deep,

[23] City of Farmersville General Plan Update Community Profile. 2002. Page 2-4.

well-drained, and with low shrink/swell potential.[24] The proposed Project site has a generally flat topography, is in an established urban area and does not include any Project features that would result in soil erosion or loss of topsoil. Therefore, the impact is ***less than significant***.

Mitigation Measures: None are required.

c. Be 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 landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. The City of Farmersville is nearly flat and soils in the area are moderately deep, well-drained with a low shrink/swell potential. See also Response a-ii. Any impacts would be ***less than significant.***

Mitigation Measures: None are required.

d. Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?

Less than Significant Impact. See Responses (c) and (a-ii). The impact is ***less than significant***.

Mitigation Measures: None are required.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The Project will tie into the City's existing wastewater system and will not require the installation of septic tanks or alternate wastewater disposal system. There is ***no impact.***

Mitigation Measures: None are required.

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[24] City of Farmersville General Plan Update Community Profile. 2002. Page 2-2.

f. <u>Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</u>

Less Than Significant Impact. As identified in the cultural evaluation performed for the project site, there are no known paleontological resources on or near the site (See Section V. for more details). Mitigation measures have been added that will protect unknown (buried) resources during construction, including paleontological resources. There are no unique geological features on site or in the area. Therefore, there is a ***less than significant impact.***

Mitigation Measures: None are required.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

The following information was provided by an Air Quality, Health Risk Analysis, Greenhouse Gas, and Energy Technical Memorandum that was performed on behalf of the proposed project by Johnson, Johnson & Miller Air Quality Consulting Services, report date June 23, 2023. The report can be read in its entirety in Appendix A.

RESPONSES

a. <u>Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</u>

Less Than Significant. The City of Farmerville has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, or goal-setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines. The County of Tulare has adopted Climate Action Plan; however, the County of Tulare's Climate Action Plan is only applicable to unincorporated areas of Tulare County. The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to the Project. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the Project. Since no other local or regional Climate Action Plan is in place, the Project is assessed for its consistency with CARB's adopted Scoping Plans.

Consistency with CARB's Adopted Scoping Plans

<u>Consistency with AB 32 and CARB's 2008 Scoping Plan</u>

The State's regulatory program implementing the 2008 Scoping Plan is now fully mature. All regulations envisioned in the Scoping Plan have been adopted, and the effectiveness of those regulations has been estimated by the agencies during the adoption process and then tracked to verify their effectiveness after implementation. The combined effect of this successful effort is that the State now projects that it will meet the 2020 target and achieve continued progress toward meeting post-2020 targets. Former Governor Brown, in the introduction to Executive Order B-30-15, stated "California is on track to meet or exceed the current target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32)."

Consistency with SB 32 and CARB's 2017 Scoping Plan

The 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. Table 16 provides an analysis of the Project's consistency with the 2017 Scoping Plan Update measures.

Table 15

Consistency with SB 32 Scoping Plan[25]

Scoping Plan Measure	Project Consistency
SB 350 50% Renewable Mandate. Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030. *(The requirement is now 60% in 2030 per SB 100.)*	**Consistent**: The project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
SB 350 Double Building Energy Efficiency by 2030. This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels.	**Not Applicable**. This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency over time. New buildings (single-family homes) constructed as part of the proposed project would comply with the applicable Title 24 Energy Efficiency Standards in effect at the time building permits are received. The current Title 24 regulations are the 2022 Title 24 standards, which become effective January 1, 2023. The next update would become effective January 1, 2026.
Low Carbon Fuel Standard. This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent**. This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing the project site would be subject to the standards. Vehicles accessing the project site will use fuel containing lower carbon content as the fuel standard is implemented.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario). Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by	**Consistent**. Future project residents can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year. The CALGreen Code requires electrical service in new single-family housing to be EV charger-ready. In addition, home deliveries will be made by

25 Eagle Meadows Residential Project in Farmersville. Air Quality, Health Risk Analysis, Greenhouse Gas, and Energy Technical Memorandum. Johnson Johnson and Miller Air Quality Consulting Services. Prepared on June 23, 2023. Appendix A.

Scoping Plan Measure	Project Consistency
2030 and increasing numbers of ZEV trucks and buses.	increasing numbers of ZEV delivery trucks as the statewide fleet is expected to get cleaner over time.
Sustainable Freight Action Plan. The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	**Not Applicable.** The measure applies to owners and operators of trucks and freight operations. The project is residential in nature and would not be considered an industrial land use or a large freight operator. However, home deliveries are expected to be made by increasing numbers of ZEV delivery trucks as technology continues to improve accessibility to ZEV vehicles and as regulations are phased in over time.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy. The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Consistent**. The project will only include natural gas hearths that produce very little black carbon compared with wood burning fireplaces and heaters in line with the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts mitigation measures.[1]
SB 375 Sustainable Communities Strategies. Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled.	**Consistent**. The project will provide residential development in the region that is consistent with the Regional Transportation Plan/Sustainable Communities Strategy (SCS) strategy to increase development densities to reduce VMT.
Post-2020 Cap-and-Trade Program. The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Consistent.** The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.
Natural and Working Lands Action Plan. CARB is working in coordination with several other agencies at the federal, state, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Not Applicable**. The project is residential development and will not be considered natural or working lands.

Scoping Plan Measure	Project Consistency
Source: California Air Resources Board (CARB). 2017. The 2017 Climate Change Scoping Plan Update. January 20. Website: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed June 16, 2023. [1] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMA. Accessed June 16, 2023.	

As described in Table 16, the proposed Project would be consistent with applicable 2017 Scoping Plan Update measures and would not obstruct the implementation of others that are not applicable. The State's regulatory program is able to target both new and existing development because the two most important strategies, motor vehicle fuel efficiency and emissions from electricity generation, obtain reductions equally from existing sources and new sources. This is because all vehicle operators use cleaner low carbon fuels and buy vehicles subject to the fuel efficiency regulations and all building owners or operators purchase cleaner energy from the grid that is produced by increasing percentages of renewable fuels. This includes regulations on mobile sources such as the Pavley standards that apply to all vehicles purchased in California, the LCFS (Low Carbon Fuel Standard) that applies to all fuel sold in California, and the Renewable Portfolio Standard and Renewable Energy Standard under SB 100 that apply to utilities providing electricity to all California end users.

Moreover, the Scoping Plan strategy will achieve more than average reductions from energy and mobile source sectors that are the primary sources related to development projects and lower than average reductions from other sources such as agriculture. The proposed residential project's operational GHG emissions would principally be generated from electricity consumption and vehicle use, which are directly under the purview of the Scoping Plan strategy and have experienced reductions above the State average reduction. Considering the information summarized above, the proposed Project would be consistent with the State's AB 32 and SB 32 GHG reduction goals.

<u>Consistency Regarding GHG Reduction Goals for 2050 under Executive Order S-3-05 and GHG Reduction Goals for 2045 under CARB's 2022 Scoping Plan</u>

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that operation of the proposed Project would comply with whatever measures are enacted that State lawmakers decide would lead to an 80 percent reduction below 1990 levels by 2050.

In its 2008 Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." In the First Scoping Plan Update; however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately."

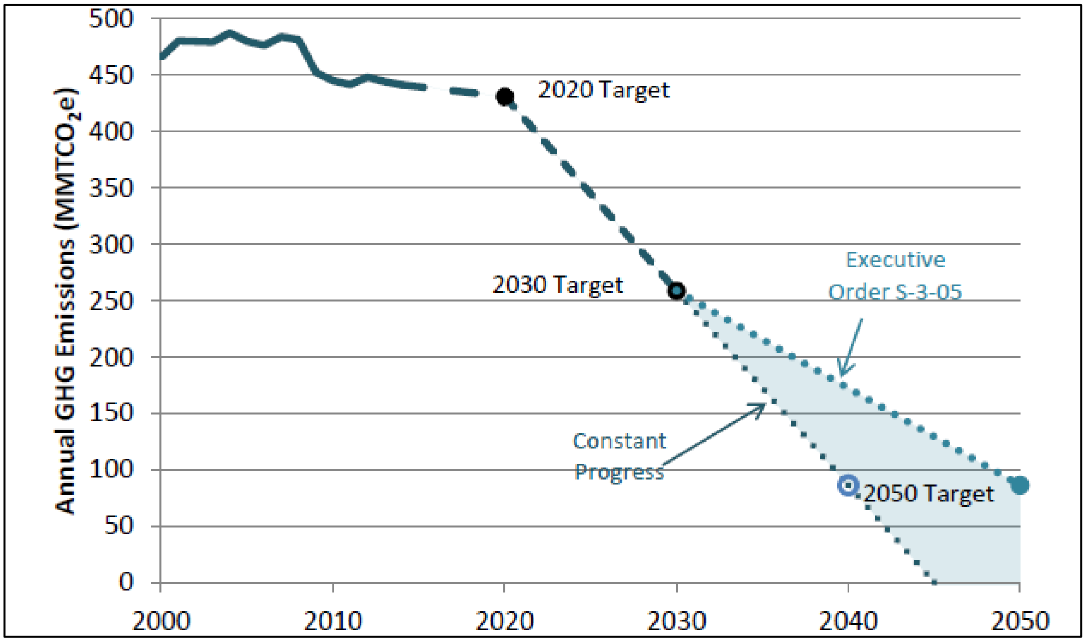
CARB recognized that AB 32 established an emissions reduction trajectory that will allow California to achieve the more stringent 2050 target: "These [greenhouse gas emission reduction] measures also put the State on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels. This trajectory is consistent with the reductions that are needed globally to stabilize the climate." In addition, CARB's First Update "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," and many of the emission reduction strategies recommended by CARB would serve to reduce the proposed Project's post-2020 emissions level to the extent applicable by law:

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the proposed project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the project's emissions level.
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the project's emissions level.
- **Water Sector:** The project's emissions level will be reduced as a result of further desired enhancements to water conservation technologies.
- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the project's emissions level.

For the reasons described above, the Project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets. The trajectory required to achieve the post-2020 targets is shown in Figure 4.

Figure 4

Path to Achieving 2050 Emissions Targets



Source: CARB 2017 Scoping Plan Update

In his January 2015 inaugural address, former Governor Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions:

- Increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030;
- Cutting the petroleum use in cars and trucks in half; and
- Doubling the efficiency of existing buildings and making heating fuels cleaner.

These expressions of executive branch policy may be manifested in adopted legislative or regulatory action through the state agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change. Studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Given the proportional contribution of mobile source-related GHG emissions to the State's inventory, recent studies also show that relatively new trends—such as the increasing importance of web-based shopping, the emergence of different driving patterns, and the increasing effect of web-based applications on transportation choices—are beginning to substantially influence transportation choices and the energy used by transportation modes. These factors have changed the direction of transportation trends in recent years and will require the creation of new models to effectively analyze future transportation patterns and the corresponding effect on GHG emissions. For the reasons described above, the proposed Project's future emissions trajectory is expected to follow a declining trend, consistent with the 2030, 2045, and 2050 targets.

The 2017 Scoping Plan provides an intermediate target that is intended to achieve reasonable progress toward the 2050 target. In addition, the 2022 Scoping Plan outlines objectives, regulations, planning efforts, and investments in clean technologies and infrastructure that outlines how the State can achieve carbon-neutrality by 2045. Accordingly, taking into account the proposed Project's design features and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the proposed Project would be consistent with State GHG Plans and would further the State's goals of reducing GHG emissions 40 percent below 1990 levels by 2030, carbon neutral by 2045, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment.

Impact Analysis Summary

As described above, the proposed Project would be consistent with State GHG Plans and would not obstruct the State's ability to meet its goals of reducing GHG emissions 40 percent below 1990 levels by 2030, carbon neutral by 2045, and 80 percent below 1990 levels by 2050. Therefore, the Project's generation of GHG emissions would not result in a significant impact on the environment. The impact is ***less than significant.***

Mitigation Measures: None are required.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant. As discussed under Impact VIII(a), neither the City of Farmersville nor the County of Tulare have adopted a GHG reduction plan that would be applicable to the proposed Project. In addition, the City of Farmersville has not completed the GHG inventory, benchmarking, or goal-setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines. The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to the Project. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the Project.

The County of Tulare has adopted Climate Action Plan; however, the County of Tulare's Climate Action Plan is only applicable to unincorporated areas of Tulare County and would not be appliable to the proposed Project. Since no other local or regional Climate Action Plan is in place, the Project is assessed for its consistency with CARB's adopted Scoping Plans. This assessment is included under Impact VII(a) above. As demonstrated in the analysis contained under Impact VIII(a), the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted to reduce the emissions of greenhouse gases. This impact would be ***less than significant***.

Mitigation Measures: None required.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

g. Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

RESPONSES

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. The proposed Project includes the construction of up to 242 single-family residential homes, including two parks across 3.32 acres, and internal access roads, lighting, landscaping, and associated improvements. Proposed Project construction activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. In addition, the Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) permit program through the submission and implementation of a Stormwater Pollution Prevention Plan during construction activities to prevent contaminated runoff from leaving the project site. Therefore, no significant impacts would occur during construction activities.

The operational phase of the proposed Project would occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes land uses that are considered compatible with the surrounding uses. None of these land uses routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common residential grade hazardous materials such as household and commercial cleaners, paint, etc. The proposed Project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials, nor would a significant hazard to the public or to the environment through the reasonably foreseeable upset and accidental conditions involving the likely release of hazardous materials into the environment occur. Therefore, the proposed Project will not create a significant hazard to the public or the environment and any impacts would be ***less than significant***.

Mitigation Measures: None are required.

b. <u>Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</u>

Less than Significant Impact. See Response a. above. Any accumulated hazardous construction or operational wastes will be collected and transported away from the site in compliance with all federal, state and local regulations. Any impacts would be ***less than significant***.

Mitigation Measures: None are required.

c. <u>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</u>

Less Than Significant Impact. Snowden Elementary School is approximately 0.2 miles east of the proposed Project site. As the proposed Project includes the development of single-family residences, it is not reasonably foreseeable that the proposed Project will cause a significant impact by emitting hazardous waste or bringing hazardous materials within one-quarter mile of an existing or proposed school. Residential land uses do not generate, store, or dispose of significant quantities of hazardous materials. Such uses also do not normally involve dangerous activities that could expose persons onsite or in the surrounding areas to large quantities of hazardous materials. See also Responses a. and b. regarding hazardous material handling. The impact is ***less than significant.***

Mitigation Measures: None are required.

d. <u>Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</u>

No Impact. The proposed Project site is not located on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 (Geotracker and DTSC Envirostor databases – accessed in May 2023). There are no hazardous materials sites that impact the Project. As such, ***no impacts*** would occur that would create a significant hazard to the public or the environment.

Mitigation Measures: None are required.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The proposed Project site is approximately five miles northwest of the Exeter Airport and the airport's safety zones do not extend into the City of Farmersville. There is ***no impact***.

Mitigation Measures: None are required.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The Project will not interfere with any adopted emergency response or evacuation plan. Construction activities will take place within right-of-ways of existing roadways. Construction activities will be temporary in nature and will not cause any road closures that could interfere with any adopted emergency response or evacuation plan. The construction contractor will be required to work with the City and County (public works, police/fire, etc.) if and when roadway diversions are required to ensure that adequate access is maintained for residents and emergency vehicles. There is ***less than significant impact.***

Mitigation Measures: None are required.

g. 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?

No Impact. There are no wildlands on or near the Project site. There is ***no impact***.

Mitigation Measures: None are required.

X. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i. Result in substantial erosion or siltation on- or off- site;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. 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	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☒	☐

X. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

The City of Farmersville provides water services to all residential, commercial, and industrial customers, as well as to the unincorporated Cameron Creek Colony through the operation of eight City owned water wells that produce up to two million (2,000,000) gallons of water per day. The proposed Project site is within the Farmersville service area.

The Kaweah Basin is the source of all drinking water supply for the City of Farmersville and surrounding communities. The Kaweah Delta Water Conservation District (KDWCD) manages the Basin. KDWCD and other irrigation districts and companies have historically managed groundwater through the conjunctive use of surface water. KDWCD regularly provides programs that benefit local agricultural customers by making available additional surface water supplies for irrigation. These programs effectively reduce the withdrawals of groundwater resulting in in-lieu recharge of the aquifer. Groundwater is normally used by agriculture as an alternate source when surface supplies are not available and is the sole source in areas within KDWCD jurisdiction that do not have access to surface water.

RESPONSES

a. <u>Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?</u>

Less than Significant Impact. The proposed Project includes the construction of up to 242 single-family residential homes, including two parks across 3.32 acres, and internal access roads, lighting, landscaping, and associated improvements. The Project will comply with all City ordinances and standards to assure proper grading and drainage. Compliance with all local, state, and federal regulations will prevent violation of water quality standards or waste discharge requirements. The proposed Project will be required to prepare a grading and drainage plan for review and approval by the City Engineer, prior to issuance of building permits.

The proposed Project will result in wastewater from residential units that will be discharged into the City's existing wastewater treatment system. The wastewater will be typical of other urban/residential developments consisting of bathrooms, kitchen drains and other similar features. The Project will not discharge any unusual or atypical wastewater. Site buildout has been planned for and anticipated. Therefore, the proposed Project will not result in additional production of wastewater that was not already accounted for in the City's infrastructure planning documents.

Additionally, there will be no discharge to any surface or groundwater source. As such, the proposed Project will not violate any water quality standards and will not impact waste discharge requirements. The impact will be ***less than significant***.

Mitigation Measures: None are required.

b. <u>Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?</u>

Less Than Significant Impact. The Kaweah River Basin Groundwater Management Plan acknowledges a continuing decline in groundwater levels of the aquifer system below the Farmersville area. The City of Farmersville will provide water services upon development. The City of Farmersville's water supply comes from groundwater extraction. To assist in mitigating this groundwater decline, The City of Farmersville has established fees that are charged to new developments, which will fund groundwater recharge and other water resource projects within the City.

The site has been planned for residential development in the General Plan and as such, has been accounted for in the City infrastructure planning documents. Project demands for groundwater resources would not substantially deplete groundwater supplies and/or otherwise interfere with groundwater recharge efforts being implemented by the City of Farmersville. Future demand can be met with continued groundwater pumping, surface water purchases and conservation measures.

Impacts would be ***less than significant.***

Mitigation Measures: None are required.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i. result in substantial erosion or siltation on- or offsite;

   ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

   iii. 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

   iv. impede or redirect flood flows?

Less than Significant Impact. The northern portion of the Project site currently supports fallowed agricultural fields consisting of annual grasses and forbs, and the southern portion supports orchards and fallowed agricultural fields. The proposed Project will change drainage patterns of the site through the installation of impervious surfaces and structures (houses, driveways, streets, etc.) and will be required by the City to be graded to facilitate proper stormwater drainage into the stormwater basin included with the Project. Storm water during construction will be managed as part of the Storm Water Pollution Prevention Plan (SWPPP). A copy of the SWPPP will be retained on-site during construction.

The eastern portion of the proposed Project site is located within Flood Zone "A" – defined as "Special Flood Hazard Areas without Base Flood Elevation" as indicated by FEMA flood hazard map 06107C0962E, effective 6/16/2009. The western portion of the proposed Project site is outside the limits of a flood study and as such, is in an area of undetermined flood hazard. The residential units will be built in accordance with the current City ordinances and California Building Code regarding construction in flood zones. The site will also be designed for adequate storm drainage. Accordingly, the chance of flooding (and therefore the release of pollutants due to flooding) at the site is remote.

Impacts are ***less than significant.***

Mitigation Measures: None are required.

d. In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?

e. <u>Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</u>

Less than Significant Impact. As discussed in Impact X(c), the proposed Project site is located within Flood Zone "A". The site will be designed for adequate storm drainage and will be required to prepare and submit a water quality control plan to be implemented during construction, as required by the National Pollutant Discharge Elimination System. This plan must be reviewed and approved by the City Engineer prior to the start of construction.

An unnamed canal bordered the western edge of the Project site, which was dry at the time of the BRE survey. There are no inland water bodies that could be potentially susceptible to a seiche in the Project vicinity. This precludes the possibility of a seiche inundating the Project site. The Project site is more than 100 miles from the Pacific Ocean, a condition that precludes the possibility of inundation by tsunami. There are no steep slopes that would be susceptible to a mudflow in the Project vicinity, nor are there any volcanically active features that could produce a mudflow in the City of Farmersville. This precludes the possibility of a mudflow inundating the Project site.

Any impacts are ***less than significant***.

Mitigation Measures: None are required.

LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

RESPONSES

a. Physically divide an established community?

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The Project applicant is proposing to subdivide and develop approximately 48.9 acres of land into a planned community with 242 single-family residential units and two parks in the City of Farmersville. The proposed Project consists of a change of land use and zone designation, Conditional Use Permit, and approval of a Tentative Subdivision Map to allow for the residential development. Specifically, the proposed Project includes:

- Approve a General Plan Amendment for the proposed 45.58-acre residential land parcels from "Medium Density Residential" to "Low Density Residential", and the two park areas of 3.32 acres to Open Space on the Farmersville General Plan land use map.
- Approve a Zone Change to:
  - Apply the (PD) "Planned Development" overlay zone to proposed residential portions of the site.
  - P-QP (Public/Quasi Public) for the two parks across 3.32 acres.
- Approve the Project's Tentative Subdivision Map.

The Project site is currently designated in the General Plan as Medium Density Residential, and zoned as Single Family Residential (R-1). Upon approval the Project will be in compliance with the General Plan and zoning ordinance. The proposed Project site is also included in the Available Residential Land Inventory as part of the Farmersville Housing Element 2016-2023.[26] Surrounding land uses include residential, commercial, and agriculture.

The Project has no characteristics that would physically divide the City of Farmersville. Access to the existing surrounding areas will be improved. ***No impacts*** would occur as a result of this Project.

Mitigation Measures: None are required.

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[26] Map 6-1, Available Residential Land Inventory, Farmersville Housing Element 2016-2023. https://www.cityoffarmersville-ca.gov/DocumentCenter/View/389/Housing-Element. Accessed July 2023.

XII. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

RESPONSES

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The most economically important minerals that are extracted in Tulare County are sand, gravel, crushed rock, and natural gas. The four streams that have provided the main source of high-quality sand and gravel in Tulare County to make Portland cement concrete and asphaltic concrete are the Kaweah River, Lewis Creek, Deer Creek and the Tule River[27].

The proposed Project area is not included in a State classified mineral resource zone[28], and the Kaweah River is approximately three miles northwest of the Project site. Therefore, there is ***no impact***.

Mitigation Measures: None are required.

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[27] Tulare County General Plan 2030 Update Recirculated Draft EIR. February 2010. Page 3.7-9.

[28] Ibid. Page 3.7-10.

XIII. NOISE

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

RESPONSES

a. <u>Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</u>

b. <u>Generation of excessive groundborne vibration or groundborne noise levels?</u>

Less than Significant Impact. The City of Farmersville General Plan does not include a noise element, but rather states that the City has adopted Tulare County's Noise Element. The County of Tulare Noise Element of the General Plan (August 2012) establishes noise level criteria in terms of the Day-Night Average Level (Ldn) metric. The Ldn is the time-weighted energy average noise level for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.).

The Ldn represents cumulative exposure to noise over an extended period of time and is therefore calculated based upon *annual average* conditions.

Site development may increase ambient noise levels in the Project vicinity beyond those already present on the site from the residential activity. In the short term, noise levels would be raised during construction of the Project phases by the operation of heavy equipment and other associated activities. Because construction noise would generally occur intermittently on Monday through Saturdays during daylight hours, per the Farmersville Noise Ordinance, the impact of noise in surrounding land uses is not expected to be significant.

In the long term, any development would add traffic and other sources of noise that will somewhat increase the ambient noise levels in the vicinity. However, these noise levels should be relatively consistent with those experienced in the area and other existing developed areas of Farmersville.

Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. Construction associated with the proposed Project includes the construction of residences and roadways.

The approximate threshold of vibration perception is 65 VdB, while 85 VdB is the vibration acceptable only if there are an infrequent number of events per day. Table 17 describes the typical construction equipment vibration levels.

Table 17

Typical Construction Vibration Levels

Equipment	VdB at 25 ft
Small Bulldozer	58
Jackhammer	79

Vibration from construction activities will be temporary and not exceed the Federal Transit Authority threshold for the nearest residences which are located adjacent to the Project site on the eastern and western boundaries. As such, any impacts resulting from an increase in ambient noise levels or excessive groundborne vibration will be ***less than significant.***

c. For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project is not located within an airport land use plan. Therefore, there is ***no impact***.

Mitigation Measures: None are required.

XIV. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

RESPONSES

a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact. The proposed Project would include the construction of up to 242 single-family residences, two parks, internal access roads, and other associated improvements. Based on the per-unit average of 3.75 persons for the City of Farmersville[29], the site would provide housing for approximately 908 people. The proposed Project consists of a change of land use and zone designation, Conditional Use Permit, and approval of a Tentative Subdivision Map to allow for the residential development. As such, the site is planned for development and the associated increase in population has been accounted for. As such, any impacts are ***less than significant***.

Mitigation Measures: None are required.

[29] E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2023. State of California Department of Finance. https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2023/. Accessed July 2023.

b. <u>Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</u>

Less than Significant. There are no residential structures currently on-site. The Project will not displace any housing and therefore there is ***less than significant***.

Mitigation Measures: None are required.

XV. PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

RESPONSES

a. <u>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</u>

<u>Fire protection?</u>

Less than Significant Impact. The Farmersville Fire Department maintains a fleet of specialized fire apparatus including a 4-wheel drive Brush Fire Patrol Unit, a Quick Attack Squad Unit (250 GPM Pumper), an Engine (1,500 GPM Pumper), a 55 Ft. Ladder Truck (1,500 GPM Pumper), and several Command/Utility Vehicles.

The Project site is already serviced by the Fire Department. The proposed Project at full buildout will add to the number of "customers" served, however, the Fire Department has capacity for the additional service need. No additional fire equipment, personnel, or services will be required by Project implementation. In addition, the Project applicant will be required to pay all associated impact fees related to public services.

As such, any impacts would be less ***than significant***.

<u>Police Protection?</u>

Less than Significant Impact. The proposed Project site will continue to be served by the City of Farmersville police department. Implementation of the proposed Project would result in an increase in demand for police services; however, this increase would be minimal compared to the number of officers currently employed by the Farmersville Police Department and would not trigger the need for new or physically altered police facilities. No additional police personnel or equipment is anticipated. In addition, each home will be assessed a public safety impact fee by the City that is used to make capital improvements for the Police Department. The impact is ***less than significant.***

<u>Schools?</u>

Less than Significant Impact. The proposed Project site is located within the Farmersville Unified School District. Pursuant to California Education Code Section 17620(a)(1), the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of school facilities. The Project applicant would be required to pay such fees to reduce any impacts of new residential development of school services. Payment of the developer fees will offset the addition of school-age children within the district. As such, any impacts would be ***less than significant.***

<u>Parks?</u>

Less than Significant Impact. Two parks will be constructed within the bounds of the proposed Project site. In addition, open space corridors with landscaping and walking trails will be established along each side of Deep Creek, in accordance with the City of Farmersville's Waterway/Trails Master Plan. To ensure sufficient recreational opportunities, the City has established a Park Impact Fee, implemented by Chapter 4, Development Fees, of the Municipal Code. Municipal Code states that parks must be constructed or expanded commensurate with growth of the City. The City Council determined that a park impact fee is required to assist in the financing of these public park improvements and to pay for new development's fair share of the acquisition and development costs of these improvements. The Project applicant would be required to comply with the Municipal Code. As such, any impacts would remain ***less than significant.***

Other public facilities?

Less than Significant Impact. The proposed Project is within growth projections identified in the City's General Plan and other infrastructure studies. As such, the Project would not result in increased demand on other public facilities such as library services that has not already been planned for. Any impacts would be ***less than significant***.

Mitigation Measures: None are required.

XVI. RECREATION

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

RESPONSES

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact. As described in Impact XIV(a), the City has established a Park Impact Fee through the Municipal Code, which states that parks must be constructed or expanded commensurate with growth of the City. Two parks, for a total of 3.32 acres, are included in the development design; however, the Project applicant will be required to comply with that Municipal Code, as well as any fees that apply. As such, any impacts will be ***less than significant***.

Mitigation Measures: None are required.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact. The proposed Project includes the development of two parks, the environmental impacts of which are the subject of this environmental document. As determined by the analysis contained within this document, ***less than significant impacts*** would occur.

Mitigation Measures: None are required.

XVII. TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☒	☐	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

The impact analysis in this resource area is based off of the Traffic Study prepared by Ruettgers & Schuler Civil Engineering in July, 2023. The Traffic Study is provided in Appendix D of this document.

RESPONSES

a. <u>Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?</u>

Less Than Significant Impact with Mitigation. The City of Farmersville General Plan Circulation Element contains Goals, Objectives and Action Plans to Ensure that streets in Farmersville are not congested and that the traffic on Farmersville's streets operates in an efficient and safe manner.

Trip Generation

The Project trip generation volumes shown in Table 18 were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Trip rates, equations, and directional splits for ITE Land Use Code 210 (Single Family Detached Housing) were used to estimate project trips for weekday peak hour of adjacent street traffic. The AM and PM peak hours of adjacent street traffic were determined to be between 6:00 AM and 7:00 AM, and between 4:00 PM and 5:00 PM, based on a review of two-hour AM & PM peak hour vehicle turn movement counts taken March 2022.

Table 18

Project Trip Generation[30]

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
210	Single-Family detached Housing	248 Dwelling Units	eq	2327	eq	26% 43	74% 127	eq	63% 147	37% 86

Trip Distribution and Assignment

The distribution of Project peak hour trips is shown in Table 19 and represents the movement of traffic accessing the Project site by direction. The Project trip distribution was developed based on site location and travel patterns anticipated for the proposed land uses.

Table 19

Project Trip Distribution[31]

Direction	Percent
North	10
East	15
South	10
West	65

Existing and Future Traffic

Existing peak hour turning movement counts were obtained in March and July 2022 and grown out to 2023. Average annual growth rates ranging between 1.10 and 2.25 percent were applied to the 2023 peak hour volumes to estimate peak hour volumes for the year 2043. These growth rates were developed based on a review of historical count data and output from TCAG's regional travel demand model as well as a

[30] Ibid.

[31] Ibid, page 7

discussion with the City of Farmersville Planning Consultant. Cumulative volumes were estimated based on information provided by the City of Farmersville regarding build year, land use, size and location for each pending development. See Appendix D for figures. [32]

Intersection Analysis

A capacity analysis of the study intersections was conducted using Synchro software from Trafficware, as detailed in Appendix A. The analysis was performed for each of the following traffic scenarios.

- Existing (2023)
- Existing (2023) + Project
- Future Cumulative (2043)
- Future Cumulative (2043) + Project

Level of service (LOS) criteria for unsignalized and signalized intersections, as defined in HCM 2010, are presented in the tables below. [33] The City of Farmersville's Circulation Element designates LOS C as the minimum acceptable intersection peak hour level of service.

Table 20 - Level of Service Criteria

Unsignalized Intersection

Level of Service	Average Control Delay (sec/veh)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no delay
B	> 10 and ≤ 15	Short delays
C	> 15 and ≤ 25	Average delays
D	> 25 and ≤ 35	Long delays
E	> 35 and ≤ 50	Very long delays
F	> 50	Extreme delays

[32] Ibid.

[33] Ibid, page 13.

Table 21 - Level of Service Criteria
Signalized Intersections

Level of Service	Average Control Delay (sec/veh)	Volume-to-Capacity Ratio
A	≤ 10	< 0.60
B	> 10 and ≤ 20	0.61 - 0.70
C	> 20 and ≤ 35	0.71 - 0.80
D	> 35 and ≤ 55	0.81 - 0.90
E	> 55 and ≤ 80	0.91 - 1.00
F	> 80	> 1.00

Peak hour level of service for the study intersections is presented in Tables 22 and 23. Intersection delay in seconds per vehicle is shown within parentheses for intersections operating below LOS C.

Table 22 – Intersection Level of Service
Weekday PM Peak Hour [34]

#	Intersection	Control Type	2023	2023+ Project	2043	2043+ Project	2043+ Project w/Mitigation[1]
1	Farmersville Rd & Ave 296	AWSC	B	B	C	C	-
2	SR 198 EB Ramps & Ave 296	NB	B	C	C	C	-
3	SR 198 EB Ramps & Ave 295	Roundabout	A	A	A	B	-
4	Farmersville Rd & Ave 295	Roundabout	A	A	B	B	-
5	Farmersville Rd & Walnut Ave/W Walnut Ave	Signal	C	C	C	C	-
6	Farmersville Rd & Front St	AWSC	C	C	F (71.2)	F (91.2)	-
		Signal	-	-	-	-	B
7	Rd 156 & Visalia Rd	Signal	B	B	C	C	-
8	Hacienda Dr & Visalia Rd	AWSC	-	A	F (113.4)	F (124.3)	-
		Signal	-	-	-	-	C
9	Virginia Ave & Visalia Rd	NB	B	C	C	D (26.2)	-
		Signal	-	-	-	-	C
10	Steven Ave & Visalia Rd	SB	B	B	C	C	-
11	Ventura Ave & Visalia Rd	NB	C	C	C[2]	C[2]	-
12	Farmersville Rd & Visalia Rd	Signal	B	B	C	C	-

[34] Ibid, page 14.

Note:
[1] See Table 28 for mitigation measures.
[2] Reconfigure intersection median in the future condition to preclude northbound left turns.

Table 23 – Intersection Level of Service
Weekday AM Peak Hour [35]

#	Intersection	Control Type	2023	2023+ Project	2043	2043+ Project	2043+ Project w/Mitigation[1]
1	Farmersville Rd & Ave 296	AWSC	B	B	C	C	-
2	SR 198 EB Ramps & Ave 296	NB	B	B	C	C	-
3	SR 198 EB Ramps & Ave 295	Roundabout	A	A	A	A	-
4	Farmersville Rd & Ave 295	Roundabout	A	A	B	B	-
5	Farmersville Rd & Walnut Ave/W Walnut Ave	Signal	B	B	C	C	-
6	Farmersville Rd & Front St	AWSC	A	A	C	C	-
		Signal	-	-	-	-	B[2]
7	Rd 156 & Visalia Rd	Signal	B	B	B	B	-
8	Hacienda Dr & Visalia Rd	AWSC	-	A	C	C	-
		Signal	-	-	-	-	B[2]
9	Virginia Ave & Visalia Rd	NB	B	B	B	B	-
		Signal	-	-	-	-	B[2]
10	Steven Ave & Visalia Rd	SB	A	A	B	B	-
11	Ventura Ave & Visalia Rd	NB	B	B	A[3]	A[3]	-
12	Farmersville Rd & Visalia Rd	Signal	B	B	C	C	-

Note:
[1] See Table 28 for mitigation measures.
[2] Mitigation required due to PM Peak Hour.
[3] Reconfigure intersection median in the future condition to preclude northbound left turns.

Traffic Signal Warrant Analysis

Peak hour signal warrants were evaluated for the one unsignalized intersection within the study based on the 2014 California Manual on Uniform Traffic Control Devices (2014 CA MUTCD). Peak hour signal

[35] Ibid, page 15.

warrants assess delay to traffic on minor street approaches when entering or crossing a major street. Signal warrant analysis results are shown in Tables 24 and 25.[36]

Table 24 – Traffic Signal Warrants
Weekday PM Peak Hour

		2023			2023+Project			2043			2043+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	Farmersville Rd at Ave 296	396	162	NO	409	168	NO	599	237	YES	612	249	YES
2	SR 198 EB Ramps at Ave 296	561	64	NO	574	76	NO	844	113	NO	857	125	NO
6	Farmersville Rd at Front St	1081	123	YES	1200	127	YES	2075	182	YES	2194	186	YES
8	Hacienda Dr at Visalia Rd	-	-	-	44	0	NO	1718	64	NO	1762	64	NO
9	Virginia Ave at Visalia Rd	793	24	NO	837	24	NO	1358	39	NO	1402	39	NO
10	Steven Ave at Visalia Rd	785	41	NO	907	72	NO	1492	405	YES	1614	477	YES
11	Ventura Ave at Visalia Rd	899	72	NO	1049	72	NO	1673	97	YES	1823	97	YES

Table 25 – Traffic Signal Warrants
Weekday AM Peak Hour

		2023			2023+Project			2043			2043+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	Farmersville Rd at Ave 296	345	107	NO	364	107	NO	509	156	NO	528	156	NO
2	SR 198 EB Ramps at Ave 296	431	37	NO	450	41	NO	658	62	NO	677	66	NO
6	Farmersville Rd at Front St	393	99	NO	481	100	NO	861	142	NO	949	143	NO
8	Hacienda Dr at Visalia Rd	-	-	-	31	0	NO	842	78	NO	873	78	NO
9	Virginia Ave at Visalia Rd	341	23	NO	372	23	NO	621	38	NO	652	38	NO
10	Steven Ave at Visalia Rd	304	50	NO	339	106	NO	614	277	YES	649	383	YES
11	Ventura Ave at Visalia Rd	351	36	NO	461	36	NO	765	49	NO	875	49	NO

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered in order to determine whether signals are truly justified.

[36] Ibid, page 16.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service or operate below an acceptable level of service and not meet signal warrant criteria.

Roadway Analysis

A capacity analysis of the study roadways was conducted using Table 4 in the State of Florida Department of Transportation *Quality/Level of Service Handbook* dated June 2020. The City of Farmersville Circulation Element states that the peak hour level of service for roadways shall be no lower than LOS "C" for urban areas. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2023)
- Existing (2023) + Project
- Future (2042)
- Future (2043) + Project

Table 26

PM Roadway Level of Service[37]

Street	2023 Two-Way LOS		2023+Project Two-Way LOS		2043 Two-Way LOS		2043+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Ave 296: Farmersville Rd to SR 198 WB Ramps	539	C	578	C	805	C	851	C
Ave 295: SR 198 EB Ramps Farmersville Rd	639	C	699	C	1051	C	1124	C
Visalia Rd: Rd 156 to Hacienda Dr	936	C	1005	C	1528	D	1611	C
Visalia Rd: Hacienda Dr to Virgina Ave	790	C	855	C	1478	D	1560	C
Visalia Rd: Virgina Ave to Steven Ave	796	C	861	C	1177	C	1252	C
Visalia Rd: Steven Ave to Ventura Ave	881	C	1057	C	1183	C	1366	C
Visalia Rd: Ventura Ave to Farmersville Rd	886	C	1062	C	1193	C	1337	C
Farmersville Rd: Visalia Rd to Font St	891	C	1039	C	1423	C	1585	C
Farmersville Rd: Font St Walnut St	1234	C	1384	C	1893	C	2059	C
Farversville Rd: Walnut St to Ave 295	816	C	892	C	1392	C	1500	C
Farversville Rd: Ave 295 to Ave 296	605	C	646	C	945	C	994	C

[37] Ibid, page 18.

Table 27

AM Roadway Level of Service[38]

Street	2023 Two-Way LOS		2023+Project Two-Way LOS		2043 Two-Way LOS		2043+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Ave 296: Farmersville Rd to SR 198 WB Ramps	413	C	447	C	611	C	650	C
Ave 295: SR 198 EB Ramps Farmersville Rd	292	C	319	C	527	C	560	C
Visalia Rd: Rd 156 to Hacienda Dr	403	C	444	C	777	C	828	C
Visalia Rd: Hacienda Dr to Virgina Ave	343	C	383	C	717	C	767	C
Visalia Rd: Virgina Ave to Steven Ave	337	C	386	C	532	C	577	C
Visalia Rd: Steven Ave to Ventura Ave	365	C	487	C	530	C	656	C
Visalia Rd: Ventura Ave to Farmersville Rd	349	C	470	C	510	C	636	C
Farmersville Rd: Visalia Rd to Font St	365	C	465	C	612	C	719	C
Farmersville Rd: Font St Walnut St	528	C	627	C	833	C	940	C
Farversville Rd: Walnut St to Ave 295	480	C	535	C	896	C	961	C
Farversville Rd: Ave 295 to Ave 296	471	C	506	C	743	C	785	C

Intersection Improvements

Intersection improvements needed by the year 2043 to maintain or improve the operational level of service of the street system in the Project vicinity are presented in Table 28.

Table 28

Future Intersection Improvements[39]

#	Intersection	Total Improvements Required by 2043	Project Share
6	Farmersville Rd & Front St	Signal	14.91%
8	Hacienda Dr & Visalia Rd	Signal	2.67%
9	Virginia Ave & Visalia Rd	Signal	9.87%

[38] Ibid, page 19.

[39] Ibid, page 20.

Project percent share is calculated using the following formula:

$$\% \text{ Share} = \frac{\text{Project Traffic}}{(\text{Future+Project Traffic}) - \text{Existing Traffic}} \times 100\%$$

In summary, all roadway segments within the scope of the traffic study currently operate above LOS C during peak hours prior to, and with the addition of Project traffic in both 2023 and 2043. All 12 study intersections currently operate at or above LOS C during peak hours prior to and with the addition of Project traffic.

In 2043, it is anticipated that the intersections of Farmersville Road & Front Street, Hacienda Drive & Visalia Road, and Ventura Avenue & Visalia Road will operate below an acceptable level of service prior to the addition of Project traffic. All remaining intersections operate at an acceptable level of service prior to and with the addition of Project traffic. The intersections can be mitigated to acceptable levels of service with a traffic signal. The median at the intersection of Ventura Avenue & Visalia Road should be modified to preclude northbound left turns. With the addition of the mitigation measure identified in Table 28, all intersections will operate at acceptable levels.

As such, potential impacts will be ***less than significant with mitigation incorporation.***

Mitigation Measures:

TRA-1:

> The Applicant shall pay the City of Farmersville for their Fair Share Portion of the intersection improvements described in Table 28, in order to maintain or improve the operational level of service of the street system in the Project vicinity prior to issuance of building permits.

b. <u>Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?</u>

Less Than Significant with Mitigation. An evaluation of vehicle miles traveled (VMT) for Project traffic was conducted in accordance with California Environmental Quality Act (CEQA) requirements. The City of Farmersville has adopted the "County of Tulare SB 743 Guidelines", dated June 8, 2020, which contain recommendations regarding VMT assessment, significance thresholds and mitigation measures.

Baseline VMT was determined utilizing data from the California Statewide Travel Demand Model (CSTDM). The proposed residential Project is located in Traffic Analysis Zone (TAZ) 2757, which has an average VMT/capita of 11.27 miles. The proposed residential Project is considered a typical project within the TAZ and therefore the Project would be expected to have the same VMT per capita. There are no special considerations with the Project to assume the Project would produce a VMT/capita lower than the average for the TAZ. The threshold of significance for residential project VMT/capita is if the Project VMT is below the average in the TAZ where the Project is located. Since VMT/capita is assumed to be equal to the average for the aforementioned zone, it is anticipated that the proposed Project will have a significant transportation impact prior to mitigation.

The Tulare County guidelines include detailed instructions for mitigation if a project has significant impacts. The guidelines state "The preferred method of VMT mitigation in Tulare County is for project applicants to provide transportation improvements that facilitate travel by walking, bicycling, or transit." In accordance with these guidelines, a survey was conducted within a half mile of the Project to determine any pedestrian, bicycle or transit facilities deficiencies exist. After review, ADA compliant wheelchair ramps are proposed to be constructed as provided in Figure 5 and is included as Mitigation Measure TRA-2.

The total project cost is estimated at approximately $48,000 with a 20% contingency. The guidelines include a minimum cost for mitigation of $20 per daily trip generated by the project or 0.5% of the total construction cost of the project (not including land acquisition). As shown in Table 1, the project is anticipated to generate 2,327 daily trips, which equates to a target value of improvements of $46,540.

Project VMT analysis showed a VMT which was equal to the existing local VMT in the area, which indicates a transportation impact under CEQA.

Pursuant to the guidelines, if a project provides mitigation which meets the minimum threshold listed above, the project can presume a 1% reduction in VMT. The assumed VMT/capita reduction is 1% of 11.27 or 0.11. The resulting VMT/capita after mitigation is 11.16 which is below the average VMT/capita in the TAZ which the Project is located. With implementation of the mitigation measure TRA-2 for reduction of VMT, the Project will have a ***less than significant impact***.

Mitigation Measures:

TRA-2:

The applicant shall install ADA compliant wheelchair ramps at the following locations prior to issuance of occupation permits:

- Ventura Avenue & Oakland Street (2 ramps)
- Kern Avenue & Oakland Street (1 ramp)
- Ventura Avenue & Fresno Street (2 ramps)
- Kern Avenue & Fresno Street (4 ramps)
- Shasta Avenue & Fresno Street (2 ramps)
- Ventura Avenue & Tulare Street (2 ramps)

- Kern Avenue & Tulare Street (2 ramps)
- Shasta Avenue & Tulare Street (1 ramp)

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. The proposed Project has been designed for ease of access, adequate circulation/movement, and is typical of residential developments in the City of Farmersville. On-site circulation patterns do not involve high speeds, sharp curves or dangerous intersections. Although there will be an increase in the volume of vehicles accessing the site and surrounding areas, the proposed Project will not present a substantial increase in hazards. Any impacts are considered ***less than significant.***

Mitigation Measures: None are required.

d. Result in inadequate emergency access?

Less Than Significant Impact. The proposed Project does not involve a change to any emergency response plan. Access points to the Project are along Visalia Road, Ventura Avenue, and Tulare Street, and the site will remain accessible to emergency vehicles of all sizes. As such, potential impacts are ***less than significant.***

Mitigation Measures: None are required.

Figure 5 – VMT Mitigation

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. 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	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

RESPONSES

a-i, a-ii. <u>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 a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?</u>

Less than Significant Impact with Mitigation. A Tribal Cultural Resource (TCR) is defined under Public Resources Code section 21074 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that are either included and that is listed or eligible for inclusion in the California Register of Historic Resources or in a local register of historical resources, or if the City of Farmersville, acting as the Lead Agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR. As discussed above, under Section V, Cultural Resources, criteria (b) and (d), no known archeological resources, ethnographic sites or Native American remains are located on the proposed Project site. As discussed under criterion (b) implementation of Mitigation Measure CUL-1 would reduce impacts to unknown archaeological deposits, including TCRs, to a less than significant level. As discussed under criterion (d), compliance with California Health and Safety Code Section 7050.5 would reduce the likelihood of disturbing or discovering human remains, including those of Native Americans.

The following California Native American Tribes were notified pursuant to AB 52 (Public Resources Code Section 21080.3.1, et seq.) on behalf of the City of Farmersville on March 21, 2022.

- Big Sandy Rancheria of Western Mono Indians
- Santa Rosa Indian Community of the Santa Rosa Rancheria
- Tule River Indian Tribe
- Wuksache Indian Tribe/Eshom Valley band

Tribes were provided 30 days, to request consultation pursuant to those statutes. The Santa Rosa Rancheria – Tachi Yokuts responded on March 31, 2022 and requested to be retained to perform a cultural presentation for all construction staff and to be informed of any and all discoveries made related to the Project. No other comments were received. Implementation of TCR-1 will ensure that impacts to potential tribal cultural resources will remain ***less than significant.***

Mitigation Measures:

TCR-1 Santa Rosa Rancheria – Tachi Yokut Tribe shall be allowed to perform a cultural presentation for all construction staff prior to ground-disturbing activities. The

Project developer shall hire an archaeological monitor during ground-disturbing activities and the monitor shall provide weekly monitoring logs to the Santa Rosa Rancheria – Tachi Yokut Tribe. The Developer shall notify the Santa Rosa Rancheria – Tachi Yokut Tribe at least seven business days prior to ground-disturbing activities.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. 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?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

RESPONSES

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. Wastewater service, water, electric power, natural gas and telecommunications facilities would all provide service to the proposed Project from their respective existing facilities and as such, would not be required to construct new or expanded facilities. The Project will have a ***less than significant impact*** to this analysis area.

Mitigation Measures: None are required.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact. As discussed in Impact X(b), the proposed Project will increase demands on the Farmersville water production and distribution area. The City's water system consists of a series of wells, pump stations, treatment facilities and distribution lines. The system draws from the groundwater system underlying Farmersville and the Central Valley. While groundwater supplies can accommodate multiple dry years, the City of Farmersville, Tulare County, and nearby cities are engaging in groundwater management activities to monitor and enhance recharge capabilities to accommodate future demands. The City will have sufficient supply to serve the proposed Project. As such, the proposed Project will have a ***less than significant impact*** to this impact area.

Mitigation Measures: None are required.

c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. The Project will result in wastewater from residential units that will be discharged into the City's existing wastewater treatment system. The wastewater will be typical of other urban/residential developments consisting of bathrooms, kitchen drains and other similar features. The Project will not discharge any unusual or atypical wastewater that would violate the City's waste discharge requirements. The City of Farmersville Public Works Department has reviewed the Project and determined that it can accommodate the wastewater generated from the project. Therefore, the impact of the Project on wastewater treatment is ***less than significant***.

Mitigation Measures: None are required.

d. <u>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?</u>

Less than Significant Impact. Disposal services in the City are provided by a private contractor, Mid Valley Disposal. Solid waste is usually hauled to the Visalia Landfill, north of Visalia on Road 80. The State of California requires that all cities and counties reduce the amount of waste going to landfills and the City is meeting its recycling requirements. Mid Valley Disposal has a program of recycling pick-ups in Farmersville; materials separated for recycling include paper, glass, metals and plastics to provide a diversion of portions of the waste stream resulting in a reduction of the solid waste stream going to landfills and similar disposal locations. The site has been designated for residential uses by the General Plan and as such, the demand for City infrastructure, such as disposal services, has been accounted for in City planning documents. Impacts to this resource area are ***less than significant.***

Mitigation Measures: None are required.

e. <u>Comply with federal, state, and local statutes and regulations related to solid waste?</u>

Less than Significant Impact. See Response d, above. The proposed Project would be required to comply with all federal, State, and local regulations related to solid waste. Furthermore, the proposed Project would be required to comply with all standards related to solid waste diversion, reduction, and recycling during project construction and operation. As such, any impacts would be ***less than significant.***

Mitigation Measures: None are required.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b. 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?	☐	☐	☒	☐
c. 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?	☐	☐	☒	☐
d. 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?	☐	☐	☒	☐

RESPONSES

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

b. 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?

c. 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?

d. 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?

Less Than Significant Impact. The proposed Project is located in an area developed with residential, commercial and agricultural uses, which precludes the risk of wildfire. The area is flat in nature which would limit the risk of downslope flooding and landslides, and limit any wildfire spread.

To receive building permits, the proposed Project would be required to be in compliance with the adopted emergency response plan. As such, any wildfire risk to the project structures or people would be ***less than significant.***

Mitigation Measures: None are required.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a 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)?	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

RESPONSES

a. <u>Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of</u>

a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact With Mitigation. The analyses of environmental issues contained in this Initial Study indicate that the proposed Project is not expected to have substantial impact on the environment or on any resources identified in the Initial Study. Mitigation measures have been incorporated in the project design to reduce all potentially significant impacts to ***less than significant***.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a 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)?

Less than Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the Project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. The proposed Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc.). The impact is ***less than significant***.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact With Mitigation. The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the Project design to reduce all potentially significant impacts to ***less than significant.***

LIST OF PREPARERS

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- Karl Schoettler, Contract City Planner

California Historic Resources Information System

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Appendix A

Air Quality, Health Risk, GHG & Energy Technical Memo

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Eagle Meadows Residential Project—Farmersville

Report Date: June 23, 2023

Subject: Air Quality, Health Risk, Greenhouse Gas, and Energy Technical Memorandum

This Air Quality, Health Risk, Greenhouse Gas, and Energy Technical Memorandum was prepared to evaluate whether the estimated criteria air pollutant, ozone precursor, toxic air contaminant (TAC), and/or greenhouse gas (GHG) emissions generated from construction and/or operation of the Eagle Meadows Residential Project (proposed project or project) would cause significant impacts to air quality, GHG, or energy resources. The methodology follows the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD) for the quantification of emissions and evaluation of potential impacts to air resources.[1] The GHG Analysis references the SJVAPCD's Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under the California Environmental Quality Act (CEQA).[2]

Project Location and Description

The Eagle Meadows Residential Project (proposed project or project) consists of a change of land use and zone designation, Conditional Use Permit, and approval of a Tentative Subdivision Map to allow for a 242-unit residential development in the City of Farmersville. Specifically, the proposed project includes:

- General Plan Amendment to change the designation of "Medium Density Residential" to "Low Density Residential" on the Farmersville General Plan land use map.
- Approve a Zone Change to:
    - Apply the (PD) "Planned Development" overlay zone to proposed residential portions of the site.
- Approve the Project's Tentative Subdivision Map.
- Develop 242 single-family residential units and two parks (3.32 total acres) on a 48.9-acre site.

Site Circulation and Access

The site has been designed with nine points of ingress and egress. One of these points connects at Visalia Road along the northern edge of the project, two access points connect at Ventura Avenue to the

[1] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.

[2] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17. Website: https://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf. Accessed June 16, 2023.

east, two access points connect at Virginia Avenue to the west, and four access points connect at Tulare Street to the south. The project will be responsible for construction of internal roadways as well as for improvements to surrounding roadways to accommodate the project.

Infrastructure

The project includes the construction of a 0.93-acre park/storm drain basin and a 2.39-acre park/storm drain basin, for a total of 3.32 acres of park/storm drain basins and will require connection to various City-operated systems such as sewer, water and storm drain facilities. The project will be responsible for the construction of connection points to the City's existing infrastructure. The project also includes improvements and landscaping along the frontage roads and within the site itself. A seven-foot block sound wall will be constructed along the entire project site frontage adjacent to Virginia Avenue and along Ventura Avenue between Harold Street and Sycamore Street.

Construction Schedule

Proposed project construction will require site preparation activities such as site preparation/grubbing to remove the existing orchards and site grading activities. Construction is expected to occur over three years as determined by market demands and is anticipated to begin in October of 2023.

Project Location

An aerial view of the project site is shown in Figure 1, and the site plan included as part of Attachment A.

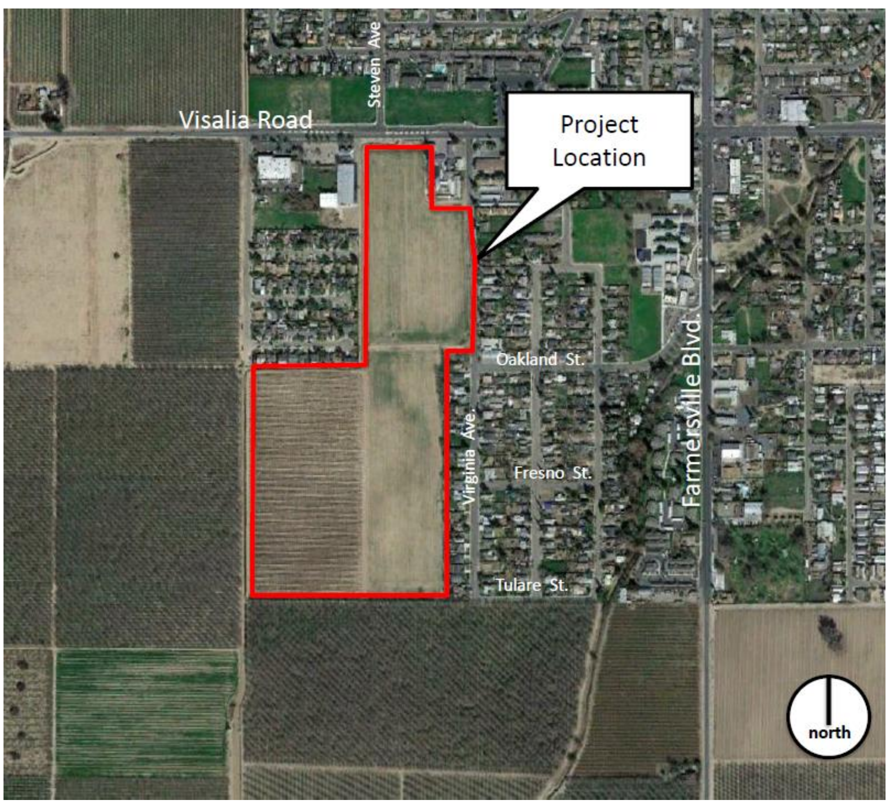

Figure 1 – Eagle Meadows Residential Project—Aerial View of Project Location

Summary of Analysis Results

The following is a summary of the analysis results. As shown below, the proposed project would result in less than impacts to air quality, GHG, and energy resources. Mitigation is required during the construction period to reduce Impact AIR-C.

Impact AIR-A: The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. **Less than significant impact.**

Impact AIR-B: The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? **Less than significant impact.**

Impact AIR-C: The proposed project would not expose sensitive receptors to substantial pollutant concentrations. **Less than significant impact with incorporation of mitigation.**

Impact AIR-D: The proposed project would not create objectionable odors affecting a substantial number of people. **Less than significant impact.**

Impact GHG-A: The proposed project would not generate direct or indirect greenhouse gas emissions that would result in a significant impact on the environment. **Less than significant impact.**

Impact GHG-B: The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. **Less than significant impact**.

Impact Energy-A: The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. **Less than significant impact.**

Impact Energy-B: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **Less than significant impact**.

Mitigation Measures

Air Quality Mitigation Measures

MM AIR-C1 is required to reduce the project's potential impacts during construction to less than significant (see Impact AIR-C).

MM AIR-C1 Before a construction permit is issued for the proposed project, the project applicant, project sponsor, or construction contractor shall submit documentation demonstrating reasonably detailed compliance with one of the following requirements to the City of Farmersville:

- **Option 1)** Where portable diesel engines are used during construction, all off-road equipment with engines greater than 50 horsepower shall have engines that meet or exceed either United States Environmental Protection Agency (EPA) or California Air Resources Board (CARB) Tier 4 Interim off-road emission standards except as otherwise specified herein. If engines that comply with Tier 4 Interim or Tier 4 Final off-road emission standards are not commercially available, then the construction contractor shall use the next cleanest piece of off-road equipment (e.g., Tier 3) that is commercially available. For purposes of this project design feature, “commercially available” shall mean the equipment at issue is available taking into consideration factors such as (i) critical-path timing of construction; and (ii) geographic proximity to the project site of equipment. If the relevant equipment is determined by the project applicant to not be commercially available, the contractor can confirm this conclusion by providing letters from at least two rental companies for each piece of off-road equipment that is at issue.

- **Option 2)** Prior to the issuance of any demolition, grading, or building permits (whichever occurs earliest), the project applicant and/or construction contractor shall prepare a construction operations plan that, during construction activities, requires all off-road equipment with engines greater than 50 horsepower to meet either the particulate matter emissions standards for Tier 4 Interim engines or be equipped with Level 3 diesel particulate filters. Tier 4 Interim engines shall, at a minimum, meet EPA or CARB particulate matter emissions standards for Tier 4 Interim engines. Alternatively, use of CARB-certified Level 3 diesel particulate filters on off-road equipment with engines greater than 50 horsepower can be used in lieu of Tier 4 Interim engines or in combination with Tier 4 Interim or better engines. The construction contractor shall maintain records documenting its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information shall include, but are not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number. The project applicant and/or construction contractor shall submit the construction operations plan and records of compliance to the City of Farmersville.

Greenhouse Gas Emissions Mitigation Measures

No mitigation is required.

Energy Mitigation Measures

No mitigation is required.

Modeling Parameters and Assumptions

The following modeling parameters and assumptions were used to generate criteria air pollutant, GHG, and TAC emissions for the proposed project.

Air Pollutants and GHGs Assessed

Criteria Pollutants Assessed

The following criteria air pollutants were assessed in this analysis: reactive organic gases (ROG),[3] oxides of nitrogen (NO_X), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). Note that the proposed project would emit ozone precursors ROG and NO_X. However, the proposed project would not directly emit ozone since it is formed in the atmosphere during the photochemical reaction of ozone precursors.

General descriptions and most relevant effects from pollutant exposure of the criteria pollutants of concern are listed below.

Table 1: Descriptions of Criteria Pollutants of Concern

Criteria Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Ozone	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), nitrous oxides (NO_X), and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_X) are mobile sources (on-road and off-road vehicle exhaust).	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.
Particulate matter (PM_{10}) Particulate matter ($PM_{2.5}$)	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (one micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from	• Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.

3 Note: Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. VOC = volatile organic compounds

Criteria Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
		vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.	
Nitrogen dioxide (NO_2)	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO_X (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_X is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_X can react with compounds to form nitric acid and related small particles and result in particulate matter (PM) related health effects.	NO_X is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide forms quickly from NO_X emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contributions to atmospheric discoloration; increased visits to hospital for respiratory illnesses.
Carbon monoxide (CO)	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.
Sulfur dioxide (SO_2)	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 parts per million (ppm), the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethyl sulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.
Source: U.S. Environmental Protection Agency (EPA). Criteria Air Pollutants. Website: https://www.epa.gov/criteria-air-pollutants. Accessed June 13, 2023.			

GHGs Assessed

This analysis was restricted to GHGs identified by AB 32, which include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The proposed project would generate a variety of GHGs, including several defined by AB 32 such as CO_2, CH_4, and N_2O.

Water vapor could be emitted from evaporated water used for landscaping and other uses, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities.

Ozone is a GHG; however, unlike the other GHGs, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis. Stratospheric ozone can be reduced through reactions with other pollutants.

Certain GHGs defined by AB 32 would not be emitted by the residential project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

GHG emissions associated with the proposed project construction as well as future operations were estimated using CO_2 equivalent (CO_2e) emissions as a proxy for all GHG emissions. In order to obtain the CO_2e, an individual GHG is multiplied by its Global Warming Potential (GWP). The GWP designates on a pound for pound basis the potency of the specific GHG compared to CO_2.

Toxic Air Contaminants Assessed

Toxic Air Contaminants

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

The California Almanac of Emissions and Air Quality—2009 Edition presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data.[4] The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk.[5] In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

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[4] California Air Resources Board (CARB). 2009. The California Almanac of Emissions and Air Quality—2009 Edition. Website: https://www.arb.ca.gov/aqd/almanac/almanac09/almanac2009 all.pdf.

[5] California Air Resources Board (CARB). 1998. The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines. Website: www.arb.ca.gov/toxics/dieseltac/factsht1.pdf.

DPM

For purposes of this study, DPM exhaust emissions are represented as exhaust PM_{10}. During project operations, the project would generate primarily passenger vehicle trips from residents and visitors; however, the project would also generate truck trips from deliveries and other services. The main source of DPM from the long-term operations of the proposed project would be from combustion of diesel fuel in diesel-powered engines in on-road trucks. On-site motor vehicle emissions refer to DPM exhaust emissions from the motor vehicle traffic that would travel and idle within the project site each day.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present.

Model Selection

Air pollutant emissions can be estimated by using emission factors and a level of activity. Emission factors are the emission rate of a pollutant given the activity over time; for example, grams of NO_X per horsepower-hour. CARB has published emission factors for on-road mobile vehicles/trucks in the EMFAC mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. An air emissions model (or calculator) combines the emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

The project is located in the City of Farmersville, within Tulare County and within the San Joaquin Valley Air Basin. The modeling follows SJVAPCD guidance where applicable from its GAMAQI. The models used in this analysis are summarized as follows:

- Construction emissions: CalEEMod, version 2022.1
- Operational emissions: CalEEMod, version 2022.1
- Operational TAC emissions: EMission FACtor (EMFAC) 2021
- Dispersion Model: American Meteorological Society/ Environmental Protection Agency Regulatory Model (AERMOD), version 22112
- Health Risk Metric Calculations: Hot Spots Analysis & Reporting Program 2 (HARP2)

Criteria Pollutants and GHG Emissions

The California Emissions Estimator Model (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, CalEEMod identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user.

CalEEMod was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California Air Districts. Default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California Air Districts to account for local requirements and conditions.

CalEEMod is a comprehensive tool for quantifying air quality impacts from land use projects located throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as preparing CEQA or National Environmental Policy Act documents, conducting pre-project planning, and, verifying compliance with local air quality rules and regulations, etc.

CalEEMod version CalEEMod 2022.1 was used to estimate construction and operational impacts of the proposed project. CalEEMod version 2022.1 was the most recent version of CalEEMod at the time emissions were estimated in June 2023.

Assumptions

Construction Modeling Assumptions

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and application of architectural coatings would release VOC emissions. Off-site emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $PM_{2.5}$).

Schedule

CalEEMod includes default equipment lists and construction schedules. Where project-specific information was unknown, CalEEMod default values were used.

Table 2 shows the conceptual construction schedule for the proposed project. The construction schedule utilized in the analysis represents a “worst-case” analysis scenario, since emission factors for construction equipment decrease as the analysis year increases due to improvements in technology and more stringent regulatory requirements. Therefore, construction emission estimates would decrease if the construction schedule moved to later years. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required per CEQA guidelines. The site-specific construction fleet may vary due to specific project needs at the time of construction.

Table 2: Project Construction Schedule

Construction Activity	Start Date	End Date	Workdays
Site Work for the Entire Project Site and Paving of Internal Streets			
Site Preparation	10/2/2023	11/10/2023	30
Grading	11/11/2023	2/23/2024	75
Paving	2/24/2024	5/10/2024	55
Home Construction			
Building Construction	11/21/2023	6/30/2026	681
Paving	5/11/2024	7/26/2024	55
Architectural Coating	4/15/2026	6/30/2026	55
Note: The construction schedule utilized in the analysis represents a "worst-case" analysis scenario since emission factors for construction equipment decrease as the analysis year increases due to improvements in technology and more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule moved to later years. Source: Modeling Assumptions and CalEEMod Output Files (Attachment A).			

Equipment

Construction equipment for each construction activity is shown in Table 3. Where the construction schedule was adjusted to match the applicant-provided schedule, construction equipment was increased to retain the CalEEMod-default construction HP-hours.

Table 3: Project Construction Equipment

Construction Activity	Equipment Type	Pieces of Equipment	Usage (hours/day)	Horsepower	Load Factor	Fuel Type
Site Work for the Entire Project Site and Paving of Internal Streets						
Site Preparation	Rubber Tired Dozers	3	8	367	0.40	Diesel
	Tractors/Loaders/Backhoes	4	8	84	0.37	Diesel
Grading	Excavators	2	8	36	0.38	Diesel
	Graders	1	8	148	0.41	Diesel
	Rubber Tired Dozers	1	8	367	0.40	Diesel
	Scrapers	2	8	423	0.48	Diesel
	Tractors/Loaders/Backhoes	2	8	84	0.37	Diesel
Paving	Pavers	2	8	81	0.42	Diesel
	Paving Equipment	2	8	89	0.36	Diesel
	Rollers	2	8	36	0.38	Diesel
Home Construction						
Building Construction	Cranes	1	7.61	367	0.29	Diesel
	Forklifts	3	8.69	82	0.20	Diesel
	Generator Sets	1	8.69	14	0.74	Diesel

Construction Activity	Equipment Type	Pieces of Equipment	Usage (hours/day)	Horsepower	Load Factor	Fuel Type
	Tractors/Loaders/Backhoes	3	7.61	84	0.37	Diesel
	Welders	1	8.69	46	0.45	Diesel
Paving	Pavers	2	8	81	0.42	Diesel
	Paving Equipment	2	8	89	0.36	Diesel
	Rollers	2	8	36	0.38	Diesel
Architectural Coating	Air Compressors	1	6	37	0.48	Diesel
Source: Modeling Assumptions and CalEEMod Output Files (Attachment A).						

Vehicles Trips

Table 4 provides a summary of the construction-related vehicle trips. CalEEMod default values were used to estimate the number of construction-related vehicle trips. Additional vendor trips were included in each construction activity phase to account for the delivery of materials.

The fleet mix for worker trips is light-duty passenger vehicles to light-duty trucks. The vendor trips fleet mix is composed of a mixture of medium and heavy-duty diesel trucks. The hauling trips were assumed to be 100 percent heavy-duty diesel truck trips. CalEEMod default trip lengths for a project in Tulare County were used for the construction trips.

Table 4: Construction Vehicle Trips

Construction Task	Worker Trips per Day	Vendor Trips per Day	Haul Trips per Day
Site Work for the Entire Project Site and Paving of Internal Streets			
Site Preparation	17.50	2	0
Grading	20	2	8.33
Paving	15	2	0
Home Construction			
Building Construction	87.12	25.87	0
Paving	15	4	0
Architectural Coating	17.42	2	0
Notes: Additional vendor trips were added to each phase to account for delivery of materials. Source: Modeling Assumptions and CalEEMod Output Files (Attachment A).			

Operational Modeling Assumptions

Operational emissions are those emissions that would occur during long-term operations of the proposed project.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the proposed project site. Project-specific trip rates were used in the analysis, consistent with the project-specific traffic analysis prepared by Ruettgers & Schuler Civil Engineers.

Table 5: Project Trip Generation Calculations used to Estimate Project Emissions

Land Use	Daily Trips (trips per day)
Single-Family Detached Housing	2,327
Source: Project-specific traffic analysis prepared by Ruettgers & Schuler Civil Engineers (see Attachment A).	

Vehicle Fleet Mix

Trip lengths are for primary trips. Trip purposes are primary, diverted, and pass-by trips. Diverted trips take a slightly different path than a primary trip. The CalEEMod default rates for percentages of primary, diverted, and pass-by trips were used for the passenger vehicle run.

The vehicle fleet mix is defined as the mix of motor vehicle classes active during the operation of the proposed project. Emission factors are assigned to the expected vehicle mix as a function of vehicle class, speed, and fuel use (gasoline- and diesel-powered vehicles). The vehicle fleet mix was revised to reflect the residential fleet mix approved by SJVAPCD for each year analyzed.

Area Sources

Consumer Products

Consumer products are various solvents used in non-industrial applications, which emit VOCs during their product use. “Consumer Product” means a chemically formulated product used by household and institutional consumers, including but not limited to: detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. It does not include other paint products, furniture coatings, or architectural coatings. CalEEMod includes default consumer product use rates. The default emission factors developed for CalEEMod were used for consumer products.

Architectural Coatings (Painting)

Paints release VOC emissions during application and drying. The buildings in the project would be repainted on occasion. The project is required to comply with the SJVAPCD Rule 4601—Architectural Coatings. The rule required flat paints to meet a standard of 50 grams per liter (g/l) and gloss paints 100 g/l by 2012 for an average rate of 65 g/l. Effective January 1, 2022, nonflat gloss and semigloss paints are also required to meet the 50 g/l standard, providing lower VOC emissions for buildings constructed after that date. Therefore, the analysis uses the 50 g/l emission factor for the analysis.

Landscaping Emissions

CalEEMod estimates days for which landscaping equipment would be used to estimate potential emissions for the proposed project.

Indirect Emissions

For GHG emissions, CalEEMod contains calculations to estimate indirect GHG emissions. Indirect emissions are emissions where the location of consumption or activity is different from where actual emissions are generated. For example, electricity would be consumed at the proposed project site;

however, emissions associated with producing that electricity are generated off-site at a power plant. Since the electricity can vary greatly based on locations, the user should override these values if they have more specific information regarding their specific water supply and treatment.

Energy Use

Electricity used by the project (for lighting, etc.) would result in emissions from the power plants that would generate electricity distributed on the electrical power grid. Electricity emissions estimates are only used in the GHG analysis.

The project would generate emissions from the combustion of natural gas for water heaters, heat, etc. CalEEMod has two categories for natural gas consumption: Title 24 and non-Title 24.

The emissions associated with the building electricity and natural gas usage (non-hearth) were estimated based on the land use type and size. Values for a project served by Eastside Power Authority and Southern California Gas were used in the analysis.

The Renewable Electricity Standards took effect in 2020. The Renewable Electricity Standard requires that electricity providers include a minimum of 33 percent renewable energy in their portfolios by the year 2020. The utilities in California will be required to increase the use of renewable energy sources to 60 percent by 2030.

Other Indirect Emissions (Water Use, Wastewater Use, and Solid Waste)

CalEEMod includes calculations for indirect GHG emissions for electricity consumption, water consumption, and solid waste disposal. For water consumption, CalEEMod calculates embedded energy (e.g., treatment, conveyance, distribution) associated with providing each gallon of potable water to the project. For solid waste disposal, GHG emissions are associated with the disposal of solid waste generated by the proposed project into landfills. CalEEMod default data were used for inputs associated with solid waste.

Offroad Equipment

Stationary Sources

No stationary sources are included as part of the residential proposed project.

Vegetation

There is currently limited carbon sequestration occurring on-site in the form of existing agricultural uses, including existing orchards. The proposed project would meet any requirements set forth by the City of Farmersville in regard to landscaping/open space that may result in the inclusion of vegetation. For this analysis, it was assumed that the loss and addition of carbon sequestration that are due to the proposed project would be balanced (when GHG emissions from watering and upkeep of the orchards is also taken into consideration); therefore, emissions due to carbon sequestration were not included.

Refrigerants

Buildings requiring cold storage are not included as part of the proposed project. CalEEMod default values were applied to the proposed single-family homes associated with the residential project.

Health Risk Assessment Assumptions

A Health Risk Assessment (HRA) was completed to evaluate potential health risks associated with the generation of TACs during construction activities associated with the proposed project. Assumptions used in the HRA are summarized below, while complete calculations parameters are provided as part of Attachment B.

Model Selection and Parameters

An air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. The air dispersion model applied in this assessment was the United States Environmental Protection Agency (EPA) AERMOD (version 22112) air dispersion model. Specifically, AERMOD was used to estimate levels of air pollutant concentrations at existing sensitive receptor locations from potential sources of project-generated TACs. The use of AERMOD provides a refined methodology for estimating construction impacts by utilizing long-term, measured representative meteorological data for the project site and a representative operational schedule.

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. Direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. Terrain elevations were obtained for the project site using the AERMAP model, the AERMOD terrain data pre-processor. Elevation data for the area were obtained and included in the model runs to account for complex terrain. The air dispersion model assessment used meteorological data from the Visalia Station (Station #93144). The meteorological data used was preprocessed for use with AERMOD by the SJVAPCD and included data for the years 2007 to 2010; all years were used in the assessment. All receptors were placed within the breathing zone at 1.2 meters above ground level.

Detailed parameters and complete calculations are contained in Attachment B. Attachment B also includes a representation of the operational DPM modeling parameters, including modeled on-site vehicle travel and locations of sensitive receptors within approximately ¼-mile (1,320 feet) of the project boundary.

Cancer Risk

The model was run to obtain annual average concentration in micrograms per cubic meter [μg/m³] at sensitive receptor locations. Receptor were placed at sensitive receptors locations with ¼-mile (1,32 feet) of the project site and in the closest receptor locations in each direction from the project site. Consistent with SJVAPCD guidance, a health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year exposure scenario. Cancer risk and non-cancer hazard calculations were completed using HARP2. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA Human Health Evaluation Manual (1991) and OEHHA's 2015 Guidance Manual.[6,7]

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home (for residents only), and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk

[6] U.S. Environmental Protection Agency (EPA). 1991. Human Health Evaluation Manual. Website: https://www.epa.gov/sites/default/files/2015-11/documents/defaultExposureParams.pdf. Accessed June 13, 2023.

[7] California Office of Environmental Health Hazards Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Website: http://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed June 13, 2023.

by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function the breathing rate, the exposure frequency, and the concentration of a substance in the air. For residential exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

Dose-air = (C_{air} * {BR/BW} * A * EF * 10^{-6})

Where:

Dose-air	=	dose through inhalation (mg/kg/day)
Cair	=	air concentration (µg/m³) from air dispersion model
{BR/BW}	=	daily breathing rate normalized to body weight (L/kg body weight – day) (361 L\kg BW-day for 3rd Trimester, 1,090 L/kg BW-day for 0<2 years, 861 L/kg BW-day for 2<9 years, 745 L/kg BW-day for 2<16 years, 335 L/kg BW-day for 16<30 years, and 290 L/kg BW-day 30<70 years)
A	=	Inhalation absorption factor (unitless [1])
EF	=	exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])
10^{-6}	=	conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. The following FAH values were used in this assessment:

- From the third trimester to age <2 years: 100 percent (the OEHHA-recommended value is 85 percent of time is spent at home; however, 100 percent was assumed in order to present a conservative analysis and to be consistent with SJVAPCD guidance);
- From age 2 through <16 years: 100 percent (the OEHHA-recommended value is 72 percent of time is spent at home; however, 100 percent was assumed in order to present a conservative analysis and to be consistent with SJVAPCD guidance); and
- From age 16 years and greater: 73 percent (the OEHHA-recommended value is 73 percent of time is spent at home; however, 100 percent was assumed in order to present a conservative analysis and to be consistent with SJVAPCD guidance).

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$Risk_{inh\text{-}res}$ = ($Dose_{air}$ * CPH * ASF * ED/AT * FAH)

Where:

$Risk_{inh-res}$	=	residential inhalation cancer risk (potential chances per million)
$Dose_{air}$	=	daily dose through inhalation (mg/kg-day)
CPF	=	inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	age sensitivity factor for a specified age group (unitless)
ED	=	exposure duration (in years) for a specified age group
AT	=	averaging time of lifetime cancer risk (years)
FAH	=	fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

Hazard Quotient = C_i/REL_i

Where:

C_i	=	Concentration in the air of substance i (annual average concentration in $\mu g/m^3$)
REL_i	=	Chronic noncancer Reference Exposure Level for substance i ($\mu g/m^3$)

The non-cancer chronic hazard index was calculated in HARP2. The primary source of the emissions responsible for chronic risk are from diesel trucks. DPM does not have an acute risk factor; however, HARP2 was run to obtain the following for each modeled receptor: cancer risk, chronic hazard index, and acuate hazard index.

Thresholds

Air pollutant emissions have regional effects and localized effects. This analysis assesses the regional effects of the project's criteria pollutant emissions in comparison to SJVAPCD thresholds of significance for short-term construction activities and long-term operation of the project. Localized emissions from project construction and operation are also assessed using concentration-based thresholds that determine if the project would result in a localized exceedance of any ambient air quality standards or would make a cumulatively considerable contribution to an existing exceedance.

The primary pollutants of concern during project construction and operation are ROG, NO_X, PM_{10}, and $PM_{2.5}$. The SJVAPCD GAMAQI adopted in 2015 contains thresholds for ROG and NO_X; SO_X, CO, PM_{10}, and $PM_{2.5}$.

Ozone is a secondary pollutant that can be formed miles away from the source of emissions through reactions of ROG and NO_X emissions in the presence of sunlight. Therefore, ROG and NO_X are termed ozone precursors. The San Joaquin Valley Air Basin (SJVAB) often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The SJVAB also exceeds air quality standards for PM_{10}, and $PM_{2.5}$; therefore, substantial project emissions may contribute to an exceedance for these pollutants.

The SJVAPCD adopted significance thresholds for regional construction-related and operational ROG, NO_X, PM, CO, and SO_X, these thresholds are included in Table 6.

Table 6: SJVAPCD Proposed Project-Level Air Quality CEQA Thresholds of Significance

Pollutant	Significance Threshold	
	Construction Emissions (tons/year)	Operational Emission (tons/year)
CO	100	100
NO_X	10	10
ROG	10	10
SO_X	27	27
PM_{10}	15	15
$PM_{2.5}$	15	15
Source: SJVAPCD. 2015. Guidance for Assessing and Mitigating Air Quality Impacts. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.		

Table 7: Health Risk Assessment Thresholds

Health Risk Metric	Applicable Threshold of Significance
Maximum Cancer Risk (Risk per Million)	20
Chronic Non-Cancer Hazard Index	1
Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.	

Additional thresholds of significance are discussed, where applicable, in the appropriate impact analysis.

Fugitive Dust

Construction

Fugitive dust would be generated from site grading and other earth-moving activities. Most of this fugitive dust would remain localized and would be deposited near the project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from the project site. Therefore, adherence to Regulation VIII would be required during construction of the proposed project. Regulation VIII would require fugitive dust control measures that are consistent with best management practices (BMPs) established by the SJVAPCD to reduce the proposed project's construction-generated fugitive dust impacts to a less than significant level.

The SJVAPCD (SJVAPCD or District) adopted Regulation VIII in 1993 and its most recent amendments became effective on October 1, 2004. This is a basic summary of the regulation's requirements as they apply to construction sites. These regulations affect all workers at a regulated construction site, including everyone from the landowner to the subcontractors. Violations of Regulation VIII are subject to enforcement action including fines.[8]

Visible Dust Emissions may not exceed 20 percent opacity during periods when soil is being disturbed by equipment or by wind at any time. Visible Dust Emissions opacity of 20 percent means dust that would obstruct an observer's view of an object by 20 percent. District inspectors are state certified to evaluate visible emissions. Dust control may be achieved by applying water before/during earthwork and onto unpaved traffic areas, phasing work to limit dust, and setting up wind fences to limit windblown dust.

Soil Stabilization is required at regulated construction sites after normal working hours and on weekends and holidays. This requirement also applies to inactive construction areas such as phased projects where disturbed land is left unattended. Applying water to form a visible crust on the soil and restricting vehicle access are often effective for short-term stabilization of disturbed surface areas. Long-term methods include applying dust suppressants and establishing vegetative cover.

Carryout and Trackout occur when materials from emptied or loaded vehicles falls onto a paved surface or shoulder of a public road or when materials adhere to vehicle tires and are deposited onto a paved surface or shoulder of a public road. Should either occur, the material must be cleaned up at least daily, and immediately if it extends more than 50 feet from the exit point onto a paved road. The appropriate clean-up methods require the complete removal and cleanup of mud and dirt from the paved surface and shoulder. Using a blower device or dry sweeping with any mechanical device other than a PM_{10}-efficient street sweeper is a violation. Larger construction sites, or sites with a high amount of traffic on one or more days, must prevent carryout and trackout from occurring by installing gravel pads, grizzlies, wheel washers, paved interior roads, or a combination thereof at each exit point from the site. In many cases, cleaning up trackout with water is also prohibited as it may lead to plugged storm drains. Prevention is the best method.

Unpaved Access and Haul Roads, as well as unpaved vehicle and equipment traffic areas at construction sites must have dust control. Speed limit signs limiting vehicle speed to 15 mph or less at construction sites must be posted every 500 feet on uncontrolled and unpaved roads.

Storage Piles and Bulk Materials have handling, storage, and transportation requirements that include applying water when handling materials, wetting or covering stored materials, and installing wind barriers to limit visible dust emissions. Also, limiting vehicle speeds, loading haul trucks with a freeboard of six inches or greater along with applying water to the top of the load, and covering the cargo compartments are effective measures for reducing visible dust emissions and carryout from vehicles transporting bulk materials.

Dust Control Plans identify the dust sources and describe the dust control measures that will be implemented before, during, and after any dust generating activity for the duration of the project. Owners

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[8] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2007. Compliance Assistance Bulletin. Website: http://www.valleyair.org/busind/comply/pm10/forms/RegVIIICAB.pdf. Accessed June 13, 2023.

or operators are required to submit plans to the SJVAPCD at least 30 days prior to commencing the work for the following:

- Residential developments of ten or more acres of disturbed surface area.
- Non-residential developments of five or more acres of disturbed surface area.
- The relocation of more than 2,500 cubic yards per day of materials on at least three days.

Operations may not commence until the SJAVPCD has approved the Dust Control Plan. A copy of the plan must be on site and available to workers and District employees. All work on the site is subject to the requirements of the approved dust control plan. A failure to abide by the plan by anyone on site may be subject to enforcement action. Owners or operators of construction projects that are at least one acre in size and where a Dust Control Plan is not required, must provide written notification to the SJVAPCD at least 48 hours in advance of any earthmoving activity.

Record Keeping is required to document compliance with the rules and must be kept for each day any dust control measure is used. The SJVAPCD has developed record forms for water application, street sweeping, and “permanent” controls such as applying long term dust palliatives, vegetation, ground cover materials, paving, or other durable materials. Records must be kept for one year after the end of dust generating activities (Title V sources must keep records for five years).

Exemptions exist for several activities. Those occurring above 3,000 feet in elevation are exempt from all Regulation VIII requirements. Further, Rule 8021 – Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities exempts the following construction and earthmoving activities:

- Blasting activities permitted by California Division of Industrial Safety.
- Maintenance or remodeling of existing buildings provided the addition is less than 50% of the size of the existing building or less than 10,000 square feet (due to asbestos concerns, contact the SJVAPCD at least two weeks ahead of time).
- Additions to single family dwellings.
- The disking of weeds and vegetation for fire prevention on sites smaller than ½ acre.
- Spreading of daily landfill cover to preserve public health and safety and to comply with California Integrated Waste Management Board requirements.

Nuisances are prohibited at all times because District Rule 4102 – Nuisance applies to all construction sources of fugitive dust, whether or not they are exempt from Regulation VIII. It is important to monitor dust-generating activities and implement appropriate dust control measures to limit the public’s exposure to fugitive dust.

Addressing Air Quality CEQA Impact Questions

Table 8: Summary of Air Quality Impact Analysis

Air Quality *Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.*	
Would the project:	**Significance Finding**
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less than Significant Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?	Less than Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	Less than Significant Impact with Incorporation of Mitigation
d) Result in other emissions (such as those leading to odors or) adversely affecting a substantial number of people?	Less than Significant Impact

Air Quality Mitigation Measures

MM AIR-C1 is required to reduce the project's potential impacts during construction to less than significant (see Impact AIR-C).

MM AIR-C1 Before a construction permit is issued for the proposed project, the project applicant, project sponsor, or construction contractor shall submit documentation demonstrating reasonably detailed compliance with one of the following requirements to the City of Farmersville:

- **Option 1)** Where portable diesel engines are used during construction, all off-road equipment with engines greater than 50 horsepower shall have engines that meet or exceed either United States Environmental Protection Agency (EPA) or California Air Resources Board (CARB) Tier 4 Interim off-road emission standards except as otherwise specified herein. If engines that comply with Tier 4 Interim or Tier 4 Final off-road emission standards are not commercially available, then the construction contractor shall use the next cleanest piece of off-road equipment (e.g., Tier 3) that is commercially available. For purposes of this project design feature, "commercially available" shall mean the equipment at issue is available taking into consideration factors such as (i) critical-path timing of construction; and (ii) geographic proximity to the project site of equipment. If the relevant equipment is determined by the project applicant to not be commercially available, the contractor can confirm this conclusion by providing letters from at least two rental companies for each piece of off-road equipment that is at issue.

- **Option 2)** Prior to the issuance of any demolition, grading, or building permits (whichever occurs earliest), the project applicant and/or construction contractor shall prepare a construction operations plan that, during construction activities, requires all off-road equipment with engines greater than 50 horsepower to meet either the particulate matter emissions standards for Tier 4 Interim engines or be equipped with Level 3 diesel particulate filters. Tier 4 Interim engines shall, at a minimum, meet EPA or CARB particulate matter emissions standards for Tier 4 Interim engines.

Alternatively, use of CARB-certified Level 3 diesel particulate filters on off-road equipment with engines greater than 50 horsepower can be used in lieu of Tier 4 Interim engines or in combination with Tier 4 Interim or better engines. The construction contractor shall maintain records documenting its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information shall include, but are not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number. The project applicant and/or construction contractor shall submit the construction operations plan and records of compliance to the City of Farmersville.

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact.

Air Quality Plans (AQPs) are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the Air Basin can reach attainment for the ambient air quality standards. The proposed project site is located within the jurisdictional boundaries of the SJVAPCD. To show attainment of the standards, the SJVAPCD analyzes the growth projections in the Valley, contributing factors in air pollutant emissions and formations, and existing and adopted emissions controls. The SJVAPCD then formulates a control strategy to reach attainment that includes both State and SJVAPCD regulations and other local programs and measures. For projects that include stationary sources of emissions, the SJVAPCD relies on project compliance with Rule 2201—New and Modified Stationary Source Review to ensure that growth in stationary source emissions would not interfere with the applicable AQP. Projects exceeding the offset thresholds included in the rule are required to purchase offsets in the form of Emission Reduction Credits (ERCs).

The CEQA Guidelines indicate that a significant impact would occur if the project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI indicates that projects that do not exceed SJVAPCD regional criteria pollutant emissions quantitative thresholds would not conflict with or obstruct the applicable AQP. An additional criterion regarding the project's implementation of control measures was assessed to provide further evidence of the project's consistency with current AQPs. This document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.

2. Will the project comply with applicable control measures in the AQPs?

The use of the criteria listed above is a standard approach for CEQA analysis of projects in the SJVAPCD's jurisdiction, as well as within other air districts, for the following reasons:

- Significant contribution to existing or new exceedances of the air quality standards would be inconsistent with the goal of attaining the air quality standards.

- AQP emissions inventories and attainment modeling are based on growth assumptions for the area within the air district's jurisdiction.

- AQPs rely on a set of air district-initiated control measures as well as implementation of federal and state measures to reduce emissions within their jurisdictions, with the goal of attaining the air quality standards.

Contribution to Air Quality Violations

As discussed in Impact AIR-B below, emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ associated with the proposed project would not exceed the SJVAPCD's significance thresholds during the construction phase (see Table 9). Similarly, emissions of ROG, NO_X, CO, SO_X, $PM_{2.5}$ or PM_{10} during operations would not exceed any applicable threshold of significance (see Table 10). Therefore, regarding this criterion, the project would be considered less than significant.

Air Quality Plan Control Measures

The AQP contains a number of control measures that are enforceable requirements through the adoption of rules and regulations. The following rules and regulations are relevant to the project:

Rule 4201—Particulate Matter Concentration. This rule shall apply to any source operation that emits or may emit dust, fumes, or total suspended particulate matter.

Rule 4601—Architectural Coatings. The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling. Only compliant components are available for purchase in the San Joaquin Valley.

Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641. This regulation is enforced on the asphalt provider.

Rule 4702—Internal Combustion Engines. The purpose of this rule is to limit the emissions of NO_X, carbon monoxide (CO), VOC, and sulfur oxides (SO_X) from internal combustion engines. If the project includes emergency generators, the equipment is required to comply with Rule 4702.

Regulation VIII—Fugitive PM_{10} Prohibitions. This regulation is a control measure that is one main strategies from the 2006 PM_{10} for reducing the PM_{10} emissions that are part of fugitive dust. Projects over 10 acres are required to file a Dust Control Plan (DCP) containing dust control practices sufficient to comply with Regulation VIII. Rule 8021 regulates construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

Rule 9510–Indirect Source Review. This rule reduces the impact of NO_X and PM_{10} emissions from growth within the SJVAB. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site District-administered projects, or a combination of the two.

Conclusion

The project would comply with all applicable CARB and SJVAPCD rules and regulations. Therefore, the project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan with regards to this criterion.

The project's regional operational emissions would not exceed any applicable SJVAPCD prior to the incorporation of mitigation measures (see Impact AIR-B). Therefore, the project would be considered consistent with the existing AQPs.

Based on the findings above, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. The impact would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?

Less than Significant Impact.

To result in a less than significant impact, emissions of nonattainment pollutants must be below the SJVAPCD's regional significance thresholds. This is an approach recommended by the SJVAPCD's in its GAMAQI. The SJVAB is in nonattainment for ozone, PM_{10} (State only), and $PM_{2.5}$. Ozone is a secondary pollutant that can be formed miles from the source of emissions, through reactions of ROG and NO_X emissions in the presence of sunlight. Therefore, ROG and NO_X are termed ozone precursors. As such, the primary pollutants of concern during project construction and operation are ROG, NO_X, PM_{10}, and $PM_{2.5}$.

Since the SJVAB is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, it is considered to have an existing significant cumulative health impact without the project. When this occurs, the analysis considers whether the project's contribution to the existing violation of air quality standards is cumulatively considerable. The SJVAPCD regional thresholds for NO_X, ROG/VOC, PM_{10}, or $PM_{2.5}$ are applied as cumulative contribution thresholds. The SJVAPCD GAMAQI adopted in 2015 contains thresholds for CO, NO_X, ROG, SO_X, PM_{10}, and $PM_{2.5}$. Air pollutant emissions have both regional and localized effects. The project's regional emissions are compared to the applicable SJVAPCD regional thresholds below to address if the project would result in a cumulatively considerable net increase of any criteria pollutant (including ozone precursors) of concern.

Criteria Pollutant Emission Estimates

Construction Emissions (Regional)

Construction emissions associated with the development envisioned for the proposed project are shown in Table 9 prior to the incorporation of any mitigation.

Table 9: Summary of Construction-Generated Emissions of Criteria Air Pollutants – Unmitigated

Emissions Source	Emissions (Tons/Year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Site Work (2023)	0.13	1.30	1.14	< 0.01	0.29	0.14
Site Work (2024)	0.11	0.90	0.90	< 0.01	0.18	0.07
Home Construction (2023)	0.03	0.21	0.27	< 0.01	0.02	0.01
Home Construction (2024)	0.27	1.97	2.68	< 0.01	0.23	0.10
Home Construction (2025)	0.22	1.63	2.33	< 0.01	0.19	0.08

Home Construction (2026)	1.63	0.79	1.18	< 0.01	0.11	0.04
Total Construction Duration						
Project Total	**2.39**	**6.80**	**8.50**	**< 0.01**	**1.02**	**0.44**
Significance Thresholds	**10**	**10**	**100**	**27**	**15**	**15**
Exceed Significance Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

PM_{10} and $PM_{2.5}$ emissions are from the mitigated output to reflect compliance with Regulation VIII—Fugitive PM_{10} Prohibitions.

Source of Emissions: Modeling Assumptions and CalEEMod Output Files (Attachment A).

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.

As shown in Table 9 above, emissions from construction activities associated with the proposed project would fall below the significance thresholds. Therefore, regional and cumulative impacts associated with construction of the proposed project are less than significant.

Operational Emissions (Regional)

Operational emissions occur over the lifetime of the project. The SJVAPCD considers permitted and non-permitted emission sources separately when making significance determinations. In addition, the annual operational emissions are also considered separately from construction emissions. Operational emissions associated with the proposed project are shown in Table 10. Operational emissions were estimated using a full buildout scenario in the earliest year of operations (2024), which provides a conservative estimate of emissions and resulting potential impacts.

Table 10: Summary of Operational Emissions of Criteria Air Pollutants – Unmitigated

Source	Emissions (tons/year)					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area	2.13	0.09	1.27	< 0.01	0.01	0.01
Energy	0.02	0.41	0.17	< 0.01	0.03	0.03
Mobile (Automobiles)	1.68	2.12	17.23	0.04	3.37	0.87
Annual Total (2024)	**3.83**	**2.62**	**18.67**	**0.04**	**3.41**	**0.91**
Significance Thresholds	**10**	**10**	**100**	**27**	**15**	**15**
Exceed Significance Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

Emissions were quantified using CalEEMod based on project details and earliest operational year for the proposed project.

Source: Modeling Assumptions and CalEEMod Output Files (Attachment A).

As shown in Table 10, operational emissions would not exceed the applicable SJVAPCD thresholds of significance for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. Therefore, the impact from operations of the project would be less than significant.

Conclusion

As shown in Table 9, the project's regional emissions would not exceed the applicable regional criteria pollutant emissions quantitative thresholds during project construction. During operations, the project would not exceed the applicable regional criteria pollutant emissions quantitative thresholds (see Table 10). Therefore, the impact would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact with Incorporation of Mitigation.

Emissions occurring at or near the project have the potential to create a localized impact that could expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. The SJVAPCD considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

The closest existing sensitive receptors to the project site include residential receptors, the closest of which include existing single-family homes located within approximately 50 feet east of the project boundary and single-family homes located within approximately 50 feet west of the northern third of the project site. See Attachment B (Construction Health Risk Assessment and Operational Health Risk Screening) for a graphical representation of the sensitive receptor locations within approximately ¼-mile of the project site.

Localized Impacts

Emissions occurring at or near the project have the potential to create a localized impact also referred to as an air pollutant hotspot. Localized emissions are considered significant if when combined with background emissions, they would result in exceedance of any health-based air quality standard. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard. The pollutants of concern for localized impact in the SJVAB are NO_2, SO_X, and CO.

The SJVAPCD has provided guidance for screening localized impacts in the GAMAQI that establishes a screening threshold of 100 pounds per day of any criteria pollutant. If a project exceeds 100 pounds per day of any criteria pollutant, then ambient air quality modeling would be necessary. If the project does not exceed 100 pounds per day of any criteria pollutant, then it can be assumed that it would not cause a violation of an ambient air quality standard.

Construction: Localized Concentrations of PM_{10}, $PM_{2.5}$, CO, SO_X, and NO_X

Local construction impacts would be short-term in nature lasting only during the duration of construction. As shown in Table 11 below, on-site construction emissions would be less than 100 pounds per day for each of the criteria pollutants. To present a conservative estimate, on-site emissions for on-road construction vehicles were included in the localized analysis. Based on the SJVAPCD's guidance, the construction emissions would not cause an ambient air quality standard violation.

Table 11: Localized Concentrations of PM_{10}, $PM_{2.5}$, CO, and NO_X for Construction – Unmitigated

Emission Source	On-site Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2023						
Highest Daily Construction Site Work (2023)	4.03	39.83	35.84	0.06	10.85	5.74
Highest Daily Construction Home Construction (2023)	1.80	13.32	16.17	0.03	1.03	0.60
Highest Combined Construction	5.83	53.15	52.01	0.09	11.88	6.34
2024						
Highest Daily Construction Site Work (2024)	3.61	34.53	30.66	0.06	6.42	2.90
Highest Daily Construction Home Construction (2024)	3.06	20.54	25.90	0.04	1.75	0.95
Highest Combined Construction	6.67	55.07	56.56	0.1	8.17	3.85
2025						
Highest Daily Construction Home Construction (2025)	1.67	11.81	15.79	0.03	0.90	0.48
2026						
Highest Daily Construction Home Construction (2026)	57.10	12.05	16.66	0.03	1.25	0.49
Total Construction Duration						
Highest Daily Maximum	**57.10**	**55.07**	**56.56**	**0.10**	**11.88**	**6.34**
Significance Thresholds	**—**	**100**	**100**	**100**	**100**	**100**
Exceed Significance Thresholds?	**—**	**No**	**No**	**No**	**No**	**No**

Note: Overlap of construction activities is based on the construction schedule shown in Table 2 and Attachment A.

Source of Emissions: Modeling Assumptions and CalEEMod Output Files (Attachment A). Maximum daily emissions represent the maximum daily emissions between the Summer and Winter scenarios.

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.

Operation: Localized Concentrations of PM_{10}, $PM_{2.5}$, CO, SO_X, and NO_X

Localized impacts could occur in areas with a single large source of emissions such as a power plant or with multiple sources concentrated in a small area such as a distribution center. The maximum daily operational emissions would occur at project buildout, which was modeled for the year 2024 (the earliest year of operations). Operational emissions include those generated on-site by area sources such as consumer products and landscape maintenance, energy use from natural gas combustion, and motor vehicles operation at the project site. Motor vehicle emissions are estimated for on-site operations using trip lengths for on-site travel and ¼-mile of off-site emissions.

As shown in Table 12 below, operational modeling of on-site emissions for the project indicate that the project would not exceed 100 pounds per day for each of the criteria pollutants. Therefore, based on the SJVAPCD's guidance, the operational emissions would not cause an ambient air quality standard violation. As such, impacts would be less than significant.

Table 12: Localized Concentrations of PM_{10}, $PM_{2.5}$, CO, and NO_X for Operations

Source	On-site Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	9.10	3.29	23.14	0.01	0.84	0.23
Energy	12.41	2.01	14.53	0.01	0.17	0.17
Mobile (Automobiles)	0.13	2.23	0.95	0.01	0.18	0.18
Total	**21.64**	**7.53**	**38.62**	**0.03**	**1.19**	**0.58**
Significance Thresholds	**—**	**100**	**100**	**100**	**100**	**100**
Exceed Significance Thresholds?	**—**	**No**	**No**	**No**	**No**	**No**

Source of Emissions: Modeling Assumptions and CalEEMod Output Files (Attachment A).

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.

Toxic Air Contaminants

Construction

Project construction would involve the use of diesel-fueled vehicles and equipment that emit DPM, which is considered a TAC. The SJVAPCD's current threshold of significance for TAC emissions is an increase in cancer risk for the maximally exposed individual of 20 in a million (formerly 10 in a million). The SJVAPCD's 2015 GAMAQI does not currently recommend analysis of TAC emissions from project construction activities, but instead focuses on projects with operational emissions that would expose sensitive receptors over a typical lifetime of 70 years. In addition, the most intense construction activities of the project's construction would occur during site preparation and grading phases over a short period. There are no conditions unique to the project site that would require more intense construction activity compared to typical development. Examples of situations that would warrant closer scrutiny may include sites that would require extensive excavation and hauling due to existing site conditions. Building construction typically requires limited amounts of diesel equipment relative to site clearing activities. Nonetheless, a construction HRA was prepared as part of this analysis. In addition, the analysis includes an evaluation of potential health impacts from construction and operations of the project considered together, over a 70-year exposure scenario.

The results of the HRA prepared for project construction for cancer risk and long-term chronic cancer risk are summarized below. Construction emissions were estimated assuming adherence to all applicable rules, regulations, and project design features. The construction emissions were assumed to be distributed over the project area with a working schedule of eight hours per day and five days per week. Emissions were adjusted by a factor of 4.2 to convert for use with a 24-hour-per-day, 365 day-per-year averaging period. Health risk calculations were completed using HARP2. Detailed parameters and complete calculations are included in Attachment B.

The estimated health and hazard impacts at the Maximally Exposed Receptor (MER) from the project's construction emissions are provided in Table 13.

Table 13: Summary of the Health Impacts from Unmitigated Construction of the Project

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
Risks and Hazards at the MER			
Risks and Hazards at the MER	28.47	0.0153	0.0000
Significance Threshold	**20**	**1**	**1**
Threshold Exceeded in Any Scenario?	**Yes**	**No**	**No**
MER = Maximally Exposed Receptor Eagle Meadows Residential Project Unmitigated Construction MER: Receptor #158 (36°17'42.5"N 119°12'41.9"W) Source: Construction Health Risk Assessment and Operational Health Risk Screening (Attachment B).			

As shown in Table 13, estimated health risks from elevated DPM concentrations during construction of the proposed project would exceed the applicable cancer risk significance threshold in at least one scenario. This represents a potentially significant construction TAC exposure impact. Therefore, mitigation is required to reduce the impact during the construction period to below a level of significance.

MM AIR-C1 requires the project applicant, project sponsor, or construction contractor to provide documentation to the City of Farmerville that all off-road diesel-powered construction equipment greater than 50 horsepower meet EPA or CARB Tier 4 Interim off-road emissions standards or will utilize Level 3 filters. Table 14 shows the health risks and non-cancer hazard index for construction with implementation of MM AIR-C1.

Table 14: Summary of the Health Impacts from Mitigated Construction of the Project

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
Risks and Hazards at the MER—Tier 4 Interim Equipment Scenario			
Risks and Hazards at the MER	4.98	0.0027	0.0000
Risks and Hazards at the MER—Level 3 Filters Scenario			
Risks and Hazards at the MER	6.23	0.0034	0.0000
Highest Risks and Hazards at the MER after Incorporation of MM AIR-C1			
Risks and Hazards at the MER	6.23	0.0034	0.0000
Significance Threshold	**20**	**1**	**1**
Threshold Exceeded in Any Scenario?	**No**	**No**	**No**
MER = Maximally Exposed Receptor Eagle Meadows Residential Project Unmitigated Construction MER: Receptor #158 (36°17'42.5"N 119°12'41.9"W) Source: Construction Health Risk Assessment and Operational Health Risk Screening (Attachment B).			

As noted in Table 14, calculated health metrics from the proposed project's construction DPM emissions would not exceed the cancer risk significance threshold or non-cancer hazard index significance threshold at the MEI with incorporation of MM AIR-C1. Therefore, the proposed project would not result in a significant impact on nearby sensitive receptors from TACs during construction.

Operations

Unlike warehouses or distribution centers, the daily vehicle trips generated by the proposed residential project would be primarily generated by passenger vehicles. Passenger vehicles typically use gasoline engines rather than the diesel engines that are found in heavy-duty trucks. Gasoline-powered vehicles do emit TACs in the form of toxic organic gases, some of which are carcinogenic. Compared to the combustion of diesel, the combustion of gasoline had relatively low emissions of TACs. Thus, residential projects typically produce limited amounts of TAC emissions during operation. Nonetheless, it is anticipated that there would be some heavy-duty trucks visiting the project site during operations. Consistent with SJVAPCD guidance, an operational prioritization screening analysis was completed for the proposed project.

Operational DPM emissions from diesel trucks were estimated using EMFAC2021emission factors and estimated truck travel and idling at the project site. The emissions were entered into the SJVAPCD Prioritization Screening Tool to determine the risk scores, with complete calculations and assumptions included as part of Attachment B. The results of the screening analysis are provided in Table 15.

Table 15: Prioritization Tool Health Risk Screening Results

Impact Source	Cancer Risk Score	Chronic Risk Score	Acute Risk Score
Diesel Trucks	3.622	0.007	0.000
Total Risk from Project Operations	**3.622**	**0.007**	**0.000**
Screening Risk Score Threshold	**10**	**1**	**1**
Screening Thresholds Exceeded?	**No**	**No**	**No**
Source: Construction Health Risk Assessment and Operational Health Risk Screening (Attachment B)			

As shown in Table 15, the project would not exceed the cancer risk or chronic hazard screening threshold levels during project operations. The primary source of the emissions responsible for chronic risk are from diesel trucks. DPM does not have an acute risk factor. Since the project does not exceed the applicable SJVAPCD screening thresholds for cancer risk, acute risk, or chronic risk, this impact would be less than significant.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The San Joaquin Valley is considered an endemic area for Valley fever. The San Joaquin Valley is considered an endemic area for Valley fever. During 2000–2018, a total of 65,438 coccidioidomycosis cases were reported in California; median statewide annual incidence was 7.9 per 100,000 population and varied by region from 1.1 in Northern and Eastern California to 90.6 in the Southern San Joaquin Valley, with the largest increase (15-fold) occurring in the Northern San Joaquin Valley. Incidence has been consistently high in six counties in the Southern San Joaquin Valley (Fresno, Kern, Kings, Madera, Tulare, and Merced counties) and Central Coast (San Luis Obispo County) regions.[9] California experienced 7,517 new probable or confirmed cases of Valley fever in 2022. A total of 319 suspect, probable, and confirmed Valley fever cases were reported in Tulare County in 2022.[10]

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
2) Old (prehistoric) Indian campsites near fire pits
3) Areas with sparse vegetation and alkaline soils
4) Areas with high salinity soils
5) Areas adjacent to arroyos (where residual moisture may be available)
6) Packrat middens
7) Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils
8) Sandy, well-aerated soil with relatively high water-holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

1) Cultivated fields
2) Heavily vegetated areas (e.g., grassy lawns)
3) Higher elevations (above 7,000 feet)
4) Areas where commercial fertilizers (e.g., ammonium sulfate) have been applied
5) Areas that are continually wet
6) Paved (asphalt or concrete) or oiled areas
7) Soils containing abundant microorganisms
8) Heavily urbanized areas where there is little undisturbed virgin soil.[11]

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9 Centers for Disease Control and Prevention (CDC). 2020. Regional Analysis of Coccidioidomycosis Incidence—California, 2000–2018. Website: https://www.cdc.gov/mmwr/volumes/69/wr/mm6948a4.htm?s_cid=mm6948a4_e. Accessed June 16, 2023.

10 California Department of Public Health (CDPH). 2021. Coccidioidomycosis in California Provisional Monthly Report January – April 2023 (as of April 30, 2023). Website: https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciinCA ProvisionalMonthlyReport.pdf. Accessed June 16, 2023.

11 United States Geological Survey (USGS). 2000. Operational Guidelines (Version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever), 2000, Open-File Report 2000-348. Website: https://pubs.usgs.gov/of/2000/0348/pdf/of00-348.pdf. Accessed June 16, 2023.

The project is situated on a site previously disturbed that does not provide a suitable habitat for spores. Specifically, the project site had been previously cultivated and has vegetation cover in the form of agricultural uses including orchards. Therefore, implementation of the proposed project would have a low probability of the site having *C. immitis* growth sites and exposure to the spores from disturbed soil.

Although conditions are not favorable, construction activities could generate fugitive dust that contains *C. immitis* spores. The project will minimize the generation of fugitive dust during construction activities by complying with SJVAPCD's Regulation VIII. Therefore, this regulation, combined with the relatively low probability of the presence of *C. immitis* spores would reduce Valley fever impacts to less than significant.

During operations, dust emissions are anticipated to be relatively small because most of the project area where operational activities would occur would be occupied by the proposed residential subdivision and related homes, pavement, and internal streets. This condition would lessen the possibility of the project site providing habitat suitable for *C. immitis* spores and for generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

Naturally Occurring Asbestos

Review of the map of areas where naturally occurring asbestos in California are likely to occur found no such areas in the immediate project area. Therefore, development of the project is not anticipated to expose receptors to naturally occurring asbestos.[12] Impacts would be less than significant.

Operations—The Project's Potential to Locate Sensitive Receptor Near Existing Sources of TACs

As a residential project, the project would locate sensitive receptors (future residents) to a site where future project residents could be subject to existing sources of TACs at the project site. However, the California Supreme Court concluded in *California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)* that agencies subject to CEQA are not required to analyze the impact of existing environmental conditions on a project's future users or residents. Therefore, this impact will not be further addressed in this document.

Impact Analysis Summary

In summary, the project would not exceed SJVAPCD localized emission daily screening levels for any criteria pollutant. The project is not a significant source of TAC emissions during construction or operation. The project is not in an area with suitable habitat for Valley fever spores and is not in area known to have naturally occurring asbestos. Therefore, the project would not result in significant impacts to sensitive receptors.

d) Result in other emissions (such as those leading to odors or) adversely affecting a substantial number of people?

Less Than Significant Impact.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor.

[12] U.S. Geological Survey. 2011. Van Gosen, B.S., and Clinkenbeard, J.P. California Geological Survey Map Sheet 59. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California. Open-File Report 2011-1188 Website: https://pubs.usgs.gov/of/2011/1188/. Accessed May 20, 2023.

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Although the project is less than one mile from the nearest sensitive receptor, the project is not expected to be a significant source of odors. The screening levels for these land use types are shown in Table 16.

Table 16: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Wastewater Treatment Facilities	2 miles
Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed June 16, 2023.	

Construction

During construction, various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and intermittent, which would decrease the likelihood of the odors concentrating in a single area or lingering for any notable period of time. As such, these odors would likely not be noticeable for extended periods of time beyond the project's site boundaries. The potential for odor impacts from construction of the proposed project would, therefore, be less than significant.

Operations

Project as a Potential Odor Generator

The development of the proposed project would not substantially increase objectionable odors in the area and would not introduce any new sensitive receptors to the area that could be affected by any existing objectionable odor sources in the area. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, asphalt batch plants, rendering plants, and other land uses outlined in Table 16. The proposed residential project would not engage in any of these activities. Minor sources of odors that would be associated with typical single-family residential projects, such as exhaust from mobile sources (including diesel-fueled vehicles), are known to have temporary and less concentrated odors. Considering the low intensity of potential odor emissions, the proposed project's operational activities would not expose receptors to objectionable odor emissions. Therefore, the proposed project would not be considered to be a generator of objectionable odors during operations. As such, impacts would be less than significant.

Project as a Receptor

With the *CBIA v. BAAQMD* ruling, analysis of odor impacts on receivers is not required for CEQA compliance unless the project would exacerbate the impact. As discussed above, the project is residential in nature and would not be considered a major source of odors during construction or operation. Therefore, the following analysis is provided for informational purposes only, while the significance determination for the odor is determined based on whether the project would be a generator of objectionable odors during operations. As a residential development, the project has the potential to place sensitive receptors near existing and new odor sources. The project area was reviewed for major odor-generating sources (as listed in Table 16) within screening distance of the project site. Results of this review found that the project site could be within the screening distances of the following potential sources of odor: Farmersville Wastewater Treatment Plant, recycling facility/possible compositing facility, painting/coating operations (e.g., auto body shop) and Blue Grass Dairy. Public record requests were filed with the SJVAPCD to obtain the most recent 3-year odor complaint history for the potential odor generators within the vicinity of the project site. Based on the responses from the SJVAPCD, there are no land uses within the screening distances shown in Table 16 that have received one (1) or more confirmed complaints per year for the most recent 3-year period or three (3) of more unconfirmed complaints for the most recent 3-year period. The evaluation of potential sources of odors within the project vicinity are provided below in Table 17.

Table 17: Evaluation of Potential Odor Sources Near the Project Site

Odor Generator	Screening Distance	Facilities Near the Project Site	Proximity of the Nearest Source to the Project Site	More than One (1) Confirmed Complaints per Year?	More than Three (3) Unconfirmed Complaints per Year?
Wastewater Treatment Facilities	2 miles	Farmersville Wastewater Treatment Plant	Approximately 0.36 mile south of the project site	No	No
Sanitary Landfill	1 mile	None	> 1 mile	Not Applicable	Not Applicable
Transfer Station	1 mile	WM - Tulare County	2.65 miles southwest of the project site	Not Applicable	Not Applicable
Composting Facility	1 mile	Regals Recycling (Recycling Facility that may also serve as a transfer station and/or a composting facility—accepts green waste)	0.31 mile east of the project site	No	No
Petroleum Refinery	2 miles	None	> 2 mile	Not Applicable	Not Applicable
Asphalt Batch Plant	1 mile	None	> 1 mile	Not Applicable	Not Applicable
Chemical Manufacturing	1 mile	Processtec (Manufacturer) 345 E Tulare Ave Suite E Visalia, CA 93277	4.34 miles northwest of the project site	Not Applicable	Not Applicable

Odor Generator	Screening Distance	Facilities Near the Project Site	Proximity of the Nearest Source to the Project Site	More than One (1) Confirmed Complaints per Year?	More than Three (3) Unconfirmed Complaints per Year?
Fiberglass Manufacturing	1 mile	None	> 1 mile	Not Applicable	Not Applicable
Painting/Coating Operations (e.g., auto body shop)	1 mile	Jesse's Auto Garage	0.40 mile east of the project site	No	No
		G & H Auto Repair	0.52 mile east, slightly northeast of the project site	No	No
		Pioneer Paint & Body	0.56 mile east, slightly northeast of the project site	No	No
		Jesse's Automotive	0.59 mile east, slightly northeast of the project site	No	No
		Tapia's Auto Body & Paint Shop	0.61 mile east, slightly northeast of the project site	No	No
		C&J Auto Body & Paint	0.67 mile east of the project site	No	No
Food Processing Facility	1 mile	Milk Specialties Global	6.01 miles northwest of the project site	Not Applicable	Not Applicable
		Advanced Food Products LLC (assumed could be a possible food processor)	4.14 miles northwest of the project site		
Feed Lot/Dairy	1 mile	Blue Grass Dairy (36°17'12.50"N, 119°13'27.38"W)	0.82 mile southwest of the project site	No	No
Rendering Plant	1 mile	None	> 1 mile	Not Applicable	Not Applicable
Source of Types of Major Odor Generator Land Uses: See Table 16.					

As shown in Table 17, there are no major odor-generating sources that have received complaints to an extent that would exceed SJVAPCD-recommended thresholds for assessing odor impacts from odor generators. Furthermore, there are existing residential uses located within the screening distances for all the potential sources in the project vicinity. As shown in the dispersion modeling general parameters included in the health risk assessment prepared for the project in Attachment B, the predominant wind direction in project area is northwesterly. The northwesterly winds blow from the northwest towards the southeast direction. Because the Farmersville Wastewater Treatment Plant is located south of the project site, future residents would not be placed downwind of the potential odor source. Regals Recycling is considered a possible odor generator because it may accept green waste and could be considered a compost facility. This possible odor generator is located at 873 S Farmersville Boulevard, Farmersville, CA 93223. The project site is not located downwind of this recycling facility. Furthermore, there are existing residents located closer to the recycling facility than the proposed project. Considering this information, the uses in the vicinity of the project would not result in substantial odor impacts to the project. Impacts would be less than significant.

Greenhouse Gas Emissions Estimation Summary and Greenhouse Gas Impact Analysis

Thresholds of Significance

Section 15064.4(b) of the CEQA Guidelines for GHG emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- **Consideration #1**: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

Under the SJVAPCD guidance, projects meeting one of the following would have a less than significant impact on climate change:

- Exempt from CEQA;
- Complies with an approved GHG emission reduction plan or GHG mitigation program;
- Project achieves 29 percent GHG reductions by using approved Best Performance Standards; and
- Project achieves AB 32 targeted 29 percent GHG reductions compared with "business as usual."

The SJVAPCD has not yet adopted BPS for development projects that could be used to streamline the GHG analysis. For development projects, BPS means, "[a]ny combination of identified GHG emission reduction measures, including project design elements and land use decisions that reduce project-specific GHG emission reductions by at least 29 percent compared with business as usual."

The 29 percent GHG reduction level is based on the target established by CARB's AB 32 Scoping Plan, approved in 2008. The GHG reduction level for the State to reach 1990 emission levels by 2020 was reduced to 21.7 percent from BAU in 2020 in the 2014 First Update to the Scoping Plan to account for slower than projected growth after the 2008 recession.[13] First occupancy at the project site is expected to occur in 2024, which is after the AB 32 target year. The SJVAPCD has not updated its guidance to address SB 32 2030 targets or AB 1279 2045 targets. Therefore, whether the project's GHG emissions would result in a significant impact on the environment is determined by assessing consistency with relevant GHG reduction plans.

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[13] California Air Resources Board (CARB). 2014. First Update to the Climate Change Scoping Plan. Website: http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm. Accessed May 24, 2023.

Quantification of Greenhouse Gas Emissions for Informational Purposes

Construction

GHG emissions generated during all construction activities were combined and are shown in Table 18.

Table 18: Summary of Construction-Generated Greenhouse Gas Emissions

Emissions Source	MT CO_{2e} per Year
Site Work and Internal Paving (2023)	197
Site Work and Internal Paving (2024)	171
Homes Construction (2023)	50
Homes Construction (2024)	483
Homes Construction (2025)	437
Homes Construction (2026)	222
Project Construction Total	**1,560**
Amortized over 30 Years	**52**
Notes: MT CO_2e = metric tons of carbon dioxide equivalent Source: Modeling Assumptions and CalEEMod Output Files (Attachment A).	

Operations

Operational or long-term emissions occur over the life of the project. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, waste generation, and area sources, such as landscaping activities. Operational GHG emissions associated with the proposed project were estimated using CalEEMod 2022.1. Please see the “Assumptions” sections of this technical memorandum for details regarding assumptions and methodology used to estimate emissions. Operational GHG emissions for a full buildout scenario in the earliest operation year are shown in Table 19. Complete CalEEMod output files and additional supporting information are also included in Attachment A.

Table 19: Project Operational GHG Emissions (Buildout Year Scenario)

Emission Source	Unmitigated Buildout Year Total Emissions (MT CO_2e per year)
Area	98
Energy	914
Mobile (Automobiles)	3,425
Refrigerants	1
Water	27
Waste	76
Total (MT CO_2e per year)	**4,541**
Source of Emissions: Modeling Assumptions and CalEEMod Output Files (Attachment A).	

Addressing Greenhouse Gas CEQA Impact Questions

Table 20: Summary of Greenhouse Gas Impact Analysis

Greenhouse Gas Emissions	
Would the project:	**Significance Finding**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant Impact
b) Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than Significant Impact

Greenhouse Gas Mitigation Measures

No mitigation is required.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact.

The following analysis assesses the project's compliance with Consideration #3 regarding consistency with adopted plans to reduce GHG emissions. The City of Farmerville has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, or goal-setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines. The County of Tulare has adopted Climate Action Plan; however, the County of Tulare's Climate Action Plan is only applicable to unincorporated areas of Tulare County. The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to the project. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with CARB's adopted Scoping Plans.

Consistency with CARB's Adopted Scoping Plans

Consistency with AB 32 and CARB's 2008 Scoping Plan

The State's regulatory program implementing the 2008 Scoping Plan is now fully mature. All regulations envisioned in the Scoping Plan have been adopted, and the effectiveness of those regulations has been estimated by the agencies during the adoption process and then tracked to verify their effectiveness after implementation. The combined effect of this successful effort is that the State now projects that it will meet the 2020 target and achieve continued progress toward meeting post-2020 targets. Former Governor Brown, in the introduction to Executive Order B-30-15, stated "California is on track to meet or exceed the current target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32)."

Consistency with SB 32 and CARB's 2017 Scoping Plan

The 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. Table 21 provides an analysis of the project's consistency with the 2017 Scoping Plan Update measures.

Table 21: Consistency with SB 32 2017 Scoping Plan Update

Scoping Plan Measure	Project Consistency
SB 350 50% Renewable Mandate. Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030. *(The requirement is now 60% in 2030 per SB 100.)*	**Consistent**: The project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
SB 350 Double Building Energy Efficiency by 2030. This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels.	**Not Applicable**. This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency over time. New buildings (single-family homes) constructed as part of the proposed project would comply with the applicable Title 24 Energy Efficiency Standards in effect at the time building permits are received. The current Title 24 regulations are the 2022 Title 24 standards, which become effective January 1, 2023. The next update would become effective January 1, 2026.
Low Carbon Fuel Standard. This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent**. This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing the project site would be subject to the standards. Vehicles accessing the project site will use fuel containing lower carbon content as the fuel standard is implemented.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario). Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent**. Future project residents can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year. The CALGreen Code requires electrical service in new single-family housing to be EV charger-ready. In addition, home deliveries will be made by increasing numbers of ZEV delivery trucks as the statewide fleet is expected to get cleaner over time.
Sustainable Freight Action Plan. The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	**Not Applicable.** The measure applies to owners and operators of trucks and freight operations. The project is residential in nature and would not be considered an industrial land use or a large freight operator. However, home deliveries are expected to be made by increasing numbers of ZEV delivery trucks as technology continues to improve accessibility to ZEV vehicles and as regulations are phased in over time.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy. The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Consistent**. The project will only include natural gas hearths that produce very little black carbon compared with wood burning fireplaces and heaters in line with the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts mitigation measures.[1]
SB 375 Sustainable Communities Strategies. Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled.	**Consistent**. The project will provide residential development in the region that is consistent with the Regional Transportation Plan/Sustainable Communities Strategy (SCS) strategy to increase development densities to reduce VMT.
Post-2020 Cap-and-Trade Program. The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial	**Consistent.** The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as

Scoping Plan Measure	Project Consistency
sources such as power plants, refineries, and cement manufacturers.	electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.
Natural and Working Lands Action Plan. CARB is working in coordination with several other agencies at the federal, state, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Not Applicable**. The project is residential development and will not be considered natural or working lands.
Source: California Air Resources Board (CARB). 2017. The 2017 Climate Change Scoping Plan Update. January 20. Website: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed June 16, 2023. [1] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMA. Accessed June 16, 2023.	

As described in Table 21, the proposed project would be consistent with applicable 2017 Scoping Plan Update measures and would not obstruct the implementation of others that are not applicable. The State's regulatory program is able to target both new and existing development because the two most important strategies, motor vehicle fuel efficiency and emissions from electricity generation, obtain reductions equally from existing sources and new sources. This is because all vehicle operators use cleaner low carbon fuels and buy vehicles subject to the fuel efficiency regulations and all building owners or operators purchase cleaner energy from the grid that is produced by increasing percentages of renewable fuels. This includes regulations on mobile sources such as the Pavley standards that apply to all vehicles purchased in California, the LCFS (Low Carbon Fuel Standard) that applies to all fuel sold in California, and the Renewable Portfolio Standard and Renewable Energy Standard under SB 100 that apply to utilities providing electricity to all California end users.

Moreover, the Scoping Plan strategy will achieve more than average reductions from energy and mobile source sectors that are the primary sources related to development projects and lower than average reductions from other sources such as agriculture. The proposed residential project's operational GHG emissions would principally be generated from electricity consumption and vehicle use, which are directly under the purview of the Scoping Plan strategy and have experienced reductions above the State average reduction. Considering the information summarized above, the proposed project would be consistent with the State's AB 32 and SB 32 GHG reduction goals.

Consistency Regarding GHG Reduction Goals for 2050 under Executive Order S-3-05 and GHG Reduction Goals for 2045 under CARB's 2022 Scoping Plan

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that operation of the proposed project would comply with whatever measures are enacted that State lawmakers decide would lead to an 80 percent reduction below 1990 levels by 2050.

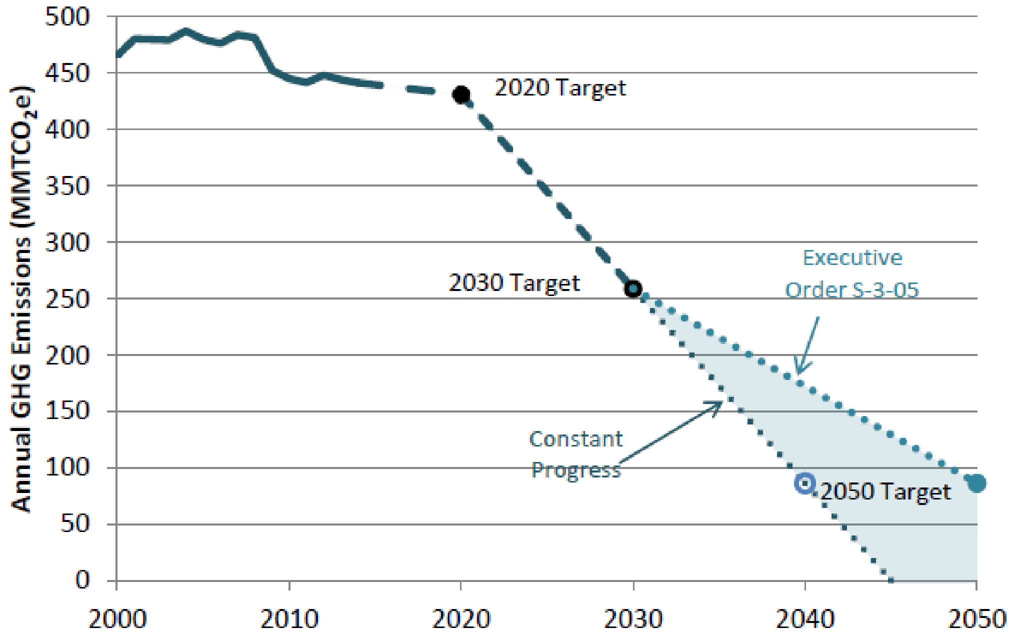
In its 2008 Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." In the First Scoping Plan Update; however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately."

CARB recognized that AB 32 established an emissions reduction trajectory that will allow California to achieve the more stringent 2050 target: "These [greenhouse gas emission reduction] measures also put the State on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels. This trajectory is consistent with the reductions that are needed globally to stabilize the climate." In addition, CARB's First Update "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," and many of the emission reduction strategies recommended by CARB would serve to reduce the proposed project's post-2020 emissions level to the extent applicable by law:

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the proposed project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the project's emissions level.
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the project's emissions level.
- **Water Sector:** The project's emissions level will be reduced as a result of further desired enhancements to water conservation technologies.
- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the project's emissions level.

For the reasons described above, the project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets. The trajectory required to achieve the post-2020 targets is shown in Figure 2.

Figure 2: California's Path to Achieving the 2050 Target



Source: CARB 2017 Scoping Plan Update

In his January 2015 inaugural address, former Governor Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions:

- Increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030;
- Cutting the petroleum use in cars and trucks in half; and
- Doubling the efficiency of existing buildings and making heating fuels cleaner.

These expressions of executive branch policy may be manifested in adopted legislative or regulatory action through the state agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change. Studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Given the proportional contribution of mobile source-related GHG emissions to the State's inventory, recent studies also show that relatively new trends—such as the increasing importance of web-based shopping, the emergence of different driving patterns, and the increasing effect of web-based applications on transportation choices—are beginning to substantially influence transportation choices and the energy used by transportation modes. These factors have changed the direction of transportation trends in recent years and will require the creation of new models to effectively analyze future transportation patterns and the corresponding effect on GHG emissions. For the reasons described above, the proposed project's future emissions trajectory is expected to follow a declining trend, consistent with the 2030, 2045, and 2050 targets.

The 2017 Scoping Plan provides an intermediate target that is intended to achieve reasonable progress toward the 2050 target. In addition, the 2022 Scoping Plan outlines objectives, regulations, planning efforts, and investments in clean technologies and infrastructure that outlines how the State can achieve carbon-neutrality by 2045. Accordingly, taking into account the proposed project's design features and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the proposed project would be consistent with State GHG Plans and would further the State's goals of reducing GHG emissions 40 percent below 1990 levels by 2030, carbon neutral by 2045, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment.

Impact Analysis Summary

As described above, the proposed project would be consistent with State GHG Plans and would not obstruct the State's ability to meet its goals of reducing GHG emissions 40 percent below 1990 levels by 2030, carbon neutral by 2045, and 80 percent below 1990 levels by 2050. Therefore, the project's generation of GHG emissions would not result in a significant impact on the environment.

b) Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact.

The following analysis assesses the project's compliance with Consideration #3 regarding consistency with adopted plans to reduce GHG emissions. As discussed under Impact GHG-A, neither the City of Farmersville nor the County of Tulare have adopted a GHG reduction plan that would be applicable to the proposed project. In addition, the City of Farmersville has not completed the GHG inventory, benchmarking, or goal-setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines. The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to the project. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. The County of Tulare has adopted Climate Action Plan; however, the County of Tulare's Climate Action Plan is only applicable to unincorporated areas of Tulare County and would not be appliable to the proposed project. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with CARB's adopted Scoping Plans. This assessment is included under Impact GHG-A above. As demonstrated in the analysis contained under Impact GHG-A, the project would not conflict with any applicable plan, policy, or regulation of an agency adopted to reduce the emissions of greenhouse gases. This impact would be less than significant.

Energy

Environmental Setting

The proposed project would be served with electricity provided by Eastside Power Authority or Southern California Edison (SCE). SCE's 2019 Green Rate 50 percent option includes 67.5 percent eligible renewable resources, including wind, geothermal, solar, eligible hydroelectric, and biomass and biowaste; 4 percent large hydroelectric; 8.1 percent natural gas; 4.1 percent nuclear; 0.1 percent other; and 16.3 percent unspecified sources of power[14] SCE's 2019 Green Rate 100 percent option includes 100 percent eligible renewable resources, composed entirely of solar. Approximately 43 percent of the electricity that SCE delivered in 2020 was a combination of renewable and GHG-emissions-free resources.[15,16] SCE was ahead of schedule in meeting the California's RPS 2020 mandate of serving their load with at least 33 percent RPS-eligible resources.

Approximately 23.9 percent of the electricity that Eastside Power Authority delivered in 2021 was from eligible renewable resources,[17] and 48.7 percent was from large hydroelectric.[18] Both SCE and Eastside Power Authority would be required to meet California's RPS standards of 60 percent by 2030 and carbon-free sourced-electricity by 2045.

Methodology

The energy requirements for the proposed project were determined using the construction and operational estimates generated from the Air Quality Analysis (refer to Attachment A for related CalEEMod output files). The calculation worksheets for diesel fuel consumption rates for off-road construction equipment and on-road vehicles are provided in Attachment C (Energy Consumption Calculations). Short-term construction energy consumption is discussed below.

Short-Term Construction

Off-Road Equipment

Table 22 provides estimates of the project's construction fuel consumption from off-road construction equipment for the entire project, categorized by construction activity.

Table 22: Construction Off-Road Fuel Consumption

Project Component	Construction Activity	Fuel Consumption (gallons)
Eagle Meadows Residential Project (On-site, Off-road Equipment Use)	**Site Work for the Project Site and Paving of Internal Streets**	
	Site Preparation	2,736
	Grading	9,677
	Paving	1,395
	Home Construction	
	Building Construction	29,224
	Paving	1,395

14 "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.
15 Renewable sources included solar, wind, geothermal, biomass, and small hydroelectric sources. GHG-emissions-free sources of energy included nuclear and large hydroelectric. "GHG-emissions-free resources" refers to energy sources other than renewable energy resources that also do not result in GHG emissions, such as non-emitting nuclear and hydroelectric.
16 Southern California Edison (SCE). 2021. 2022 Power Content Label. Website: https://www.energy.ca.gov/filebrowser/download/3902. Accessed June 20, 2023.
17 The eligible renewable percentage above does not reflect RPS compliance, which is determined using a different methodology.
18 Eastside Power Authority. 2022. 2021 Power Content Label. Website: https://www.energy.ca.gov/filebrowser/download/4636. Accessed June 20, 2023.

Project Component	Construction Activity	Fuel Consumption (gallons)
	Architectural Coating	161
Construction Total		**44,588**
Source: Energy Consumption Calculations (Attachment C).		

As shown in Table 22, use of off-road equipment associated with construction of the proposed project is estimated to consume approximately 44,588 gallons of diesel fuel over the entire construction duration. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the City of Farmersville, the larger Tulare County region, or other parts of California. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

On-Road Vehicles

On-road vehicles for construction workers, vendors, and haulers would require fuel for travel to and from the site during construction. Table 23 provides an estimate of the total on-road vehicle fuel usage during construction. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of the Tulare County region or the state. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Table 23: Construction On-Road Fuel Consumption

	Project Component	Total Annual Fuel Consumption (gallons)
Eagle Meadows Residential Project (On-site, Off-road Equipment Use)	**Site Work for the Project Site and Paving of Internal Streets**	
	Site Preparation	203
	Grading	2,690
	Paving	331
	Home Construction	
	Building Construction	31,134
	Paving	414
	Architectural Coating	371
Total Construction On-Road Fuel Consumption		**35,143**
Source: Energy Consumption Calculations (Attachment C).		

Other Energy Consumption Anticipated During Project Construction

Other equipment could include construction lighting, field services (office trailers), and electrically driven equipment such as pumps and other tools. The project site is located in the City of Farmersville. As construction activities would occur primarily during daylight hours; it is anticipated that the use of construction lighting would be minimal. Singlewide mobile office trailers, which are commonly used in construction staging areas, generally range in size from 160 square feet to 720 square feet. A typical 720-square-foot office trailer would consume approximately 38,145 kWh during the approximate 2.75-year construction phase (Attachment C).

Long-Term Operations

Transportation Energy Demand

Table 24 provides an estimate of the daily and annual fuel consumed by vehicles traveling to and from the proposed project. These estimates were derived using the same assumptions used in the operational air quality analysis for the proposed project.

Table 24: Long-Term Operational Vehicle Fuel Consumption

Vehicle Type	Percent of Vehicle Trips	Annual VMT	Average Fuel Economy (miles/ gallon)	Total Daily Fuel Consumption (gallons)	Total Annual Fuel Consumption (gallons)
Passenger Cars (LDA)	52.77	5,007,286	30.14	455.1	166,120
Light Trucks (Pickups) and Medium Vehicles	43.21	4,100,148	22.05	509.4	185,946
Light-Heavy to Medium-Heavy Diesel Trucks	0.98	92,991	11.56	22.0	8,047
Heavy-heavy Trucks	2.14	203,062	5.96	93.3	34,070
Motorcycles	0.25	23,722	41.76	1.6	568
Other	0.65	61,678	7.56	22.4	8,161
Total	**100**	**9,488,887**	**—**	**1,104**	**402,912**
Notes: VMT = vehicle miles traveled Percent of Vehicle Trips and VMT provided by CalEEMod. “Other” consists of buses and motor homes. Source: Energy Consumption Calculations (Attachment C).					

As shown above, annual vehicular fuel consumption is estimated to be 402,912 gallons of gasoline and diesel fuel combined. Using rates calculated for the 2024 operational year, daily consumption is estimated at approximately 1,104 gallons of fuel (see Attachment C).

Building Energy Demand

As shown in Table 25 and Table 26, the proposed project is estimated to demand 2,150,524 kilowatt-hours (KWhr) of electricity and 8,835,662 1,000-British Thermal Units (kBTU) of natural gas, respectively, on an annual basis.

Table 25: Long-Term Electricity Usage

Land Use	Total Electricity Demand (KWhr/year)
Single-family Housing	**2,150,524**
Source: Energy Consumption Calculations (Attachment C).	

Table 26: Long-Term Natural Gas Usage

Land Use	Total Natural Gas Demand (kBTU/year)
Single-family Housing	**8,835,662**
Source: Energy Consumption Calculations (Attachment C).	

Addressing Energy CEQA Impact Questions

This section discusses potential energy impacts associated with the proposed project and provides mitigation measures where necessary.

Table 27: Summary of Energy Impact Analysis

Energy	
Would the project:	**Significance Finding**
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant Impact

Energy Mitigation Measures

No mitigation is required.

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact.

This impact addresses the energy consumption from both the short-term construction and long-term operations are discussed separately below.

Construction Energy Demand

As summarized in Table 22 and Table 23, the proposed project would require 44,588 gallons of diesel fuel for construction off-road equipment and 35,143 gallons of gasoline and diesel for on-road vehicles during construction. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or other parts of the state. In addition, the overall construction schedule and process is already designed to be efficient in order to avoid excess monetary costs. For example, equipment and fuel are not typically used wastefully due to the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region, and as such, impacts would be less than significant.

Long-Term Energy Demand

Building Energy Demand

Buildings and infrastructure constructed pursuant to the proposed project (including the proposed single-family homes) would comply with the versions of CCR Titles 20 and 24, including California Green Building Standards (CALGreen), that are applicable at the time that building permits are issued. The proposed project is estimated to demand 2,150,524 KWhr of electricity per year and 8,835,662 kBTU of natural gas per year. As the project site is currently undeveloped and used for agriculture purposes, this would represent an increase in demand for electricity and natural gas.

It would be expected that building energy consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar buildings in the City of Farmersville or the larger Tulare County region. Current state regulatory requirements for new building construction contained in the 2022 CALGreen and Title 24 standards would increase energy efficiency and reduce energy demand in comparison to most existing development, and therefore would reduce actual environmental effects associated with energy use from the proposed project. Additionally, the CALGreen and Title 24 standards have increased efficiency standards through each update. The most recent 2022 standards became effective January 1, 2023 and will be updated in the next cycle that will become effective at the start of 2026. Therefore, while the proposed project would result in increased electricity and natural gas demand, electricity and natural gas would be consumed more efficiently than most existing development due to compliance with the latest building standards.

Based on the above information, the proposed project would not result in the inefficient or wasteful consumption of electricity or natural gas, and impacts would be less than significant.

Transportation Energy Demands

The daily vehicular fuel consumption is estimated to be 1,104 gallons of combined gasoline and diesel fuel. Annual consumption is estimated at 402,912 gallons. In addition, the proposed project would constitute development within an established community and would not be opening a new geographical area for development. As such, the proposed project would not result in unusually long trip lengths for future residents, visitors, or deliveries to the proposed single-family homes. The property is located near other residential land uses, including adjacent single-family homes to the east of the project site and to the west of the north half of the project site. The proposed project would be well-positioned to accommodate an existing community and provide housing for planned growth. Vehicles accessing the site would be typical of vehicles accessing similar residential uses in the City of Farmersville, Tulare County, and surrounding areas. For these reasons, vehicular fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar land use activities in the region, and impacts would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact.

The project proposes the construction of new residential development that would be built in accordance with all applicable rules and regulations. Compliance with established and applicable regulations would ensure that the project would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency. Moreover, compliance with Title 24 standards would ensure that the proposed project would not conflict with any energy conservation policies related to the proposed project's building envelope, mechanical systems, and indoor and outdoor lighting. Notably, the applicable Title 24 standards require the project to include on-site renewable energy to serve the future project occupants and residents. In addition, the proposed project would constitute development within an established community. Specifically, the project site is adjacent to built-up areas of the City of Farmersville. As such, the project would not be opening a new geographical area for development such that it would not result in unusually long trip lengths for future project residents or visitors. In addition, the proposed residential development is specifically designed for increased walkability, facilitated by the proposed pedestrian connectivity throughout the project site.

For the above reasons, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant.

Attachments

Attachment A – Modeling Assumptions and CalEEMod Output Files

Attachment B – Construction Health Risk Assessment and Operational Health Risk Screening

Attachment C – Energy Consumption Calculations

ATTACHMENT A

Modeling Assumptions and CalEEMod Output Files

Modeling Assumptions and CalEEMod Output Files

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Eagle Meadows Residential Project Construction Assumptions

Eagle Meadows - Site Work and Internal Street Paving for the Entire Project Site (Unmitigated) Custom Report, 6/20/2023
Eagle Meadows – Home Construction (Unmitigated) + Operations Custom Report, 6/20/2023

Construction Phase

Run	Phase Name	Start Date	End Date	Num Days Week	Num Days
Site Work	Site Preparation	10/2/2023	11/10/2023	5	30
Site Work	Grading	11/11/2023	2/23/2024	5	75
Site Work	Paving	2/24/2024	5/10/2024	5	55
Home Construction	Building Construction	11/21/2023	6/30/2026	5	681
Home Construction	Paving	5/11/2024	7/26/2024	5	55
Home Construction	Architectural Coating	4/15/2026	6/30/2026	5	55

OffRoad Equipment

Run	Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Work	Site Preparation	Rubber Tired Dozers	3	8	367	0.40
Site Work	Site Preparation	Tractors/Loaders/Backhoes	4	8	84	0.37
Site Work	Grading	Excavators	2	8	36	0.38
Site Work	Grading	Graders	1	8	148	0.41
Site Work	Grading	Rubber Tired Dozers	1	8	367	0.40
Site Work	Grading	Scrapers	2	8	423	0.48
Site Work	Grading	Tractors/Loaders/Backhoes	2	8	84	0.37
Site Work	Paving	Pavers	2	8	81	0.42
Site Work	Paving	Paving Equipment	2	8	89	0.36
Site Work	Paving	Rollers	2	8	36	0.38
Home Construction	Building Construction	Cranes	1	7.61	367	0.29
Home Construction	Building Construction	Forklifts	3	8.69	82	0.20
Home Construction	Building Construction	Generator Sets	1	8.69	14	0.74
Home Construction	Building Construction	Tractors/Loaders/Backhoes	3	7.61	84	0.37
Home Construction	Building Construction	Welders	1	8.69	46	0.45
Home Construction	Paving	Pavers	2	8	81	0.42
Home Construction	Paving	Paving Equipment	2	8	89	0.36
Home Construction	Paving	Rollers	2	8	36	0.38
Home Construction	Architectural Coating	Air Compressors	1	6	37	0.48

Construction Trips and VMT

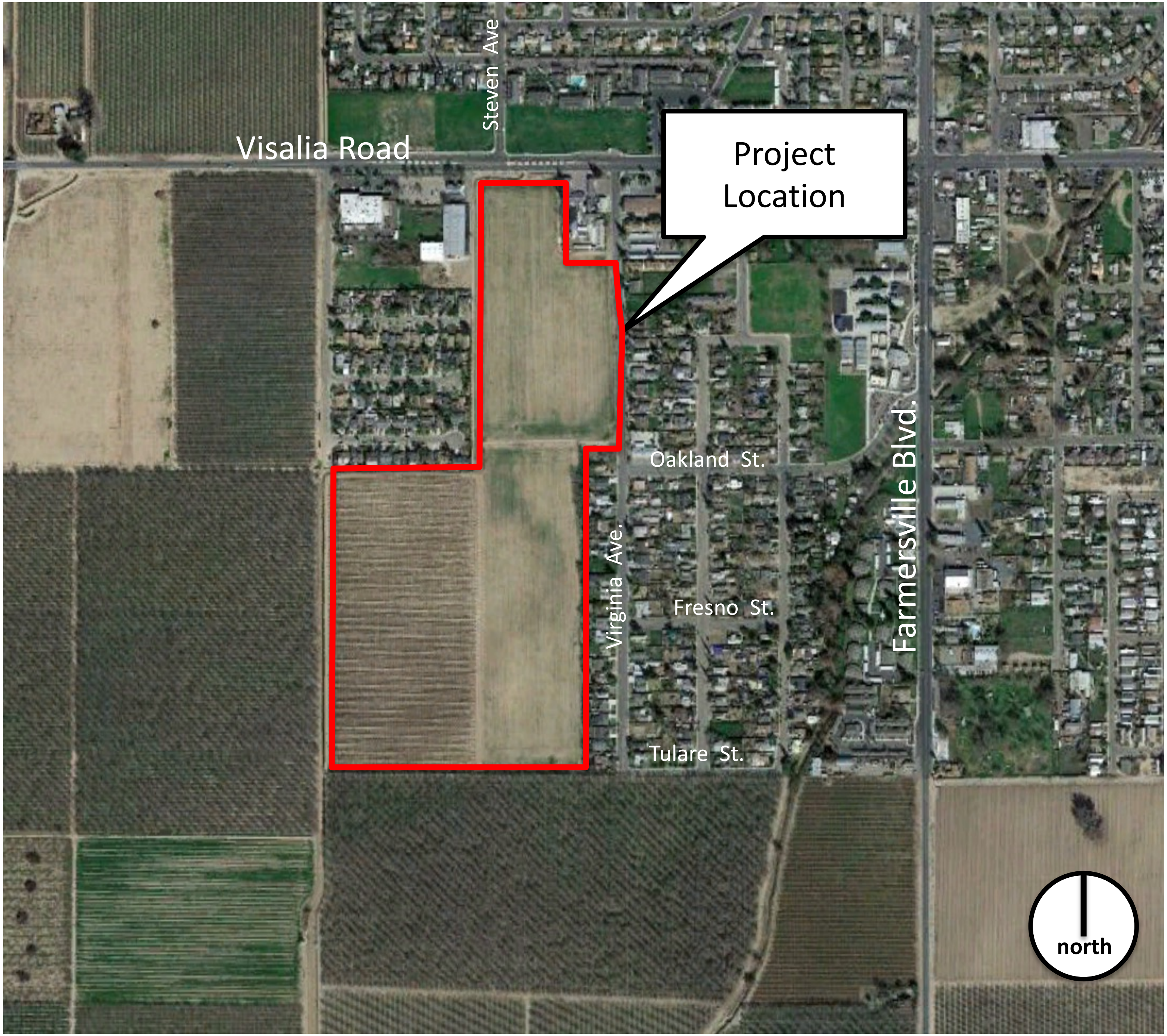
Run	Phase Name	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Site Work	Site Preparation	17.50	2	0	7.7	6.8	20
Site Work	Grading	20	2	8.33	7.7	6.8	20
Site Work	Paving	15	2	0	7.7	6.8	20
Home Construction	Building Construction	87.12	25.87	0	7.7	6.8	20
Home Construction	Paving	15	4	0	7.7	6.8	20
Home Construction	Architectural Coating	17.42	2	0	7.7	6.8	20

Calculations for Adjustments to Conserve Default HP Hours (Eagle Meadows Residential Project)

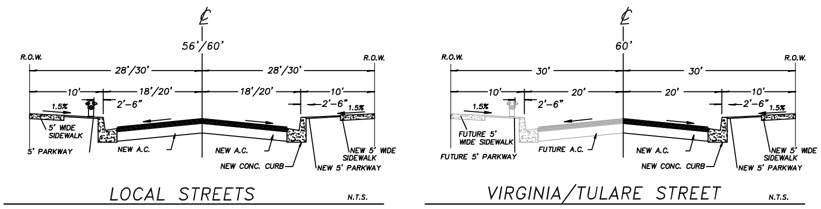
	Duration	
	CalEEMod Defaults	Revisions to Match Schedule
Building Construction	740	681

CalEEMod Defaults						Revisions						Cross-Check	
Building Construction						**Building Construction**							
Equipment	**Amount**	**Usage Hours**	**Horsepower**	**Load Factor**	**HP Hours**	**Equipment**	**Amount**	**Usage Hours**	**Horsepower**	**Load Factor**	**HP Hours**	**Goal HP Hours**	**Difference**
Cranes	1	7.0	367	0.29	551,307	Cranes	1	7.61	367	0.29	551,307	551,307	-
Forklifts	3	8.0	82	0.20	291,264	Forklifts	3	8.69	82	0.20	291,264	291,264	-
Generator Sets	1	8.0	14	0.74	61,331	Generator Sets	1	8.69	14	0.74	61,331	61,331	-
Tractors/Loaders/Backhoes	3	7.0	84	0.37	482,983	Tractors/Loaders/Backhoes	3	7.61	84	0.37	482,983	482,983	-
Welders	1	8.0	46	0.45	122,544	Welders	1	8.69	46	0.45	122,544	122,544	-
				Total	**1,509,430**					**Total**	**1,509,430**	**1,509,430**	-

Adjusted construction equipment usage to match CalEEMod default total building construction HP hours.

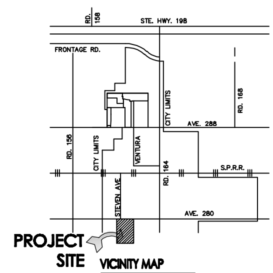

Visalia Road
Steven Ave
Project Location
Oakland St.
Virginia Ave.
Fresno St.
Farmersville Blvd.
Tulare St.
north

TSM 22-002



EAGLE MEADOW

BEING A DIVISION OF A PORTION OF THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 25 EAST, MOUNT DIABLO MERIDIAN, IN THE CITY OF FARMERSVILLE, COUNTY OF TULARE, STATE OF CALIFORNIA.
DECEMBER 2022



VICINITY MAP
SCALE: NTS

DEVELOPER:

SMEE HOMES
444 N. PROSPECT, SUITE A
PORTERVILLE, CA 93257

PROJECT INFORMATION:

NET AREA=48.82 AC
CORNER LOT WIDTHS: 60' MIN
INTERIOR LOT WIDTHS: 50' MIN
MIN. LOT SIZE: 5,000 SQ FT-14,199 SQ FT
AVERAGE LOT SIZE: 6,439 SQ FT
FLOOD ZONE: AE
TOTAL LOTS : 242 LOTS
DENSITY: 4.96 UNITS PER ACRE

A — CONSTRUCT 7' TALL BLOCKWALL

OWNER:

NEAL E & MAUREEN HESTER
16584 AVENUE 256
VISALIA, CA 93292

ENGINEER:

AW ENGINEERING
810 WEST ACEQUIA AVENUE
VISALIA, CA 93291

LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF FARMERSVILLE, COUNTY OF TULARE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:
PARCEL 1: APN: PORTION OF 130-040-020
THE EAST HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 25 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF TULARE, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.
EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PARCELS:

(1) THE NORTH 40 FEET OF THE EAST HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 12, EXCEPTING THEREFROM THE EAST 250 FEET THEREOF.
(2) BEGINNING AT THE NORTHEAST CORNER OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 12; THENCE SOUTH ALONG THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION, 150 FEET; THENCE WEST AND PARALLEL WITH THE NORTH LINE OF SAID SECTION, 260 FEET; THENCE NORTH AND PARALLEL WITH THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION, 150 FEET TO THE NORTH LINE OF SAID SECTION, THENCE EAST 260 FEET TO THE POINT OF BEGINNING.

(3) BEGINNING AT A POINT 60 FEET WEST AND 150 FEET SOUTH OF THE NORTHEAST CORNER OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 12, SAID POINT BEING THE SOUTHEAST CORNER OF THE PROPERTY CONVEYED TO THE ROMAN CATHOLIC BISHOP OF THE MONTEREY-FRESNO DIOCESE, A CORPORATION, BY DEED DATED MAY 21, 1949, RECORDED MAY 25, 1949 IN BOOK 1368, PAGE 391, OFFICIAL RECORDS; THENCE WEST ALONG THE SOUTH LINE OF THE PROPERTY SO CONVEYED TO THE ROMAN CATHOLIC BISHOP OF THE MONTEREY-FRESNO DIOCESE, A CORPORATION 200 FEET; THENCE SOUTH AND PARALLEL TO THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER, 217.8 FEET; THENCE EAST AND PARALLEL TO THE NORTH LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 12, 200 FEET TO A POINT 60 FEET WEST OF THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 12; THENCE NORTH 217.8 FEET TO THE POINT OF BEGINNING.

(4) BEGINNING AT THE SOUTHEAST CORNER OF SAID NORTHWEST QUARTER OF NORTHEAST QUARTER; THENCE SOUTH 89° 56' 30" WEST 165 FEET; THENCE NORTH 0° 04' 30" EAST 30 FEET TO THE TRUE POINT OF BEGINNING OF THE PARCEL; THENCE NORTH 89° 56' 30" EAST 135 FEET; THENCE NORTH 0° 04' 30" EAST 60 FEET; THENCE SOUTH 89° 56' 30" WEST 135 FEET; THENCE SOUTH 0° 04' 30" WEST 60 FEET TO THE TRUE POINT OF BEGINNING.

(5) BEGINNING AT A POINT IN THE EAST LINE OF SAID WEST HALF OF THE NORTHEAST QUARTER 1345.09 FEET SOUTH 0° 04' 30" WEST OF THE NORTHEAST CORNER THEREOF; THENCE SOUTH 89° 56' 30" WEST 30 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 89° 56' 30" WEST 135 FEET; THENCE NORTH 0° 04' 30" EAST 60 FEET TO THE SOUTHWEST CORNER OF THE LAND CONVEYED TO PAUL R. SMITH ET UX BY DEED RECORDED MAY 1, 1957 IN BOOK 1594, PAGE 115, OFFICIAL RECORDS; THENCE NORTH 89° 56' 30" EAST 135 FEET; THENCE SOUTH 0° 04' 30" WEST 60 FEET TO THE TRUE POINT OF BEGINNING.

FURTHER EXCEPTING THEREFROM: THAT PORTION THEREOF INCLUDED WITHIN THE LINES OF VENTURA AVENUE AS SHOWN ON THE MAP OF TRACT NO. 57, IN THE COUNTY OF TULARE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 19, PAGE 97 OF MAPS.

PARCEL 2: APN: 130-040-014 AND PORTION OF 130-040-020

THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 25 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF TULARE, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PARCELS:

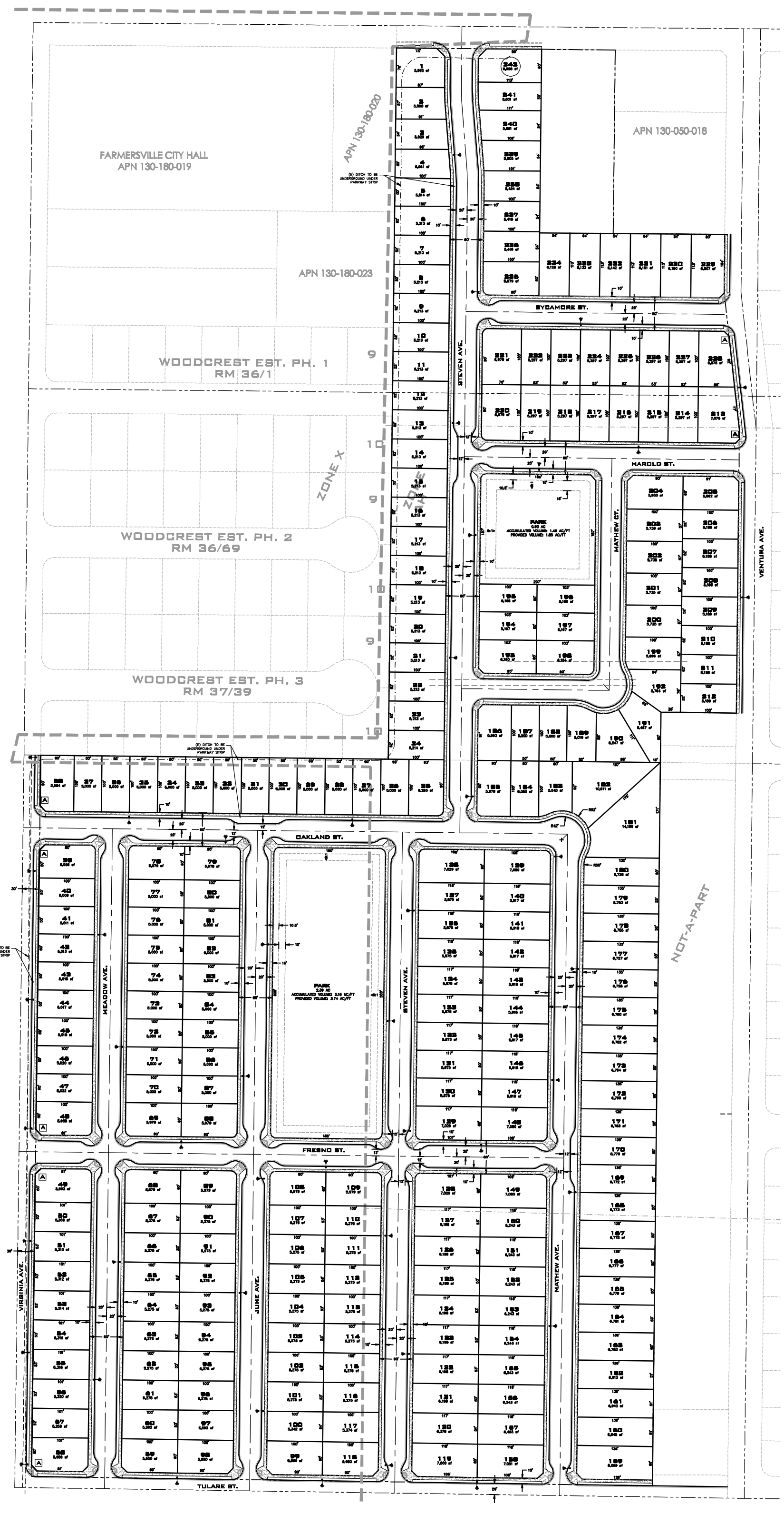
(1) THAT PORTION THEREOF INCLUDED WITHIN THE LINES OF TULARE STREET AS SHOWN ON THE MAP OF TRACT NO. 57, IN THE COUNTY OF TULARE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 19, PAGE 97 OF MAPS, TULARE COUNTY RECORDS.

(2) THAT PORTION THEREOF INCLUDED WITHIN THE LINES OF VENTURA AVENUE AS SHOWN OF THE MAP OF SAID TRACT NO. 57.

(3) THE WESTERLY 135 FEET OF THE EASTERLY 165 FEET OF SAID SOUTHWEST QUARTER OF THE NORTHEAST QUARTER, EXCEPTING THEREFROM THAT PORTION THEREOF LYING SOUTH OF THE SOUTH LINE OF THAT PARCEL OF LAND CONVEYED TO O.D. ROBERTS AND EVA L. ROBERTS BY DEED RECORDED MAY 10, 1955 IN BOOK 1838, PAGE 550, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 12: THENCE RUNNING NORTH 89° 42' WEST 165 FEET; THENCE NORTH 0° 04' 30" EAST 41 FEET TO A POINT WHICH POINT IS THE TRUE POINT OF BEGINNING OF THE PARCEL OF LAND TO BE DESCRIBED; THENCE CONTINUING NORTH 0° 04' 30" EAST 116.48 FEET; THENCE NORTH 89° 56' 30" EAST 135 FEET TO A POINT IN THE WEST LINE OF VENTURA STREET, AS SHOWN ON THE MAP OF TRACT NO. 57 RECORDED IN BOOK 19, PAGE 97 OF MAPS, TULARE COUNTY RECORDS; THENCE SOUTH 0° 04' 30" WEST ALONG THE WEST LINE OF SAID VENTURA STREET 117.32 FEET TO A POINT IN THE NORTH LINE OF TULARE STREET AS SHOWN ON SAID MAP OF TRACT NO. 57; THENCE NORTH 89°42' WEST 135 FEET TO THE TRUE POINT OF BEGINNING.

(4) THE SOUTH 20 FEET OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 12.

EXCEPT THEREFROM THE EAST 30 FEET THEREOF.



EASEMENTS OF RECORD CANNOT BE PLOTTED:

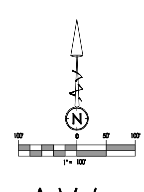
1. AN EASEMENT IN FAVOR OF SCE RECORDED IN BK 1367 OR 313
2. AN EASEMENT IN FAVOR OF SCE RECORDED IN BK 1457 OR 296

BASIS OF BEARING:

THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 12-19/25 BEARS N89° 29' 50"W PER RECORD OF SURVEY RECORDED IN BOOK 32 OF LICENSED SURVEYS AT PAGE 47 TCR

FLOOD HAZARD ZONE:

THE FOLLOWING FLOOD ZONE INFORMATION IS BASED ON OUR INTERPRETATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR COMMUNITY NUMBER 060071 DATED JUNE 16, 2009, PANEL NO. 06107C0962E. THE SUBJECT SITE IS LOCATED WITHIN ZONES A AND AH (BASE FLOOD ELEVATION UP TO 357 FT).



AW ENGINEERING
810 WEST ACEQUIA AVE.
VISALIA CA, 93291
559-713-6139 INFO@AWE-INC.COM

SHEET 1 OF 1

PROJECT TRIP GENERATION

The project trip generation volumes shown in Table 1 were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Trip rates, equations, and directional splits for ITE Land Use Code 210 (Single Family Detached Housing) were used to estimate project trips for weekday peak hour of adjacent street traffic.

Table 1
Project Trip Generation

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
210	Single-Family detached Housing	248 Dwelling Units	eq	2327	eq	26% 43	74% 127	eq	63% 147	37% 86

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project peak hour trips is shown in Table 2 and represents the movement of traffic accessing the project site by direction. The project trip distribution was developed based on site location and travel patterns anticipated for the proposed land uses.

Table 2
Project Trip Distribution

Direction	Percent
North	10
East	15
South	10
West	65

Eagle Meadows - Site Work and Internal Street Paving for the Entire Project Site (Unmitigated) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Eagle Meadows - Site Work and Internal Street Paving for the Entire Project Site (Unmitigated)
Construction Start Date	10/2/2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.292444, -119.213975
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2749
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Asphalt Surfaces	7.34	Acre	7.34	0.00	0.00	—	510	Internal streets

Other Non-Asphalt Surfaces	41.6	Acre	41.6	0.00	442,570	—	—	Total project site gross acreage: 35.81 (5.37 + 30.44 = 35.81)
Other Asphalt Surfaces	1.00	Acre	1.00	0.00	0.00	—	—	Additional acre for frontage/offsite improvements

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.11	1.34	7.96	10.9	0.01	0.39	1.47	1.86	0.36	0.16	0.52	—	1,655	1,655	0.07	0.02	0.50	1,664
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.80	4.05	39.9	36.3	0.07	1.81	9.15	11.0	1.66	4.10	5.76	—	7,371	7,371	0.29	0.17	0.05	7,427
2024	4.33	3.63	35.3	31.2	0.07	1.46	5.24	6.70	1.34	1.63	2.98	—	7,358	7,358	0.29	0.16	0.05	7,413
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.85	0.72	7.10	6.24	0.01	0.31	1.27	1.58	0.28	0.50	0.78	—	1,184	1,184	0.05	0.02	0.11	1,191
2024	0.62	0.58	4.93	4.92	0.01	0.21	0.77	0.99	0.20	0.20	0.39	—	1,026	1,026	0.04	0.02	0.13	1,033
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.16	0.13	1.30	1.14	< 0.005	0.06	0.23	0.29	0.05	0.09	0.14	—	196	196	0.01	< 0.005	0.02	197

2024	0.11	0.11	0.90	0.90	< 0.005	0.04	0.14	0.18	0.04	0.04	0.07	—	170	170	0.01	< 0.005	0.02	171

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movemen	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	3.27	2.92	< 0.005	0.15	—	0.15	0.14	—	0.14	—	435	435	0.02	< 0.005	—	437
Dust From Material Movemen	—	—	—	—	—	—	0.63	0.63	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.06	0.60	0.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	72.1	72.1	< 0.005	< 0.005	—	72.3
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.78	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	97.4	97.4	0.01	< 0.005	0.01	99.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.31	8.31	< 0.005	< 0.005	0.02	8.45
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.64	3.64	< 0.005	< 0.005	< 0.005	3.81
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Hauling	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	0.00

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.43	3.72	37.3	31.4	0.06	1.59	—	1.59	1.47	—	1.47	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.72	3.13	0.01	0.16	—	0.16	0.15	—	0.15	—	659	659	0.03	0.01	—	661
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.68	0.57	< 0.005	0.03	—	0.03	0.03	—	0.03	—	109	109	< 0.005	< 0.005	—	109
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.11	0.09	0.89	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	111	111	0.01	0.01	0.01	113
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	0.03	0.01	0.85	0.19	0.01	0.01	0.15	0.17	0.01	0.04	0.05	—	610	610	0.01	0.10	0.04	639
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.43	4.43	< 0.005	< 0.005	0.01	4.63
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.8	60.8	< 0.005	0.01	0.06	63.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.91	1.91	< 0.005	< 0.005	< 0.005	1.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.6

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.62	3.19	0.01	0.15	—	0.15	0.14	—	0.14	—	697	697	0.03	0.01	—	700
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	0.15	< 0.005	0.01	0.01	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.66	0.58	< 0.005	0.03	—	0.03	0.03	—	0.03	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	0.81	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	0.01	0.01	0.01	111
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	0.03	0.01	0.82	0.19	< 0.005	0.01	0.15	0.17	0.01	0.04	0.05	—	600	600	0.01	0.09	0.04	628

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.02	12.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.62	4.62	< 0.005	< 0.005	0.01	4.84
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.3	63.3	< 0.005	0.01	0.06	66.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.80
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.01	11.0

3.7. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.14	7.14	< 0.005	< 0.005	0.01	7.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.21	0.21	< 0.005	0.02	0.02	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.7	43.7	< 0.005	0.01	0.12	45.8
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.61	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.8	81.8	0.01	< 0.005	0.01	83.1
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.59	6.59	< 0.005	< 0.005	0.01	6.90
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.14
Hauling	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	0.00

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/2/2023	11/10/2023	5.00	30.0	—
Grading	Grading	11/11/2023	2/23/2024	5.00	75.0	—
Paving	Paving	2/24/2024	5/10/2024	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	7.70	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	6.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	2.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	7.70	LDA,LDT1,LDT2
Grading	Vendor	2.00	6.80	HHDT,MHDT
Grading	Hauling	8.33	20.0	HHDT
Grading	Onsite truck	2.00	0.50	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	2.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.50	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.0	0.00	—
Grading	2,500	2,500	225	0.00	—
Paving	0.00	0.00	0.00	0.00	49.9

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	7.34	100%
Other Non-Asphalt Surfaces	41.6	0%
Other Asphalt Surfaces	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005

2024	0.00	453	0.03	< 0.005

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Site work for the entire project site + 1 acre of offsite improvements Earliest construction start: October 2023

Eagle Meadows – Home Construction (Unmitigated) + Operations Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Eagle Meadows – Home Construction (Unmitigated) + Operations
Construction Start Date	10/2/2023
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.292444, -119.213975
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2749
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	242	Dwelling Unit	38.2	471,900	250,034	—	818	—
Other Asphalt Surfaces	7.34	Acre	7.34	0.00	47,916	—	—	—
City Park	3.32	Acre	3.32	0.00	144,619	144,619	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.25	3.12	21.4	30.0	0.04	0.94	1.50	2.43	0.86	0.25	1.12	—	5,411	5,411	0.22	0.16	4.33	5,469
2025	1.99	1.72	12.4	18.6	0.03	0.48	1.01	1.48	0.44	0.19	0.63	—	3,693	3,693	0.15	0.13	3.52	3,738
2026	2.13	57.2	12.7	20.2	0.03	0.44	1.50	1.94	0.41	0.25	0.66	—	3,955	3,955	0.16	0.14	3.65	4,004
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.18	1.86	14.2	18.5	0.03	0.61	1.01	1.61	0.56	0.19	0.75	—	3,670	3,670	0.16	0.13	0.10	3,714
2024	2.07	1.76	13.5	18.1	0.03	0.55	1.01	1.55	0.51	0.19	0.70	—	3,653	3,653	0.16	0.13	0.10	3,696
2025	1.93	1.65	12.5	17.7	0.03	0.48	1.01	1.48	0.44	0.19	0.63	—	3,633	3,633	0.16	0.13	0.09	3,675
2026	1.83	1.55	11.8	17.4	0.03	0.42	1.01	1.43	0.39	0.19	0.58	—	3,612	3,612	0.16	0.13	0.08	3,654
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.18	0.15	1.13	1.50	< 0.005	0.05	0.08	0.13	0.04	0.02	0.06	—	296	296	0.01	0.01	0.14	299

2024	1.66	1.46	10.8	14.7	0.02	0.45	0.79	1.24	0.42	0.14	0.56	—	2,883	2,883	0.12	0.10	1.18	2,917
2025	1.39	1.19	8.93	12.8	0.02	0.34	0.71	1.05	0.31	0.13	0.45	—	2,607	2,607	0.11	0.09	1.08	2,638
2026	0.69	8.92	4.33	6.47	0.01	0.15	0.43	0.58	0.14	0.08	0.22	—	1,327	1,327	0.06	0.05	0.52	1,343
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.03	0.03	0.21	0.27	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	49.0	49.0	< 0.005	< 0.005	0.02	49.6
2024	0.30	0.27	1.97	2.68	< 0.005	0.08	0.14	0.23	0.08	0.03	0.10	—	477	477	0.02	0.02	0.20	483
2025	0.25	0.22	1.63	2.33	< 0.005	0.06	0.13	0.19	0.06	0.02	0.08	—	432	432	0.02	0.01	0.18	437
2026	0.13	1.63	0.79	1.18	< 0.005	0.03	0.08	0.11	0.03	0.01	0.04	—	220	220	0.01	0.01	0.09	222

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.5	10.4	10.6	119	0.21	0.15	18.3	18.5	0.14	4.64	4.78	—	21,874	21,874	0.97	1.04	87.7	22,296
Area	1.56	12.4	2.14	14.5	0.01	0.17	—	0.17	0.17	—	0.17	0.00	2,584	2,584	0.05	0.01	—	2,587
Energy	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	5,502	5,502	0.45	0.03	—	5,522
Water	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165
Waste	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	13.3	23.0	15.0	134	0.24	0.50	18.3	18.8	0.49	4.64	5.13	151	30,040	30,192	16.7	1.12	91.1	31,033
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.0	8.98	12.6	89.6	0.19	0.15	18.3	18.5	0.14	4.64	4.78	—	19,668	19,668	1.08	1.13	2.27	20,035
Area	0.23	11.2	2.01	0.85	0.01	0.16	—	0.16	0.16	—	0.16	0.00	2,548	2,548	0.05	< 0.005	—	2,550
Energy	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	5,502	5,502	0.45	0.03	—	5,522
Water	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165

Waste	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	10.5	20.3	16.8	91.4	0.22	0.49	18.3	18.8	0.48	4.64	5.12	151	27,797	27,948	16.8	1.22	5.65	28,736
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.2	9.21	11.6	94.4	0.20	0.15	18.3	18.5	0.14	4.64	4.78	—	20,301	20,301	1.02	1.09	37.9	20,688
Area	0.71	11.7	0.52	6.94	< 0.005	0.04	—	0.04	0.04	—	0.04	0.00	590	590	0.01	< 0.005	—	591
Energy	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	5,502	5,502	0.45	0.03	—	5,522
Water	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165
Waste	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	11.2	21.0	14.4	102	0.22	0.37	18.3	18.7	0.36	4.64	5.00	151	26,473	26,625	16.7	1.16	41.2	27,430
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.87	1.68	2.12	17.2	0.04	0.03	3.34	3.37	0.03	0.85	0.87	—	3,361	3,361	0.17	0.18	6.27	3,425
Area	0.13	2.13	0.09	1.27	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	97.8	97.8	< 0.005	< 0.005	—	97.9
Energy	0.05	0.02	0.41	0.17	< 0.005	0.03	—	0.03	0.03	—	0.03	—	911	911	0.07	< 0.005	—	914
Water	—	—	—	—	—	—	—	—	—	—	—	3.27	13.2	16.5	0.34	0.01	—	27.3
Waste	—	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	—	76.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Total	2.05	3.84	2.62	18.7	0.04	0.07	3.34	3.41	0.07	0.85	0.91	25.1	4,383	4,408	2.76	0.19	6.83	4,541

3. Construction Emissions Details

3.1. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.63	1.37	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.56	5.56	< 0.005	< 0.005	< 0.005	5.84
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	1.15	< 0.005	0.05	—	0.05	0.04	—	0.04	—	209	209	0.01	< 0.005	—	210
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.6	34.6	< 0.005	< 0.005	—	34.7
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.47	0.39	3.88	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	485	485	0.04	0.02	0.06	493
Vendor	0.04	0.02	0.91	0.33	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	574	574	0.01	0.09	0.04	600
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.04	0.03	0.32	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.4	40.4	< 0.005	< 0.005	0.08	41.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.0	46.0	< 0.005	0.01	0.05	48.2
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.68	6.68	< 0.005	< 0.005	0.01	6.80
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	0.01	7.97
Hauling	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	0.00

3.3. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.54	—	0.54	0.50	—	0.50	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.54	—	0.54	0.50	—	0.50	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.46	5.46	< 0.005	< 0.005	< 0.005	5.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.73	10.2	0.02	0.39	—	0.39	0.36	—	0.36	—	1,866	1,866	0.08	0.02	—	1,873

Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	3.88	3.88	< 0.005	< 0.005	< 0.005	4.07
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.59	1.86	< 0.005	0.07	—	0.07	0.07	—	0.07	—	309	309	0.01	< 0.005	—	310
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.29	4.53	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	537	537	0.03	0.02	2.20	547
Vendor	0.04	0.03	0.82	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	1.51	593
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.47	0.43	0.36	3.55	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	475	475	0.04	0.02	0.06	483
Vendor	0.04	0.02	0.87	0.31	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	0.04	592
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.23	2.63	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	353	353	0.03	0.02	0.68	359
Vendor	0.03	0.02	0.61	0.22	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	405	405	0.01	0.06	0.46	424
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	58.4	58.4	< 0.005	< 0.005	0.11	59.5
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	67.1	67.1	< 0.005	0.01	0.08	70.2
Hauling	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	0.00

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.47	—	0.47	0.43	—	0.43	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.28	5.28	< 0.005	< 0.005	< 0.005	5.55
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.47	—	0.47	0.43	—	0.43	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.87	8.11	10.1	0.02	0.34	—	0.34	0.31	—	0.31	—	1,861	1,861	0.08	0.02	—	1,868
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	—	3.80	3.80	< 0.005	< 0.005	< 0.005	3.99
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.48	1.85	< 0.005	0.06	—	0.06	0.06	—	0.06	—	308	308	0.01	< 0.005	—	309
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.66
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.47	0.27	4.15	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	526	526	0.03	0.02	2.01	535
Vendor	0.04	0.02	0.78	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	1.50	582
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.41	0.32	3.26	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	465	465	0.04	0.02	0.05	473
Vendor	0.04	0.02	0.83	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	0.04	581
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.30	0.21	2.40	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.03	0.02	0.62	351
Vendor	0.03	0.01	0.58	0.21	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	397	397	0.01	0.06	0.46	415
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.44	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.0	57.0	< 0.005	< 0.005	0.10	58.1
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	65.8	65.8	< 0.005	0.01	0.08	68.8
Hauling	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	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.41	—	0.41	0.38	—	0.38	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.41	—	0.41	0.38	—	0.38	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.27	5.27	< 0.005	< 0.005	< 0.005	5.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.41	3.79	4.99	0.01	0.15	—	0.15	0.13	—	0.13	—	923	923	0.04	0.01	—	926
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.94
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.69	0.91	< 0.005	0.03	—	0.03	0.02	—	0.02	—	153	153	0.01	< 0.005	—	153
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.44	0.23	3.83	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	515	515	0.03	0.02	1.83	524
Vendor	0.03	0.02	0.75	0.27	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	1.34	572
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.37	0.30	3.00	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	455	455	0.04	0.02	0.05	463

Vendor	0.03	0.02	0.80	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	0.03	571
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.09	1.10	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	167	167	0.01	0.01	0.28	170
Vendor	0.01	0.01	0.28	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.21	202
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.7	27.7	< 0.005	< 0.005	0.05	28.2
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.0	32.0	< 0.005	< 0.005	0.03	33.5
Hauling	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	0.00

3.9. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	87.4	87.4	< 0.005	0.01	0.23	91.7
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.28
Hauling	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	0.00

3.11. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Architectural Coatings	—	8.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.33	3.33	< 0.005	< 0.005	—	3.34
Architectural Coatings	—	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.77	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	103	103	0.01	< 0.005	0.37	105
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.2	42.2	< 0.005	0.01	0.10	44.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.5
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.66
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	11.5	10.4	10.6	119	0.21	0.15	18.3	18.5	0.14	4.64	4.78	—	21,874	21,874	0.97	1.04	87.7	22,296
Other Asphalt Surfaces	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	0.00
City Park	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	0.00
Total	11.5	10.4	10.6	119	0.21	0.15	18.3	18.5	0.14	4.64	4.78	—	21,874	21,874	0.97	1.04	87.7	22,296
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	10.0	8.98	12.6	89.6	0.19	0.15	18.3	18.5	0.14	4.64	4.78	—	19,668	19,668	1.08	1.13	2.27	20,035
Other Asphalt Surfaces	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	0.00
City Park	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	0.00
Total	10.0	8.98	12.6	89.6	0.19	0.15	18.3	18.5	0.14	4.64	4.78	—	19,668	19,668	1.08	1.13	2.27	20,035
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.87	1.68	2.12	17.2	0.04	0.03	3.34	3.37	0.03	0.85	0.87	—	3,361	3,361	0.17	0.18	6.27	3,425
Other Asphalt Surfaces	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	0.00
City Park	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	0.00
Total	1.87	1.68	2.12	17.2	0.04	0.03	3.34	3.37	0.03	0.85	0.87	—	3,361	3,361	0.17	0.18	6.27	3,425

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,670	2,670	0.19	0.02	—	2,682
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,670	2,670	0.19	0.02	—	2,682
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,670	2,670	0.19	0.02	—	2,682
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,670	2,670	0.19	0.02	—	2,682
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	442	442	0.03	< 0.005	—	444
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	442	442	0.03	< 0.005	—	444

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,832	2,832	0.25	0.01	—	2,840
Other Asphalt Surfaces	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
City Park	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
Total	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,832	2,832	0.25	0.01	—	2,840
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,832	2,832	0.25	0.01	—	2,840
Other Asphalt Surfaces	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
City Park	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
Total	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,832	2,832	0.25	0.01	—	2,840
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.05	0.02	0.41	0.17	< 0.005	0.03	—	0.03	0.03	—	0.03	—	469	469	0.04	< 0.005	—	470

Other Asphalt Surfaces	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
City Park	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
Total	0.05	0.02	0.41	0.17	< 0.005	0.03	—	0.03	0.03	—	0.03	—	469	469	0.04	< 0.005	—	470

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.23	0.12	2.01	0.85	0.01	0.16	—	0.16	0.16	—	0.16	0.00	2,548	2,548	0.05	< 0.005	—	2,550
Consumer Products	—	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.32	1.26	0.14	13.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.7	36.7	< 0.005	< 0.005	—	36.8
Total	1.56	12.4	2.14	14.5	0.01	0.17	—	0.17	0.17	—	0.17	0.00	2,584	2,584	0.05	0.01	—	2,587
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.23	0.12	2.01	0.85	0.01	0.16	—	0.16	0.16	—	0.16	0.00	2,548	2,548	0.05	< 0.005	—	2,550
Consumer Products	—	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	—	0.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.23	11.2	2.01	0.85	0.01	0.16	—	0.16	0.16	—	0.16	0.00	2,548	2,548	0.05	< 0.005	—	2,550
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	< 0.005	0.08	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	94.8	94.8	< 0.005	< 0.005	—	94.9
Consumer Products	—	1.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.12	0.11	0.01	1.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.00	3.00	< 0.005	< 0.005	—	3.01
Total	0.13	2.13	0.09	1.27	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	97.8	97.8	< 0.005	< 0.005	—	97.9

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	19.7	63.6	83.4	2.03	0.05	—	149
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	2.08	2.08	< 0.005	< 0.005	—	2.09
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	13.9	13.9	< 0.005	< 0.005	—	14.0

Total	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	19.7	63.6	83.4	2.03	0.05	—	149
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	2.08	2.08	< 0.005	< 0.005	—	2.09
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	13.9	13.9	< 0.005	< 0.005	—	14.0
Total	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.27	10.5	13.8	0.34	0.01	—	24.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.34	0.34	< 0.005	< 0.005	—	0.35
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	2.31	2.31	< 0.005	< 0.005	—	2.32
Total	—	—	—	—	—	—	—	—	—	—	—	3.27	13.2	16.5	0.34	0.01	—	27.3

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	460
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	0.02	0.00	—	0.54
Total	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	460
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	0.02	0.00	—	0.54
Total	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	—	76.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.03	0.00	0.03	< 0.005	0.00	—	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	—	76.3

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description

Building Construction	Building Construction	11/21/2023	6/30/2026	5.00	681	Home construction to start after site preparation and some grading
Paving	Paving	5/11/2024	7/26/2024	5.00	55.0	—
Architectural Coating	Architectural Coating	4/15/2026	6/30/2026	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	1.00	7.61	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.69	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.69	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.61	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.69	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	87.1	7.70	LDA,LDT1,LDT2
Building Construction	Vendor	25.9	6.80	HHDT,MHDT

Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	2.00	0.25	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	4.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.25	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.4	7.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	6.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	2.00	0.25	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	955,598	318,533	0.00	0.00	19,184

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Paving	0.00	0.00	0.00	0.00	10.0

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	2.67	0%
Other Asphalt Surfaces	7.34	100%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005
2024	0.00	453	0.03	< 0.005
2025	0.00	453	0.03	< 0.005
2026	0.00	453	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Single Family Housing	2,327	2,327	2,327	849,270	25,997	25,997	25,997	9,488,887
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	121
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	121
Conventional Wood Stoves	0
Catalytic Wood Stoves	12
Non-Catalytic Wood Stoves	12
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
955597.5	318,533	0.00	0.00	19,184

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	2,150,524	453	0.0330	0.0040	8,835,662
Other Asphalt Surfaces	0.00	453	0.0330	0.0040	0.00
City Park	0.00	453	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	10,300,161	4,410,385
Other Asphalt Surfaces	0.00	691,524
City Park	0.00	4,638,099

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	244	—

Other Asphalt Surfaces	0.00	—
City Park	0.29	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	The project includes the development of 242 single-family residential units and two parks (3.32 total acres) on a 48.9-acre site.

Construction: Construction Phases	Vertical home construction (site preparation, grading, and paving for internal streets included in a separate run). Adjusted schedule based on applicant-provided construction schedule: October 2023 (site preparation/grading) to June 2026 (end home construction)
Construction: Off-Road Equipment	Adjusted construction equipment usage to match CalEEMod default total building construction HP hours.
Operations: Vehicle Data	Project-specific trip generation, consistent with the traffic analysis (2,327 daily trips)
Operations: Fleet Mix	SJVAPCD-approved residential fleet mix for the 2024 operational year applied to single-family homes.
Operations: Hearths	SJVAPCD Rule 4901 Woodburning No woodburning fireplaces or wood stoves

Site Work and Internal Street Paving for the Entire Project Site (Mitigated - Tier 4 Interim) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Site Work and Internal Street Paving for the Entire Project Site (Mitigated - Tier 4 Interim)
Construction Start Date	10/2/2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.292444, -119.213975
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2749
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Asphalt Surfaces	7.34	Acre	7.34	0.00	0.00	—	510	Internal streets

Other Non-Asphalt Surfaces	41.6	Acre	41.6	0.00	442,570	—	—	Total project site gross acreage: 35.81 (5.37 + 30.44 = 35.81)
Other Asphalt Surfaces	1.00	Acre	1.00	0.00	0.00	—	—	Additional acre for frontage/offsite improvements

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.11	1.34	7.96	10.9	0.01	0.39	1.47	1.86	0.36	0.16	0.52	—	1,655	1,655	0.07	0.02	0.50	1,664
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.80	4.05	39.9	36.3	0.07	1.81	9.15	11.0	1.66	4.10	5.76	—	7,371	7,371	0.29	0.17	0.05	7,427
2024	4.33	3.63	35.3	31.2	0.07	1.46	5.24	6.70	1.34	1.63	2.98	—	7,358	7,358	0.29	0.16	0.05	7,413
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.85	0.72	7.10	6.24	0.01	0.31	1.27	1.58	0.28	0.50	0.78	—	1,184	1,184	0.05	0.02	0.11	1,191
2024	0.62	0.58	4.93	4.92	0.01	0.21	0.77	0.99	0.20	0.20	0.39	—	1,026	1,026	0.04	0.02	0.13	1,033

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.16	0.13	1.30	1.14	< 0.005	0.06	0.23	0.29	0.05	0.09	0.14	—	196	196	0.01	< 0.005	0.02	197
2024	0.11	0.11	0.90	0.90	< 0.005	0.04	0.14	0.18	0.04	0.04	0.07	—	170	170	0.01	< 0.005	0.02	171

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.64	0.97	7.00	11.5	0.01	0.12	1.47	1.58	0.11	0.16	0.27	—	1,655	1,655	0.07	0.02	0.50	1,664
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.16	1.10	20.0	36.5	0.07	0.20	9.15	9.25	0.19	4.10	4.20	—	7,371	7,371	0.29	0.17	0.05	7,427
2024	1.14	1.07	19.9	36.4	0.07	0.19	5.24	5.43	0.18	1.63	1.82	—	7,358	7,358	0.29	0.16	0.05	7,413
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.18	0.17	3.22	6.05	0.01	0.03	1.27	1.30	0.03	0.50	0.53	—	1,184	1,184	0.05	0.02	0.11	1,191
2024	0.22	0.26	3.16	5.56	0.01	0.04	0.77	0.81	0.04	0.20	0.23	—	1,026	1,026	0.04	0.02	0.13	1,033
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.03	0.03	0.59	1.10	< 0.005	0.01	0.23	0.24	0.01	0.09	0.10	—	196	196	0.01	< 0.005	0.02	197
2024	0.04	0.05	0.58	1.01	< 0.005	0.01	0.14	0.15	0.01	0.04	0.04	—	170	170	0.01	< 0.005	0.02	171

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	3.27	2.92	< 0.005	0.15	—	0.15	0.14	—	0.14	—	435	435	0.02	< 0.005	—	437
Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.60	0.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	72.1	72.1	< 0.005	< 0.005	—	72.3
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.78	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	97.4	97.4	0.01	< 0.005	0.01	99.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.31	8.31	< 0.005	< 0.005	0.02	8.45
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.64	3.64	< 0.005	< 0.005	< 0.005	3.81
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Hauling	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	0.00

3.2. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.64	14.7	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	1.21	2.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	435	435	0.02	< 0.005	—	437
Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.22	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	72.1	72.1	< 0.005	< 0.005	—	72.3
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.78	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	97.4	97.4	0.01	< 0.005	0.01	99.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	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	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.31	8.31	< 0.005	< 0.005	0.02	8.45
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.64	3.64	< 0.005	< 0.005	< 0.005	3.81
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Hauling	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	0.00

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.43	3.72	37.3	31.4	0.06	1.59	—	1.59	1.47	—	1.47	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.72	3.13	0.01	0.16	—	0.16	0.15	—	0.15	—	659	659	0.03	0.01	—	661

Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.68	0.57	< 0.005	0.03	—	0.03	0.03	—	0.03	—	109	109	< 0.005	< 0.005	—	109
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.11	0.09	0.89	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	111	111	0.01	0.01	0.01	113
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	0.03	0.01	0.85	0.19	0.01	0.01	0.15	0.17	0.01	0.04	0.05	—	610	610	0.01	0.10	0.04	639
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.43	4.43	< 0.005	< 0.005	0.01	4.63
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.8	60.8	< 0.005	0.01	0.06	63.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.91	1.91	< 0.005	< 0.005	< 0.005	1.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77

Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.6

3.4. Grading (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02	0.97	19.0	35.4	0.06	0.19	—	0.19	0.18	—	0.18	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	1.89	3.53	0.01	0.02	—	0.02	0.02	—	0.02	—	659	659	0.03	0.01	—	661
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.35	0.64	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	109	109	< 0.005	< 0.005	—	109

Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.11	0.09	0.89	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	111	111	0.01	0.01	0.01	113
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	0.03	0.01	0.85	0.19	0.01	0.01	0.15	0.17	0.01	0.04	0.05	—	610	610	0.01	0.10	0.04	639
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.43	4.43	< 0.005	< 0.005	0.01	4.63
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.8	60.8	< 0.005	0.01	0.06	63.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.91	1.91	< 0.005	< 0.005	< 0.005	1.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.6

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.62	3.19	0.01	0.15	—	0.15	0.14	—	0.14	—	697	697	0.03	0.01	—	700
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	0.15	< 0.005	0.01	0.01	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.66	0.58	< 0.005	0.03	—	0.03	0.03	—	0.03	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	0.81	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	0.01	0.01	0.01	111
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	0.03	0.01	0.82	0.19	< 0.005	0.01	0.15	0.17	0.01	0.04	0.05	—	600	600	0.01	0.09	0.04	628
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.02	12.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.62	4.62	< 0.005	< 0.005	0.01	4.84
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.3	63.3	< 0.005	0.01	0.06	66.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.80
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.01	11.0

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.00	0.96	18.9	35.4	0.06	0.18	—	0.18	0.17	—	0.17	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	2.00	3.74	0.01	0.02	—	0.02	0.02	—	0.02	—	697	697	0.03	0.01	—	700
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	0.15	< 0.005	0.01	0.01	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.37	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	0.81	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	0.01	0.01	0.01	111
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	0.03	0.01	0.82	0.19	< 0.005	0.01	0.15	0.17	0.01	0.04	0.05	—	600	600	0.01	0.09	0.04	628

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.02	12.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.62	4.62	< 0.005	< 0.005	0.01	4.84
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.3	63.3	< 0.005	0.01	0.06	66.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.80
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.01	11.0

3.7. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.14	7.14	< 0.005	< 0.005	0.01	7.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.21	0.21	< 0.005	0.02	0.02	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.7	43.7	< 0.005	0.01	0.12	45.8
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.61	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.8	81.8	0.01	< 0.005	0.01	83.1
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.59	6.59	< 0.005	< 0.005	0.01	6.90
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.14
Hauling	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	0.00

3.8. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.48	6.85	10.6	0.01	0.12	—	0.12	0.11	—	0.11	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.14	7.14	< 0.005	< 0.005	0.01	7.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.48	6.85	10.6	0.01	0.12	—	0.12	0.11	—	0.11	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	1.03	1.60	< 0.005	0.02	—	0.02	0.02	—	0.02	—	228	228	0.01	< 0.005	—	229
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.21	0.21	< 0.005	0.02	0.02	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.19	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.7	43.7	< 0.005	0.01	0.12	45.8
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.61	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.8	81.8	0.01	< 0.005	0.01	83.1
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.59	6.59	< 0.005	< 0.005	0.01	6.90
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.14
Hauling	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	0.00

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/2/2023	11/10/2023	5.00	30.0	—
Grading	Grading	11/11/2023	2/23/2024	5.00	75.0	—
Paving	Paving	2/24/2024	5/10/2024	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 4 Interim	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	7.70	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	6.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	2.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	7.70	LDA,LDT1,LDT2
Grading	Vendor	2.00	6.80	HHDT,MHDT
Grading	Hauling	8.33	20.0	HHDT
Grading	Onsite truck	2.00	0.50	HHDT
Paving	—	—	—	—

Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	2.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.50	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	7.70	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	6.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	2.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	7.70	LDA,LDT1,LDT2
Grading	Vendor	2.00	6.80	HHDT,MHDT
Grading	Hauling	8.33	20.0	HHDT
Grading	Onsite truck	2.00	0.50	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	2.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.50	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.0	0.00	—
Grading	2,500	2,500	225	0.00	—
Paving	0.00	0.00	0.00	0.00	49.9

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	7.34	100%
Other Non-Asphalt Surfaces	41.6	0%
Other Asphalt Surfaces	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005

2024	0.00	453	0.03	< 0.005

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Site work for the entire project site + 1 acre of offsite improvements Earliest construction start: October 2023

Home Construction (Mitigated - Tier 4 Interim) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Home Construction (Mitigated - Tier 4 Interim)
Construction Start Date	10/2/2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.292444, -119.213975
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2749
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	242	Dwelling Unit	38.2	471,900	250,034	—	818	—

Other Asphalt Surfaces	7.34	Acre	7.34	0.00	47,916	—	—	—
City Park	3.32	Acre	3.32	0.00	144,619	144,619	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.25	3.12	21.4	30.0	0.04	0.94	1.50	2.43	0.86	0.25	1.12	—	5,411	5,411	0.22	0.16	4.33	5,469
2025	1.99	1.72	12.4	18.6	0.03	0.48	1.01	1.48	0.44	0.19	0.63	—	3,693	3,693	0.15	0.13	3.52	3,738
2026	2.13	57.2	12.7	20.2	0.03	0.44	1.50	1.94	0.41	0.25	0.66	—	3,955	3,955	0.16	0.14	3.65	4,004
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.18	1.86	14.2	18.5	0.03	0.61	1.01	1.61	0.56	0.19	0.75	—	3,670	3,670	0.16	0.13	0.10	3,714
2024	2.07	1.76	13.5	18.1	0.03	0.55	1.01	1.55	0.51	0.19	0.70	—	3,653	3,653	0.16	0.13	0.10	3,696
2025	1.93	1.65	12.5	17.7	0.03	0.48	1.01	1.48	0.44	0.19	0.63	—	3,633	3,633	0.16	0.13	0.09	3,675
2026	1.83	1.55	11.8	17.4	0.03	0.42	1.01	1.43	0.39	0.19	0.58	—	3,612	3,612	0.16	0.13	0.08	3,654
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.18	0.15	1.13	1.50	< 0.005	0.05	0.08	0.13	0.04	0.02	0.06	—	296	296	0.01	0.01	0.14	299

2024	1.66	1.46	10.8	14.7	0.02	0.45	0.79	1.24	0.42	0.14	0.56	—	2,883	2,883	0.12	0.10	1.18	2,917
2025	1.39	1.19	8.93	12.8	0.02	0.34	0.71	1.05	0.31	0.13	0.45	—	2,607	2,607	0.11	0.09	1.08	2,638
2026	0.69	8.92	4.33	6.47	0.01	0.15	0.43	0.58	0.14	0.08	0.22	—	1,327	1,327	0.06	0.05	0.52	1,343
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.03	0.03	0.21	0.27	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	49.0	49.0	< 0.005	< 0.005	0.02	49.6
2024	0.30	0.27	1.97	2.68	< 0.005	0.08	0.14	0.23	0.08	0.03	0.10	—	477	477	0.02	0.02	0.20	483
2025	0.25	0.22	1.63	2.33	< 0.005	0.06	0.13	0.19	0.06	0.02	0.08	—	432	432	0.02	0.01	0.18	437
2026	0.13	1.63	0.79	1.18	< 0.005	0.03	0.08	0.11	0.03	0.01	0.04	—	220	220	0.01	0.01	0.09	222

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.91	2.08	18.3	32.6	0.04	0.26	1.50	1.75	0.24	0.25	0.50	—	5,411	5,411	0.22	0.16	4.33	5,469
2025	1.21	1.10	11.1	20.7	0.03	0.13	1.01	1.14	0.12	0.19	0.31	—	3,693	3,693	0.15	0.13	3.52	3,738
2026	1.40	56.6	12.0	22.3	0.03	0.15	1.50	1.64	0.14	0.25	0.39	—	3,955	3,955	0.16	0.14	3.65	4,004
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.26	1.14	11.4	20.5	0.03	0.15	1.01	1.15	0.14	0.19	0.33	—	3,670	3,670	0.16	0.13	0.10	3,714
2024	1.20	1.08	11.3	20.2	0.03	0.14	1.01	1.14	0.13	0.19	0.32	—	3,653	3,653	0.16	0.13	0.10	3,696
2025	1.15	1.04	11.2	19.9	0.03	0.13	1.01	1.14	0.12	0.19	0.31	—	3,633	3,633	0.16	0.13	0.09	3,675
2026	1.10	0.99	11.1	19.6	0.03	0.12	1.01	1.13	0.12	0.19	0.31	—	3,612	3,612	0.16	0.13	0.08	3,654
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.10	0.09	0.91	1.66	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	296	296	0.01	0.01	0.14	299
2024	0.97	0.92	9.14	16.2	0.02	0.12	0.79	0.90	0.11	0.14	0.25	—	2,883	2,883	0.12	0.10	1.18	2,917

2025	0.82	0.75	7.98	14.3	0.02	0.09	0.71	0.81	0.09	0.13	0.22	—	2,607	2,607	0.11	0.09	1.08	2,638
2026	0.43	8.72	4.06	7.24	0.01	0.05	0.43	0.47	0.04	0.08	0.12	—	1,327	1,327	0.06	0.05	0.52	1,343
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.02	0.02	0.17	0.30	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	49.0	49.0	< 0.005	< 0.005	0.02	49.6
2024	0.18	0.17	1.67	2.96	< 0.005	0.02	0.14	0.17	0.02	0.03	0.05	—	477	477	0.02	0.02	0.20	483
2025	0.15	0.14	1.46	2.60	< 0.005	0.02	0.13	0.15	0.02	0.02	0.04	—	432	432	0.02	0.01	0.18	437
2026	0.08	1.59	0.74	1.32	< 0.005	0.01	0.08	0.09	0.01	0.01	0.02	—	220	220	0.01	0.01	0.09	222

3. Construction Emissions Details

3.1. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.63	1.37	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.56	5.56	< 0.005	< 0.005	< 0.005	5.84
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	1.15	< 0.005	0.05	—	0.05	0.04	—	0.04	—	209	209	0.01	< 0.005	—	210
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.6	34.6	< 0.005	< 0.005	—	34.7
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.47	0.39	3.88	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	485	485	0.04	0.02	0.06	493
Vendor	0.04	0.02	0.91	0.33	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	574	574	0.01	0.09	0.04	600
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.32	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.4	40.4	< 0.005	< 0.005	0.08	41.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.0	46.0	< 0.005	0.01	0.05	48.2
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.68	6.68	< 0.005	< 0.005	0.01	6.80
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	0.01	7.97
Hauling	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	0.00

3.2. Building Construction (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.65	10.1	16.3	0.03	0.14	—	0.14	0.13	—	0.13	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.56	5.56	< 0.005	< 0.005	< 0.005	5.84
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.81	1.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.01	< 0.005	—	210
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.15	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34.6	34.6	< 0.005	< 0.005	—	34.7
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.47	0.39	3.88	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	485	485	0.04	0.02	0.06	493
Vendor	0.04	0.02	0.91	0.33	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	574	574	0.01	0.09	0.04	600
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.04	0.03	0.32	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.4	40.4	< 0.005	< 0.005	0.08	41.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.0	46.0	< 0.005	0.01	0.05	48.2
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.68	6.68	< 0.005	< 0.005	0.01	6.80
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	0.01	7.97
Hauling	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	0.00

3.3. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.54	—	0.54	0.50	—	0.50	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.54	—	0.54	0.50	—	0.50	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.46	5.46	< 0.005	< 0.005	< 0.005	5.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.73	10.2	0.02	0.39	—	0.39	0.36	—	0.36	—	1,866	1,866	0.08	0.02	—	1,873

Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	3.88	3.88	< 0.005	< 0.005	< 0.005	4.07
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.59	1.86	< 0.005	0.07	—	0.07	0.07	—	0.07	—	309	309	0.01	< 0.005	—	310
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.29	4.53	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	537	537	0.03	0.02	2.20	547
Vendor	0.04	0.03	0.82	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	1.51	593
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.47	0.43	0.36	3.55	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	475	475	0.04	0.02	0.06	483
Vendor	0.04	0.02	0.87	0.31	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	0.04	592
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.23	2.63	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	353	353	0.03	0.02	0.68	359
Vendor	0.03	0.02	0.61	0.22	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	405	405	0.01	0.06	0.46	424
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	58.4	58.4	< 0.005	< 0.005	0.11	59.5
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	67.1	67.1	< 0.005	0.01	0.08	70.2
Hauling	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	0.00

3.4. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.63	10.1	16.3	0.03	0.13	—	0.13	0.12	—	0.12	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.63	10.1	16.3	0.03	0.13	—	0.13	0.12	—	0.12	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.46	5.46	< 0.005	< 0.005	< 0.005	5.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.45	7.21	11.7	0.02	0.09	—	0.09	0.09	—	0.09	—	1,866	1,866	0.08	0.02	—	1,873
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	3.88	3.88	< 0.005	< 0.005	< 0.005	4.07
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	1.32	2.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	309	309	0.01	< 0.005	—	310
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.29	4.53	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	537	537	0.03	0.02	2.20	547
Vendor	0.04	0.03	0.82	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	1.51	593
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.47	0.43	0.36	3.55	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	475	475	0.04	0.02	0.06	483
Vendor	0.04	0.02	0.87	0.31	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	0.04	592
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.23	2.63	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	353	353	0.03	0.02	0.68	359
Vendor	0.03	0.02	0.61	0.22	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	405	405	0.01	0.06	0.46	424
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	58.4	58.4	< 0.005	< 0.005	0.11	59.5
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	67.1	67.1	< 0.005	0.01	0.08	70.2
Hauling	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	0.00

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.47	—	0.47	0.43	—	0.43	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.28	5.28	< 0.005	< 0.005	< 0.005	5.55
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.47	—	0.47	0.43	—	0.43	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.87	8.11	10.1	0.02	0.34	—	0.34	0.31	—	0.31	—	1,861	1,861	0.08	0.02	—	1,868
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	—	3.80	3.80	< 0.005	< 0.005	< 0.005	3.99
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.48	1.85	< 0.005	0.06	—	0.06	0.06	—	0.06	—	308	308	0.01	< 0.005	—	309
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.66
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.47	0.27	4.15	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	526	526	0.03	0.02	2.01	535
Vendor	0.04	0.02	0.78	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	1.50	582
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.41	0.32	3.26	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	465	465	0.04	0.02	0.05	473

Vendor	0.04	0.02	0.83	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	0.04	581
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.30	0.21	2.40	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.03	0.02	0.62	351
Vendor	0.03	0.01	0.58	0.21	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	397	397	0.01	0.06	0.46	415
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.44	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.0	57.0	< 0.005	< 0.005	0.10	58.1
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	65.8	65.8	< 0.005	0.01	0.08	68.8
Hauling	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	0.00

3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	0.61	10.0	16.3	0.03	0.12	—	0.12	0.12	—	0.12	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.28	5.28	< 0.005	< 0.005	< 0.005	5.55
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	0.61	10.0	16.3	0.03	0.12	—	0.12	0.12	—	0.12	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.44	7.15	11.6	0.02	0.09	—	0.09	0.08	—	0.08	—	1,861	1,861	0.08	0.02	—	1,868
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	—	3.80	3.80	< 0.005	< 0.005	< 0.005	3.99
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	1.31	2.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	308	308	0.01	< 0.005	—	309
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.66
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.47	0.27	4.15	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	526	526	0.03	0.02	2.01	535
Vendor	0.04	0.02	0.78	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	1.50	582
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.41	0.32	3.26	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	465	465	0.04	0.02	0.05	473
Vendor	0.04	0.02	0.83	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	0.04	581
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.30	0.21	2.40	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.03	0.02	0.62	351
Vendor	0.03	0.01	0.58	0.21	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	397	397	0.01	0.06	0.46	415
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.44	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.0	57.0	< 0.005	< 0.005	0.10	58.1

Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	65.8	65.8	< 0.005	0.01	0.08	68.8
Hauling	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	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.41	—	0.41	0.38	—	0.38	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.41	—	0.41	0.38	—	0.38	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.27	5.27	< 0.005	< 0.005	< 0.005	5.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.41	3.79	4.99	0.01	0.15	—	0.15	0.13	—	0.13	—	923	923	0.04	0.01	—	926
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.94
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.69	0.91	< 0.005	0.03	—	0.03	0.02	—	0.02	—	153	153	0.01	< 0.005	—	153
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.44	0.23	3.83	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	515	515	0.03	0.02	1.83	524
Vendor	0.03	0.02	0.75	0.27	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	1.34	572
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.37	0.30	3.00	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	455	455	0.04	0.02	0.05	463
Vendor	0.03	0.02	0.80	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	0.03	571
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.09	1.10	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	167	167	0.01	0.01	0.28	170
Vendor	0.01	0.01	0.28	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.21	202
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.7	27.7	< 0.005	< 0.005	0.05	28.2
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.0	32.0	< 0.005	< 0.005	0.03	33.5
Hauling	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	0.00

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	0.66	0.60	9.97	16.3	0.03	0.12	—	0.12	0.11	—	0.11	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	0.60	9.97	16.3	0.03	0.12	—	0.12	0.11	—	0.11	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.27	5.27	< 0.005	< 0.005	< 0.005	5.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.21	3.53	5.76	0.01	0.04	—	0.04	0.04	—	0.04	—	923	923	0.04	0.01	—	926
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.94
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.64	1.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	153	153	0.01	< 0.005	—	153
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.44	0.23	3.83	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	515	515	0.03	0.02	1.83	524
Vendor	0.03	0.02	0.75	0.27	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	1.34	572
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.37	0.30	3.00	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	455	455	0.04	0.02	0.05	463

Vendor	0.03	0.02	0.80	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	0.03	571
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.09	1.10	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	167	167	0.01	0.01	0.28	170
Vendor	0.01	0.01	0.28	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.21	202
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.7	27.7	< 0.005	< 0.005	0.05	28.2
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.0	32.0	< 0.005	< 0.005	0.03	33.5
Hauling	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	0.00

3.9. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	87.4	87.4	< 0.005	0.01	0.23	91.7
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.28
Hauling	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	0.00

3.10. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.48	6.85	10.6	0.01	0.12	—	0.12	0.11	—	0.11	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	1.03	1.60	< 0.005	0.02	—	0.02	0.02	—	0.02	—	228	228	0.01	< 0.005	—	229
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.19	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	87.4	87.4	< 0.005	0.01	0.23	91.7
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.28
Hauling	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	0.00

3.11. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Architectural Coatings	—	8.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.33	3.33	< 0.005	< 0.005	—	3.34
Architectural Coatings	—	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.77	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	103	103	0.01	< 0.005	0.37	105
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.2	42.2	< 0.005	0.01	0.10	44.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.5

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.66
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	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	0.00

3.12. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Architectural Coatings	—	8.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.33	3.33	< 0.005	< 0.005	—	3.34
Architectural Coatings	—	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.77	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	103	103	0.01	< 0.005	0.37	105
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.2	42.2	< 0.005	0.01	0.10	44.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.5
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.66
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	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	0.00

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Building Construction	Building Construction	11/21/2023	6/30/2026	5.00	681	Home construction to start after site preparation and some grading
Paving	Paving	5/11/2024	7/26/2024	5.00	55.0	—
Architectural Coating	Architectural Coating	4/15/2026	6/30/2026	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	1.00	7.61	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.69	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.69	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.61	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.69	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	7.61	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.69	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.69	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	7.61	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.69	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	87.1	7.70	LDA,LDT1,LDT2
Building Construction	Vendor	25.9	6.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	2.00	0.25	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	4.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.25	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.4	7.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	6.80	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	2.00	0.25	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	87.1	7.70	LDA,LDT1,LDT2
Building Construction	Vendor	25.9	6.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	2.00	0.25	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	4.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.25	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.4	7.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	6.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	2.00	0.25	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	955,598	318,533	0.00	0.00	19,184

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Paving	0.00	0.00	0.00	0.00	10.0

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	2.67	0%
Other Asphalt Surfaces	7.34	100%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005
2024	0.00	453	0.03	< 0.005

2025	0.00	453	0.03	< 0.005
2026	0.00	453	0.03	< 0.005

8. User Changes to Default Data

Screen	Justification
Land Use	The project includes the development of 242 single-family residential units and two parks (3.32 total acres) on a 48.9-acre site.
Construction: Construction Phases	Vertical home construction (site preparation, grading, and paving for internal streets included in a separate run). Adjusted schedule based on applicant-provided construction schedule: October 2023 (site preparation/grading) to June 2026 (end home construction)
Construction: Off-Road Equipment	Adjusted construction equipment usage to match CalEEMod default total building construction HP hours.
Operations: Vehicle Data	Project-specific trip generation, consistent with the traffic analysis (2,327 daily trips)
Operations: Fleet Mix	SJVAPCD-approved residential fleet mix for the 2024 operational year applied to single-family homes.
Operations: Hearths	SJVAPCD Rule 4901 Woodburning No woodburning fireplaces or wood stoves

Site Work and Internal Street Paving for the Entire Project Site (Mitigated - Level 3 Filters) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Site Work and Internal Street Paving for the Entire Project Site (Mitigated - Level 3 Filters)
Construction Start Date	10/2/2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.292444, -119.213975
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2749
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Asphalt Surfaces	7.34	Acre	7.34	0.00	0.00	—	510	Internal streets

Other Non-Asphalt Surfaces	41.6	Acre	41.6	0.00	442,570	—	—	Total project site gross acreage: 35.81 (5.37 + 30.44 = 35.81)
Other Asphalt Surfaces	1.00	Acre	1.00	0.00	0.00	—	—	Additional acre for frontage/offsite improvements

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-6	Use Diesel Particulate Filters

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.11	1.34	7.96	10.9	0.01	0.39	1.47	1.86	0.36	0.16	0.52	—	1,655	1,655	0.07	0.02	0.50	1,664
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.80	4.05	39.9	36.3	0.07	1.81	9.15	11.0	1.66	4.10	5.76	—	7,371	7,371	0.29	0.17	0.05	7,427
2024	4.33	3.63	35.3	31.2	0.07	1.46	5.24	6.70	1.34	1.63	2.98	—	7,358	7,358	0.29	0.16	0.05	7,413
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.85	0.72	7.10	6.24	0.01	0.31	1.27	1.58	0.28	0.50	0.78	—	1,184	1,184	0.05	0.02	0.11	1,191
2024	0.62	0.58	4.93	4.92	0.01	0.21	0.77	0.99	0.20	0.20	0.39	—	1,026	1,026	0.04	0.02	0.13	1,033

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.16	0.13	1.30	1.14	< 0.005	0.06	0.23	0.29	0.05	0.09	0.14	—	196	196	0.01	< 0.005	0.02	197
2024	0.11	0.11	0.90	0.90	< 0.005	0.04	0.14	0.18	0.04	0.04	0.07	—	170	170	0.01	< 0.005	0.02	171

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.11	1.34	7.96	10.9	0.01	0.14	1.47	1.60	0.13	0.16	0.29	—	1,655	1,655	0.07	0.02	0.50	1,664
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.80	4.05	39.9	36.3	0.07	0.32	9.15	9.47	0.30	4.10	4.40	—	7,371	7,371	0.29	0.17	0.05	7,427
2024	4.33	3.63	35.3	31.2	0.07	0.28	5.24	5.52	0.26	1.63	1.89	—	7,358	7,358	0.29	0.16	0.05	7,413
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.85	0.72	7.10	6.24	0.01	0.06	1.27	1.33	0.05	0.50	0.55	—	1,184	1,184	0.05	0.02	0.11	1,191
2024	0.62	0.58	4.93	4.92	0.01	0.05	0.77	0.82	0.05	0.20	0.24	—	1,026	1,026	0.04	0.02	0.13	1,033
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.16	0.13	1.30	1.14	< 0.005	0.01	0.23	0.24	0.01	0.09	0.10	—	196	196	0.01	< 0.005	0.02	197
2024	0.11	0.11	0.90	0.90	< 0.005	0.01	0.14	0.15	0.01	0.04	0.04	—	170	170	0.01	< 0.005	0.02	171

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	3.27	2.92	< 0.005	0.15	—	0.15	0.14	—	0.14	—	435	435	0.02	< 0.005	—	437
Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.60	0.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	72.1	72.1	< 0.005	< 0.005	—	72.3
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.78	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	97.4	97.4	0.01	< 0.005	0.01	99.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.31	8.31	< 0.005	< 0.005	0.02	8.45
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.64	3.64	< 0.005	< 0.005	< 0.005	3.81
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Hauling	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	0.00

3.2. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	0.32	—	0.32	0.30	—	0.30	—	5,295	5,295	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	3.27	2.92	< 0.005	0.03	—	0.03	0.02	—	0.02	—	435	435	0.02	< 0.005	—	437
Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.60	0.53	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	72.1	72.1	< 0.005	< 0.005	—	72.3
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.78	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	97.4	97.4	0.01	< 0.005	0.01	99.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	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	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.31	8.31	< 0.005	< 0.005	0.02	8.45
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.64	3.64	< 0.005	< 0.005	< 0.005	3.81
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Hauling	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	0.00

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.43	3.72	37.3	31.4	0.06	1.59	—	1.59	1.47	—	1.47	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.72	3.13	0.01	0.16	—	0.16	0.15	—	0.15	—	659	659	0.03	0.01	—	661

Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.68	0.57	< 0.005	0.03	—	0.03	0.03	—	0.03	—	109	109	< 0.005	< 0.005	—	109
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.11	0.09	0.89	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	111	111	0.01	0.01	0.01	113
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	0.03	0.01	0.85	0.19	0.01	0.01	0.15	0.17	0.01	0.04	0.05	—	610	610	0.01	0.10	0.04	639
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.43	4.43	< 0.005	< 0.005	0.01	4.63
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.8	60.8	< 0.005	0.01	0.06	63.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.91	1.91	< 0.005	< 0.005	< 0.005	1.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77

Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.6

3.4. Grading (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.43	3.72	37.3	31.4	0.06	0.30	—	0.30	0.27	—	0.27	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.72	3.13	0.01	0.03	—	0.03	0.03	—	0.03	—	659	659	0.03	0.01	—	661
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.68	0.57	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	109	109	< 0.005	< 0.005	—	109

Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.11	0.09	0.89	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	111	111	0.01	0.01	0.01	113
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	< 0.005	46.4
Hauling	0.03	0.01	0.85	0.19	0.01	0.01	0.15	0.17	0.01	0.04	0.05	—	610	610	0.01	0.10	0.04	639
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.43	4.43	< 0.005	< 0.005	0.01	4.63
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.8	60.8	< 0.005	0.01	0.06	63.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.91	1.91	< 0.005	< 0.005	< 0.005	1.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.6

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.62	3.19	0.01	0.15	—	0.15	0.14	—	0.14	—	697	697	0.03	0.01	—	700
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	0.15	< 0.005	0.01	0.01	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.66	0.58	< 0.005	0.03	—	0.03	0.03	—	0.03	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	0.81	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	0.01	0.01	0.01	111
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	0.03	0.01	0.82	0.19	< 0.005	0.01	0.15	0.17	0.01	0.04	0.05	—	600	600	0.01	0.09	0.04	628
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.02	12.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.62	4.62	< 0.005	< 0.005	0.01	4.84
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.3	63.3	< 0.005	0.01	0.06	66.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.80
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.01	11.0

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	0.27	—	0.27	0.24	—	0.24	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.62	3.19	0.01	0.03	—	0.03	0.03	—	0.03	—	697	697	0.03	0.01	—	700
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	0.15	< 0.005	0.01	0.01	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.66	0.58	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	0.81	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	0.01	0.01	0.01	111
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	0.03	0.01	0.82	0.19	< 0.005	0.01	0.15	0.17	0.01	0.04	0.05	—	600	600	0.01	0.09	0.04	628

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.02	12.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.62	4.62	< 0.005	< 0.005	0.01	4.84
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.3	63.3	< 0.005	0.01	0.06	66.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.80
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.01	11.0

3.7. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.14	7.14	< 0.005	< 0.005	0.01	7.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.21	0.21	< 0.005	0.02	0.02	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.7	43.7	< 0.005	0.01	0.12	45.8
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.61	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.8	81.8	0.01	< 0.005	0.01	83.1
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.59	6.59	< 0.005	< 0.005	0.01	6.90
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.14
Hauling	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	0.00

3.8. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.14	—	0.14	0.13	—	0.13	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.14	7.14	< 0.005	< 0.005	0.01	7.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.14	—	0.14	0.13	—	0.13	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.02	—	0.02	0.02	—	0.02	—	228	228	0.01	< 0.005	—	229
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.21	0.21	< 0.005	0.02	0.02	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.7	43.7	< 0.005	0.01	0.12	45.8
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.61	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.8	81.8	0.01	< 0.005	0.01	83.1
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.8	43.8	< 0.005	0.01	< 0.005	45.8
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.59	6.59	< 0.005	< 0.005	0.01	6.90
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.14
Hauling	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	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/2/2023	11/10/2023	5.00	30.0	—
Grading	Grading	11/11/2023	2/23/2024	5.00	75.0	—
Paving	Paving	2/24/2024	5/10/2024	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	7.70	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	6.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	2.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	7.70	LDA,LDT1,LDT2
Grading	Vendor	2.00	6.80	HHDT,MHDT
Grading	Hauling	8.33	20.0	HHDT
Grading	Onsite truck	2.00	0.50	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	2.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.50	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	7.70	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	6.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	2.00	0.50	HHDT

Grading	—	—	—	—
Grading	Worker	20.0	7.70	LDA,LDT1,LDT2
Grading	Vendor	2.00	6.80	HHDT,MHDT
Grading	Hauling	8.33	20.0	HHDT
Grading	Onsite truck	2.00	0.50	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	2.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.50	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.0	0.00	—
Grading	2,500	2,500	225	0.00	—
Paving	0.00	0.00	0.00	0.00	49.9

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	7.34	100%
Other Non-Asphalt Surfaces	41.6	0%
Other Asphalt Surfaces	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005
2024	0.00	453	0.03	< 0.005

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Site work for the entire project site + 1 acre of offsite improvements Earliest construction start: October 2023

Home Construction (Mitigated - Level 3 Filters) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Home Construction (Mitigated - Level 3 Filters)
Construction Start Date	10/2/2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.292444, -119.213975
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2749
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	242	Dwelling Unit	38.2	471,900	250,034	—	818	—

Other Asphalt Surfaces	7.34	Acre	7.34	0.00	47,916	—	—	—	
City Park	3.32	Acre	3.32	0.00	144,619	144,619	—	—	

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-6	Use Diesel Particulate Filters

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.25	3.12	21.4	30.0	0.04	0.94	1.50	2.43	0.86	0.25	1.12	—	5,411	5,411	0.22	0.16	4.33	5,469
2025	1.99	1.72	12.4	18.6	0.03	0.48	1.01	1.48	0.44	0.19	0.63	—	3,693	3,693	0.15	0.13	3.52	3,738
2026	2.13	57.2	12.7	20.2	0.03	0.44	1.50	1.94	0.41	0.25	0.66	—	3,955	3,955	0.16	0.14	3.65	4,004
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.18	1.86	14.2	18.5	0.03	0.61	1.01	1.61	0.56	0.19	0.75	—	3,670	3,670	0.16	0.13	0.10	3,714
2024	2.07	1.76	13.5	18.1	0.03	0.55	1.01	1.55	0.51	0.19	0.70	—	3,653	3,653	0.16	0.13	0.10	3,696
2025	1.93	1.65	12.5	17.7	0.03	0.48	1.01	1.48	0.44	0.19	0.63	—	3,633	3,633	0.16	0.13	0.09	3,675
2026	1.83	1.55	11.8	17.4	0.03	0.42	1.01	1.43	0.39	0.19	0.58	—	3,612	3,612	0.16	0.13	0.08	3,654
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.18	0.15	1.13	1.50	< 0.005	0.05	0.08	0.13	0.04	0.02	0.06	—	296	296	0.01	0.01	0.14	299

2024	1.66	1.46	10.8	14.7	0.02	0.45	0.79	1.24	0.42	0.14	0.56	—	2,883	2,883	0.12	0.10	1.18	2,917
2025	1.39	1.19	8.93	12.8	0.02	0.34	0.71	1.05	0.31	0.13	0.45	—	2,607	2,607	0.11	0.09	1.08	2,638
2026	0.69	8.92	4.33	6.47	0.01	0.15	0.43	0.58	0.14	0.08	0.22	—	1,327	1,327	0.06	0.05	0.52	1,343
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.03	0.03	0.21	0.27	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	49.0	49.0	< 0.005	< 0.005	0.02	49.6
2024	0.30	0.27	1.97	2.68	< 0.005	0.08	0.14	0.23	0.08	0.03	0.10	—	477	477	0.02	0.02	0.20	483
2025	0.25	0.22	1.63	2.33	< 0.005	0.06	0.13	0.19	0.06	0.02	0.08	—	432	432	0.02	0.01	0.18	437
2026	0.13	1.63	0.79	1.18	< 0.005	0.03	0.08	0.11	0.03	0.01	0.04	—	220	220	0.01	0.01	0.09	222

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.25	3.12	21.4	30.0	0.04	0.30	1.50	1.80	0.28	0.25	0.53	—	5,411	5,411	0.22	0.16	4.33	5,469
2025	1.99	1.72	12.4	18.6	0.03	0.15	1.01	1.15	0.13	0.19	0.33	—	3,693	3,693	0.15	0.13	3.52	3,738
2026	2.13	57.2	12.7	20.2	0.03	0.15	1.50	1.65	0.14	0.25	0.40	—	3,955	3,955	0.16	0.14	3.65	4,004
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.18	1.86	14.2	18.5	0.03	0.18	1.01	1.19	0.17	0.19	0.36	—	3,670	3,670	0.16	0.13	0.10	3,714
2024	2.07	1.76	13.5	18.1	0.03	0.16	1.01	1.17	0.15	0.19	0.34	—	3,653	3,653	0.16	0.13	0.10	3,696
2025	1.93	1.65	12.5	17.7	0.03	0.15	1.01	1.15	0.13	0.19	0.33	—	3,633	3,633	0.16	0.13	0.09	3,675
2026	1.83	1.55	11.8	17.4	0.03	0.13	1.01	1.14	0.12	0.19	0.31	—	3,612	3,612	0.16	0.13	0.08	3,654
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.18	0.15	1.13	1.50	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	296	296	0.01	0.01	0.14	299
2024	1.66	1.46	10.8	14.7	0.02	0.14	0.79	0.93	0.13	0.14	0.27	—	2,883	2,883	0.12	0.10	1.18	2,917

2025	1.39	1.19	8.93	12.8	0.02	0.10	0.71	0.82	0.10	0.13	0.23	—	2,607	2,607	0.11	0.09	1.08	2,638
2026	0.69	8.92	4.33	6.47	0.01	0.05	0.43	0.48	0.05	0.08	0.12	—	1,327	1,327	0.06	0.05	0.52	1,343
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.03	0.03	0.21	0.27	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	49.0	49.0	< 0.005	< 0.005	0.02	49.6
2024	0.30	0.27	1.97	2.68	< 0.005	0.03	0.14	0.17	0.02	0.03	0.05	—	477	477	0.02	0.02	0.20	483
2025	0.25	0.22	1.63	2.33	< 0.005	0.02	0.13	0.15	0.02	0.02	0.04	—	432	432	0.02	0.01	0.18	437
2026	0.13	1.63	0.79	1.18	< 0.005	0.01	0.08	0.09	0.01	0.01	0.02	—	220	220	0.01	0.01	0.09	222

3. Construction Emissions Details

3.1. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.63	1.37	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.56	5.56	< 0.005	< 0.005	< 0.005	5.84
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	1.15	< 0.005	0.05	—	0.05	0.04	—	0.04	—	209	209	0.01	< 0.005	—	210
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.6	34.6	< 0.005	< 0.005	—	34.7
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.47	0.39	3.88	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	485	485	0.04	0.02	0.06	493
Vendor	0.04	0.02	0.91	0.33	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	574	574	0.01	0.09	0.04	600
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.32	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.4	40.4	< 0.005	< 0.005	0.08	41.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.0	46.0	< 0.005	0.01	0.05	48.2
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.68	6.68	< 0.005	< 0.005	0.01	6.80
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	0.01	7.97
Hauling	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	0.00

3.2. Building Construction (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.63	1.37	12.8	14.3	0.03	0.17	—	0.17	0.16	—	0.16	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.56	5.56	< 0.005	< 0.005	< 0.005	5.84
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	1.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.01	< 0.005	—	210
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34.6	34.6	< 0.005	< 0.005	—	34.7
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.47	0.39	3.88	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	485	485	0.04	0.02	0.06	493
Vendor	0.04	0.02	0.91	0.33	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	574	574	0.01	0.09	0.04	600
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.04	0.03	0.32	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.4	40.4	< 0.005	< 0.005	0.08	41.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.0	46.0	< 0.005	0.01	0.05	48.2
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.68	6.68	< 0.005	< 0.005	0.01	6.80
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	0.01	7.97
Hauling	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	0.00

3.3. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.54	—	0.54	0.50	—	0.50	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.54	—	0.54	0.50	—	0.50	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.46	5.46	< 0.005	< 0.005	< 0.005	5.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.73	10.2	0.02	0.39	—	0.39	0.36	—	0.36	—	1,866	1,866	0.08	0.02	—	1,873

Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	3.88	3.88	< 0.005	< 0.005	< 0.005	4.07
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.59	1.86	< 0.005	0.07	—	0.07	0.07	—	0.07	—	309	309	0.01	< 0.005	—	310
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.29	4.53	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	537	537	0.03	0.02	2.20	547
Vendor	0.04	0.03	0.82	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	1.51	593
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.47	0.43	0.36	3.55	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	475	475	0.04	0.02	0.06	483
Vendor	0.04	0.02	0.87	0.31	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	0.04	592
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.23	2.63	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	353	353	0.03	0.02	0.68	359
Vendor	0.03	0.02	0.61	0.22	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	405	405	0.01	0.06	0.46	424
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	58.4	58.4	< 0.005	< 0.005	0.11	59.5
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	67.1	67.1	< 0.005	0.01	0.08	70.2
Hauling	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	0.00

3.4. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.16	—	0.16	0.14	—	0.14	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.16	—	0.16	0.14	—	0.14	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.46	5.46	< 0.005	< 0.005	< 0.005	5.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.73	10.2	0.02	0.11	—	0.11	0.10	—	0.10	—	1,866	1,866	0.08	0.02	—	1,873
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	3.88	3.88	< 0.005	< 0.005	< 0.005	4.07
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.59	1.86	< 0.005	0.02	—	0.02	0.02	—	0.02	—	309	309	0.01	< 0.005	—	310
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.29	4.53	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	537	537	0.03	0.02	2.20	547
Vendor	0.04	0.03	0.82	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	1.51	593
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.47	0.43	0.36	3.55	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	475	475	0.04	0.02	0.06	483
Vendor	0.04	0.02	0.87	0.31	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	566	566	0.01	0.09	0.04	592
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.23	2.63	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	353	353	0.03	0.02	0.68	359
Vendor	0.03	0.02	0.61	0.22	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	405	405	0.01	0.06	0.46	424
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	58.4	58.4	< 0.005	< 0.005	0.11	59.5
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	67.1	67.1	< 0.005	0.01	0.08	70.2
Hauling	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	0.00

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.47	—	0.47	0.43	—	0.43	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.28	5.28	< 0.005	< 0.005	< 0.005	5.55
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.47	—	0.47	0.43	—	0.43	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.87	8.11	10.1	0.02	0.34	—	0.34	0.31	—	0.31	—	1,861	1,861	0.08	0.02	—	1,868
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	—	3.80	3.80	< 0.005	< 0.005	< 0.005	3.99
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.48	1.85	< 0.005	0.06	—	0.06	0.06	—	0.06	—	308	308	0.01	< 0.005	—	309
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.66
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.47	0.27	4.15	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	526	526	0.03	0.02	2.01	535
Vendor	0.04	0.02	0.78	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	1.50	582
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.41	0.32	3.26	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	465	465	0.04	0.02	0.05	473

Vendor	0.04	0.02	0.83	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	0.04	581
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.30	0.21	2.40	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.03	0.02	0.62	351
Vendor	0.03	0.01	0.58	0.21	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	397	397	0.01	0.06	0.46	415
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.44	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.0	57.0	< 0.005	< 0.005	0.10	58.1
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	65.8	65.8	< 0.005	0.01	0.08	68.8
Hauling	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	0.00

3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.14	—	0.14	0.13	—	0.13	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.28	5.28	< 0.005	< 0.005	< 0.005	5.55
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.14	—	0.14	0.13	—	0.13	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.87	8.11	10.1	0.02	0.10	—	0.10	0.09	—	0.09	—	1,861	1,861	0.08	0.02	—	1,868
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	—	3.80	3.80	< 0.005	< 0.005	< 0.005	3.99
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.48	1.85	< 0.005	0.02	—	0.02	0.02	—	0.02	—	308	308	0.01	< 0.005	—	309
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.66
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.47	0.27	4.15	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	526	526	0.03	0.02	2.01	535
Vendor	0.04	0.02	0.78	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	1.50	582
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.41	0.32	3.26	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	465	465	0.04	0.02	0.05	473
Vendor	0.04	0.02	0.83	0.30	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.01	0.08	0.04	581
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.30	0.21	2.40	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.03	0.02	0.62	351
Vendor	0.03	0.01	0.58	0.21	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	397	397	0.01	0.06	0.46	415
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.44	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.0	57.0	< 0.005	< 0.005	0.10	58.1

Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	65.8	65.8	< 0.005	0.01	0.08	68.8
Hauling	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	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.41	—	0.41	0.38	—	0.38	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.41	—	0.41	0.38	—	0.38	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.27	5.27	< 0.005	< 0.005	< 0.005	5.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.41	3.79	4.99	0.01	0.15	—	0.15	0.13	—	0.13	—	923	923	0.04	0.01	—	926
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.94
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.69	0.91	< 0.005	0.03	—	0.03	0.02	—	0.02	—	153	153	0.01	< 0.005	—	153
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.44	0.23	3.83	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	515	515	0.03	0.02	1.83	524
Vendor	0.03	0.02	0.75	0.27	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	1.34	572
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.37	0.30	3.00	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	455	455	0.04	0.02	0.05	463
Vendor	0.03	0.02	0.80	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	0.03	571
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.09	1.10	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	167	167	0.01	0.01	0.28	170
Vendor	0.01	0.01	0.28	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.21	202
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.7	27.7	< 0.005	< 0.005	0.05	28.2
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.0	32.0	< 0.005	< 0.005	0.03	33.5
Hauling	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	0.00

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.12	—	0.12	0.11	—	0.11	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.12	—	0.12	0.11	—	0.11	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.27	5.27	< 0.005	< 0.005	< 0.005	5.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.41	3.79	4.99	0.01	0.04	—	0.04	0.04	—	0.04	—	923	923	0.04	0.01	—	926
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.94
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.69	0.91	< 0.005	0.01	—	0.01	0.01	—	0.01	—	153	153	0.01	< 0.005	—	153
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.44	0.23	3.83	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	515	515	0.03	0.02	1.83	524
Vendor	0.03	0.02	0.75	0.27	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	1.34	572
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.37	0.30	3.00	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	455	455	0.04	0.02	0.05	463

Vendor	0.03	0.02	0.80	0.29	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	546	546	0.01	0.08	0.03	571
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.09	1.10	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	167	167	0.01	0.01	0.28	170
Vendor	0.01	0.01	0.28	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	193	193	< 0.005	0.03	0.21	202
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.7	27.7	< 0.005	< 0.005	0.05	28.2
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.0	32.0	< 0.005	< 0.005	0.03	33.5
Hauling	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	0.00

3.9. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	87.4	87.4	< 0.005	0.01	0.23	91.7
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.28
Hauling	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	0.00

3.10. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.14	—	0.14	0.13	—	0.13	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.02	—	0.02	0.02	—	0.02	—	228	228	0.01	< 0.005	—	229
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	92.5	92.5	0.01	< 0.005	0.38	94.2
Vendor	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	87.4	87.4	< 0.005	0.01	0.23	91.7
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.28
Hauling	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	0.00

3.11. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Architectural Coatings	—	8.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.33	3.33	< 0.005	< 0.005	—	3.34
Architectural Coatings	—	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.77	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	103	103	0.01	< 0.005	0.37	105
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.2	42.2	< 0.005	0.01	0.10	44.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.5

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.66
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	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	0.00

3.12. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Architectural Coatings	—	8.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.33	3.33	< 0.005	< 0.005	—	3.34
Architectural Coatings	—	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.77	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	103	103	0.01	< 0.005	0.37	105
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.2	42.2	< 0.005	0.01	0.10	44.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.5
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.66
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	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	0.00

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Building Construction	Building Construction	11/21/2023	6/30/2026	5.00	681	Home construction to start after site preparation and some grading
Paving	Paving	5/11/2024	7/26/2024	5.00	55.0	—
Architectural Coating	Architectural Coating	4/15/2026	6/30/2026	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	1.00	7.61	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.69	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.69	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.61	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.69	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Building Construction	Cranes	Diesel	Average	1.00	7.61	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.69	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.69	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.61	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.69	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	87.1	7.70	LDA,LDT1,LDT2
Building Construction	Vendor	25.9	6.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	2.00	0.25	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	4.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.25	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.4	7.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	6.80	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	2.00	0.25	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	87.1	7.70	LDA,LDT1,LDT2
Building Construction	Vendor	25.9	6.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	2.00	0.25	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	4.00	6.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	2.00	0.25	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.4	7.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	6.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	2.00	0.25	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	955,598	318,533	0.00	0.00	19,184

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Paving	0.00	0.00	0.00	0.00	10.0

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	2.67	0%
Other Asphalt Surfaces	7.34	100%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005
2024	0.00	453	0.03	< 0.005

2025	0.00	453	0.03	< 0.005
2026	0.00	453	0.03	< 0.005

8. User Changes to Default Data

Screen	Justification
Land Use	The project includes the development of 242 single-family residential units and two parks (3.32 total acres) on a 48.9-acre site.
Construction: Construction Phases	Vertical home construction (site preparation, grading, and paving for internal streets included in a separate run). Adjusted schedule based on applicant-provided construction schedule: October 2023 (site preparation/grading) to June 2026 (end home construction)
Construction: Off-Road Equipment	Adjusted construction equipment usage to match CalEEMod default total building construction HP hours.
Operations: Vehicle Data	Project-specific trip generation, consistent with the traffic analysis (2,327 daily trips)
Operations: Fleet Mix	SJVAPCD-approved residential fleet mix for the 2024 operational year applied to single-family homes.
Operations: Hearths	SJVAPCD Rule 4901 Woodburning No woodburning fireplaces or wood stoves

Site Work and Internal Street Paving for the Entire Project Site (Unmitigated) - Localized Analysis Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Site Work and Internal Street Paving for the Entire Project Site (Unmitigated) - Localized Analysis
Construction Start Date	10/2/2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.292444, -119.213975
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2749
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Asphalt Surfaces	7.34	Acre	7.34	0.00	0.00	—	510	Internal streets

Other Non-Asphalt Surfaces	41.6	Acre	41.6	0.00	442,570	—	—	Total project site gross acreage: 35.81 (5.37 + 30.44 = 35.81)
Other Asphalt Surfaces	1.00	Acre	1.00	0.00	0.00	—	—	Additional acre for frontage/offsite improvements

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.10	1.33	7.89	10.3	0.01	0.39	1.38	1.77	0.36	0.14	0.50	—	1,533	1,533	0.07	0.02	0.04	1,539
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.79	4.03	39.8	35.8	0.06	1.81	9.05	10.9	1.66	4.08	5.74	—	6,653	6,653	0.28	0.06	< 0.005	6,678
2024	4.29	3.61	34.5	30.7	0.06	1.45	4.98	6.42	1.33	1.57	2.90	—	6,652	6,652	0.28	0.06	< 0.005	6,677
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.85	0.71	7.02	6.12	0.01	0.31	1.24	1.55	0.28	0.49	0.77	—	1,101	1,101	0.05	0.01	0.01	1,105
2024	0.62	0.58	4.84	4.78	0.01	0.21	0.73	0.95	0.19	0.19	0.38	—	934	934	0.04	0.01	0.01	937
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.15	0.13	1.28	1.12	< 0.005	0.06	0.23	0.28	0.05	0.09	0.14	—	182	182	0.01	< 0.005	< 0.005	183

2024	0.11	0.11	0.88	0.87	< 0.005	0.04	0.13	0.17	0.04	0.03	0.07	—	155	155	0.01	< 0.005	< 0.005	155

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	3.27	2.92	< 0.005	0.15	—	0.15	0.14	—	0.14	—	435	435	0.02	< 0.005	—	437
Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.06	0.60	0.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	72.1	72.1	< 0.005	< 0.005	—	72.3
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.02	0.33	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.64	9.64	0.01	< 0.005	< 0.005	10.4
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.44	5.44	< 0.005	< 0.005	< 0.005	5.70
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.86
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.47
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Hauling	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	0.00

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.43	3.72	37.3	31.4	0.06	1.59	—	1.59	1.47	—	1.47	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.34	7.34	< 0.005	< 0.005	< 0.005	7.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.72	3.13	0.01	0.16	—	0.16	0.15	—	0.15	—	659	659	0.03	0.01	—	661
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.68	0.57	< 0.005	0.03	—	0.03	0.03	—	0.03	—	109	109	< 0.005	< 0.005	—	109
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.03	0.37	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	0.01	< 0.005	< 0.005	11.9
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.44	5.44	< 0.005	< 0.005	< 0.005	5.70
Hauling	0.01	0.01	0.15	0.10	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	30.6	30.6	< 0.005	< 0.005	< 0.005	32.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.12	1.12	< 0.005	< 0.005	< 0.005	1.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.57
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.04	3.04	< 0.005	< 0.005	< 0.005	3.19
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.20
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.53

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.62	3.19	0.01	0.15	—	0.15	0.14	—	0.14	—	697	697	0.03	0.01	—	700
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	0.15	< 0.005	0.01	0.01	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.66	0.58	< 0.005	0.03	—	0.03	0.03	—	0.03	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.03	0.34	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	0.01	< 0.005	< 0.005	11.5
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.37	5.37	< 0.005	< 0.005	< 0.005	5.62
Hauling	0.01	0.01	0.15	0.10	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	30.1	30.1	< 0.005	< 0.005	< 0.005	31.5

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.15	1.15	< 0.005	< 0.005	< 0.005	1.23
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.59
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.16	3.16	< 0.005	< 0.005	< 0.005	3.31
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.19	0.19	< 0.005	< 0.005	< 0.005	0.20
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.10
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.55

3.7. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.14	7.14	< 0.005	< 0.005	0.01	7.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.37	1.37	< 0.005	0.14	0.14	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.57

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.21	0.21	< 0.005	0.02	0.02	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.02	0.20	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.64	8.64	< 0.005	< 0.005	0.02	9.19
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.32	5.32	< 0.005	< 0.005	0.01	5.58
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.02	0.26	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.07	8.07	< 0.005	< 0.005	< 0.005	8.64
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.37	5.37	< 0.005	< 0.005	< 0.005	5.62
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.24	1.24	< 0.005	< 0.005	< 0.005	1.32
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.84
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.22
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Hauling	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	0.00

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/2/2023	11/10/2023	5.00	30.0	—
Grading	Grading	11/11/2023	2/23/2024	5.00	75.0	—
Paving	Paving	2/24/2024	5/10/2024	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	0.50	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	0.50	HHDT,MHDT
Site Preparation	Hauling	0.00	0.50	HHDT
Site Preparation	Onsite truck	2.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	0.50	LDA,LDT1,LDT2
Grading	Vendor	2.00	0.50	HHDT,MHDT
Grading	Hauling	8.33	0.50	HHDT
Grading	Onsite truck	2.00	0.50	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	0.50	LDA,LDT1,LDT2
Paving	Vendor	2.00	0.50	HHDT,MHDT
Paving	Hauling	0.00	0.50	HHDT
Paving	Onsite truck	2.00	0.50	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.0	0.00	—
Grading	2,500	2,500	225	0.00	—
Paving	0.00	0.00	0.00	0.00	49.9

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	7.34	100%
Other Non-Asphalt Surfaces	41.6	0%
Other Asphalt Surfaces	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005

2024	0.00	453	0.03	< 0.005

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Site work for the entire project site + 1 acre of offsite improvements Earliest construction start: October 2023
Construction: Trips and VMT	Trip lengths updated to 0.5 mile to account for on-site and localized emissions from construction vehicles.

Home Construction (Unmitigated) + Operations - Localized Analysis Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Home Construction (Unmitigated) + Operations - Localized Analysis
Construction Start Date	10/2/2023
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.292444, -119.213975
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2749
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	242	Dwelling Unit	38.2	471,900	250,034	—	818	—
Other Asphalt Surfaces	7.34	Acre	7.34	0.00	47,916	—	—	—
City Park	3.32	Acre	3.32	0.00	144,619	144,619	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.15	3.06	20.5	25.9	0.04	0.93	0.82	1.75	0.86	0.09	0.95	—	4,267	4,267	0.20	0.06	0.30	4,289
2025	1.92	1.67	11.8	15.5	0.03	0.47	0.43	0.90	0.43	0.05	0.48	—	2,728	2,728	0.13	0.04	0.25	2,744
2026	2.05	57.1	12.1	16.7	0.03	0.44	0.82	1.25	0.40	0.09	0.49	—	2,878	2,878	0.14	0.05	0.26	2,896
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.09	1.80	13.3	16.2	0.03	0.60	0.43	1.03	0.55	0.05	0.60	—	2,730	2,730	0.14	0.04	0.01	2,746
2024	1.98	1.71	12.7	16.0	0.03	0.54	0.43	0.97	0.50	0.05	0.55	—	2,728	2,728	0.14	0.04	0.01	2,743
2025	1.86	1.60	11.8	15.8	0.03	0.47	0.43	0.90	0.43	0.05	0.48	—	2,725	2,725	0.14	0.04	0.01	2,741
2026	1.76	1.52	11.2	15.6	0.03	0.41	0.43	0.84	0.38	0.05	0.43	—	2,723	2,723	0.13	0.04	0.01	2,738
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.17	0.15	1.07	1.28	< 0.005	0.05	0.03	0.08	0.04	< 0.005	0.05	—	219	219	0.01	< 0.005	0.01	220

2024	1.59	1.43	10.3	12.8	0.02	0.45	0.36	0.81	0.41	0.04	0.45	—	2,185	2,185	0.11	0.03	0.08	2,198
2025	1.33	1.15	8.43	11.1	0.02	0.34	0.30	0.64	0.31	0.03	0.34	—	1,947	1,947	0.09	0.03	0.08	1,958
2026	0.66	8.91	4.09	5.66	0.01	0.15	0.21	0.36	0.14	0.02	0.16	—	988	988	0.05	0.02	0.04	993
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.03	0.03	0.19	0.23	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	36.3	36.3	< 0.005	< 0.005	< 0.005	36.5
2024	0.29	0.26	1.87	2.34	< 0.005	0.08	0.07	0.15	0.07	0.01	0.08	—	362	362	0.02	0.01	0.01	364
2025	0.24	0.21	1.54	2.03	< 0.005	0.06	0.06	0.12	0.06	0.01	0.06	—	322	322	0.02	< 0.005	0.01	324
2026	0.12	1.63	0.75	1.03	< 0.005	0.03	0.04	0.07	0.03	< 0.005	0.03	—	163	163	0.01	< 0.005	0.01	164

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.33	9.10	2.89	23.1	0.01	0.02	0.82	0.84	0.02	0.21	0.23	—	1,446	1,446	0.43	0.23	3.92	1,530
Area	1.56	12.4	2.14	14.5	0.01	0.17	—	0.17	0.17	—	0.17	0.00	2,584	2,584	0.05	0.01	—	2,587
Energy	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	5,502	5,502	0.45	0.03	—	5,522
Water	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165
Waste	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	11.2	21.6	7.26	38.6	0.04	0.37	0.82	1.19	0.37	0.21	0.58	151	9,612	9,763	16.1	0.32	7.30	10,268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.04	7.73	3.29	29.9	0.01	0.02	0.82	0.84	0.02	0.21	0.23	—	1,364	1,364	0.58	0.26	0.10	1,455
Area	0.23	11.2	2.01	0.85	0.01	0.16	—	0.16	0.16	—	0.16	0.00	2,548	2,548	0.05	< 0.005	—	2,550
Energy	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	5,502	5,502	0.45	0.03	—	5,522
Water	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165

Waste	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	8.54	19.0	7.52	31.7	0.04	0.36	0.82	1.18	0.36	0.21	0.57	151	9,493	9,645	16.3	0.34	3.48	10,156
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.21	7.94	3.05	25.5	0.01	0.02	0.82	0.84	0.02	0.21	0.23	—	1,383	1,383	0.50	0.24	1.69	1,469
Area	0.71	11.7	0.52	6.94	< 0.005	0.04	—	0.04	0.04	—	0.04	0.00	590	590	0.01	< 0.005	—	591
Energy	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	5,502	5,502	0.45	0.03	—	5,522
Water	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165
Waste	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Total	9.18	19.8	5.80	33.4	0.03	0.24	0.82	1.06	0.24	0.21	0.45	151	7,555	7,706	16.2	0.32	5.07	8,211
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.50	1.45	0.56	4.65	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	229	229	0.08	0.04	0.28	243
Area	0.13	2.13	0.09	1.27	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	97.8	97.8	< 0.005	< 0.005	—	97.9
Energy	0.05	0.02	0.41	0.17	< 0.005	0.03	—	0.03	0.03	—	0.03	—	911	911	0.07	< 0.005	—	914
Water	—	—	—	—	—	—	—	—	—	—	—	3.27	13.2	16.5	0.34	0.01	—	27.3
Waste	—	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	—	76.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Total	1.67	3.61	1.06	6.09	0.01	0.04	0.15	0.19	0.04	0.04	0.08	25.1	1,251	1,276	2.68	0.05	0.84	1,359

3. Construction Emissions Details

3.1. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.63	1.37	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.56	5.56	< 0.005	< 0.005	< 0.005	5.84
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	1.15	< 0.005	0.05	—	0.05	0.04	—	0.04	—	209	209	0.01	< 0.005	—	210
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.6	34.6	< 0.005	< 0.005	—	34.7
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.41	0.12	1.62	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	48.0	48.0	0.03	0.01	< 0.005	51.9
Vendor	0.02	0.01	0.34	0.21	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	70.4	70.4	< 0.005	0.01	< 0.005	73.7
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.03	0.01	0.11	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.91	3.91	< 0.005	< 0.005	0.01	4.17
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.63	5.63	< 0.005	< 0.005	< 0.005	5.89
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.69
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.98
Hauling	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	0.00

3.3. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.54	—	0.54	0.50	—	0.50	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.2	14.3	0.03	0.54	—	0.54	0.50	—	0.50	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.46	5.46	< 0.005	< 0.005	< 0.005	5.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.73	10.2	0.02	0.39	—	0.39	0.36	—	0.36	—	1,866	1,866	0.08	0.02	—	1,873

Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	3.88	3.88	< 0.005	< 0.005	< 0.005	4.07
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.59	1.86	< 0.005	0.07	—	0.07	0.07	—	0.07	—	309	309	0.01	< 0.005	—	310
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.47	0.46	0.09	1.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	50.2	50.2	0.02	0.01	0.14	53.4
Vendor	0.02	0.01	0.32	0.19	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	68.9	68.9	< 0.005	0.01	0.11	72.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.40	0.39	0.11	1.50	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	46.9	46.9	0.03	0.01	< 0.005	50.2
Vendor	0.02	0.01	0.33	0.21	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	69.4	69.4	< 0.005	0.01	< 0.005	72.7
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.29	0.07	0.91	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	34.1	34.1	0.02	0.01	0.04	36.4
Vendor	0.01	0.01	0.23	0.14	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	49.5	49.5	< 0.005	0.01	0.03	51.9
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.01	0.17	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	5.65	5.65	< 0.005	< 0.005	0.01	6.03
Vendor	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.19	8.19	< 0.005	< 0.005	0.01	8.58
Hauling	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	0.00

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.47	—	0.47	0.43	—	0.43	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.28	5.28	< 0.005	< 0.005	< 0.005	5.55
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46	1.22	11.4	14.2	0.03	0.47	—	0.47	0.43	—	0.43	—	2,606	2,606	0.11	0.02	—	2,615
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.87	8.11	10.1	0.02	0.34	—	0.34	0.31	—	0.31	—	1,861	1,861	0.08	0.02	—	1,868
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	—	3.80	3.80	< 0.005	< 0.005	< 0.005	3.99
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.48	1.85	< 0.005	0.06	—	0.06	0.06	—	0.06	—	308	308	0.01	< 0.005	—	309
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.66
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.43	0.09	1.07	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	49.0	49.0	0.02	0.01	0.13	52.2
Vendor	0.02	0.01	0.31	0.19	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	67.7	67.7	< 0.005	0.01	0.11	71.0
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.36	0.10	1.39	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	45.8	45.8	0.03	0.01	< 0.005	49.0
Vendor	0.02	0.01	0.33	0.20	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	68.2	68.2	< 0.005	0.01	< 0.005	71.4
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.27	0.07	0.84	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	33.2	33.2	0.02	0.01	0.04	35.5
Vendor	0.01	0.01	0.23	0.14	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.5	48.5	< 0.005	0.01	0.03	50.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.01	0.15	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	5.50	5.50	< 0.005	< 0.005	0.01	5.88
Vendor	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.03	8.03	< 0.005	< 0.005	0.01	8.41
Hauling	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	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.41	—	0.41	0.38	—	0.38	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.39	1.16	10.7	14.1	0.03	0.41	—	0.41	0.38	—	0.38	—	2,605	2,605	0.11	0.02	—	2,614
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.27	5.27	< 0.005	< 0.005	< 0.005	5.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.41	3.79	4.99	0.01	0.15	—	0.15	0.13	—	0.13	—	923	923	0.04	0.01	—	926
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.94
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.69	0.91	< 0.005	0.03	—	0.03	0.02	—	0.02	—	153	153	0.01	< 0.005	—	153
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.40	0.39	0.08	0.99	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	47.9	47.9	0.02	0.01	0.12	51.1
Vendor	0.02	0.01	0.31	0.19	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	66.5	66.5	< 0.005	0.01	0.10	69.8
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.34	0.10	1.29	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	44.8	44.8	0.02	0.01	< 0.005	47.9

Vendor	0.02	0.01	0.32	0.20	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	67.1	67.1	< 0.005	0.01	< 0.005	70.2
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.03	0.39	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	16.1	16.1	0.01	< 0.005	0.02	17.2
Vendor	0.01	< 0.005	0.11	0.07	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	23.6	23.6	< 0.005	< 0.005	0.02	24.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.07	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.85
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.91	3.91	< 0.005	< 0.005	< 0.005	4.10
Hauling	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	0.00

3.9. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.39	5.39	< 0.005	< 0.005	< 0.005	5.66
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.13	1.18	1.51	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.02	0.20	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.64	8.64	< 0.005	< 0.005	0.02	9.19
Vendor	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.02	11.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.24	1.24	< 0.005	< 0.005	< 0.005	1.32
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.61	1.61	< 0.005	< 0.005	< 0.005	1.69
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.22
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.28
Hauling	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	0.00

3.11. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	—	5.19	5.19	< 0.005	< 0.005	< 0.005	5.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Architectural Coatings	—	8.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.33	3.33	< 0.005	< 0.005	—	3.34
Architectural Coatings	—	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.02	0.20	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.59	9.59	< 0.005	< 0.005	0.02	10.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.14	5.14	< 0.005	< 0.005	0.01	5.39
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.47
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.81
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.24
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	9.33	9.10	2.89	23.1	0.01	0.02	0.82	0.84	0.02	0.21	0.23	—	1,446	1,446	0.43	0.23	3.92	1,530
Other Asphalt Surfaces	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	0.00
City Park	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	0.00
Total	9.33	9.10	2.89	23.1	0.01	0.02	0.82	0.84	0.02	0.21	0.23	—	1,446	1,446	0.43	0.23	3.92	1,530
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	8.04	7.73	3.29	29.9	0.01	0.02	0.82	0.84	0.02	0.21	0.23	—	1,364	1,364	0.58	0.26	0.10	1,455
Other Asphalt Surfaces	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	0.00
City Park	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	0.00
Total	8.04	7.73	3.29	29.9	0.01	0.02	0.82	0.84	0.02	0.21	0.23	—	1,364	1,364	0.58	0.26	0.10	1,455
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.50	1.45	0.56	4.65	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	229	229	0.08	0.04	0.28	243
Other Asphalt Surfaces	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	0.00
City Park	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	0.00
Total	1.50	1.45	0.56	4.65	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	229	229	0.08	0.04	0.28	243

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,670	2,670	0.19	0.02	—	2,682
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,670	2,670	0.19	0.02	—	2,682
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,670	2,670	0.19	0.02	—	2,682
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,670	2,670	0.19	0.02	—	2,682
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	442	442	0.03	< 0.005	—	444
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	442	442	0.03	< 0.005	—	444

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,832	2,832	0.25	0.01	—	2,840
Other Asphalt Surfaces	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
City Park	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
Total	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,832	2,832	0.25	0.01	—	2,840
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,832	2,832	0.25	0.01	—	2,840
Other Asphalt Surfaces	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
City Park	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
Total	0.26	0.13	2.23	0.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,832	2,832	0.25	0.01	—	2,840
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.05	0.02	0.41	0.17	< 0.005	0.03	—	0.03	0.03	—	0.03	—	469	469	0.04	< 0.005	—	470

Other Asphalt Surfaces	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
City Park	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
Total	0.05	0.02	0.41	0.17	< 0.005	0.03	—	0.03	0.03	—	0.03	—	469	469	0.04	< 0.005	—	470

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.23	0.12	2.01	0.85	0.01	0.16	—	0.16	0.16	—	0.16	0.00	2,548	2,548	0.05	< 0.005	—	2,550
Consumer Products	—	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.32	1.26	0.14	13.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.7	36.7	< 0.005	< 0.005	—	36.8
Total	1.56	12.4	2.14	14.5	0.01	0.17	—	0.17	0.17	—	0.17	0.00	2,584	2,584	0.05	0.01	—	2,587
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.23	0.12	2.01	0.85	0.01	0.16	—	0.16	0.16	—	0.16	0.00	2,548	2,548	0.05	< 0.005	—	2,550
Consumer Products	—	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	—	0.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.23	11.2	2.01	0.85	0.01	0.16	—	0.16	0.16	—	0.16	0.00	2,548	2,548	0.05	< 0.005	—	2,550
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	< 0.005	0.08	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	94.8	94.8	< 0.005	< 0.005	—	94.9
Consumer Products	—	1.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.12	0.11	0.01	1.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.00	3.00	< 0.005	< 0.005	—	3.01
Total	0.13	2.13	0.09	1.27	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	97.8	97.8	< 0.005	< 0.005	—	97.9

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	19.7	63.6	83.4	2.03	0.05	—	149
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	2.08	2.08	< 0.005	< 0.005	—	2.09
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	13.9	13.9	< 0.005	< 0.005	—	14.0

Total	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	19.7	63.6	83.4	2.03	0.05	—	149
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	2.08	2.08	< 0.005	< 0.005	—	2.09
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	13.9	13.9	< 0.005	< 0.005	—	14.0
Total	—	—	—	—	—	—	—	—	—	—	—	19.7	79.6	99.4	2.03	0.05	—	165
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.27	10.5	13.8	0.34	0.01	—	24.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.34	0.34	< 0.005	< 0.005	—	0.35
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	2.31	2.31	< 0.005	< 0.005	—	2.32
Total	—	—	—	—	—	—	—	—	—	—	—	3.27	13.2	16.5	0.34	0.01	—	27.3

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

265

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	460
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	0.02	0.00	—	0.54
Total	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	460
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	0.02	0.00	—	0.54
Total	—	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	461
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	—	76.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.03	0.00	0.03	< 0.005	0.00	—	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	—	76.3

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.38	3.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description

Building Construction	Building Construction	11/21/2023	6/30/2026	5.00	681	Home construction to start after site preparation and some grading
Paving	Paving	5/11/2024	7/26/2024	5.00	55.0	—
Architectural Coating	Architectural Coating	4/15/2026	6/30/2026	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	1.00	7.61	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.69	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.69	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.61	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.69	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	87.1	0.50	LDA,LDT1,LDT2
Building Construction	Vendor	25.9	0.50	HHDT,MHDT

Building Construction	Hauling	0.00	0.50	HHDT
Building Construction	Onsite truck	2.00	0.25	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	0.50	LDA,LDT1,LDT2
Paving	Vendor	4.00	0.50	HHDT,MHDT
Paving	Hauling	0.00	0.50	HHDT
Paving	Onsite truck	2.00	0.25	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.4	0.50	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	0.50	HHDT,MHDT
Architectural Coating	Hauling	0.00	0.50	HHDT
Architectural Coating	Onsite truck	2.00	0.25	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	955,598	318,533	0.00	0.00	19,184

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Paving	0.00	0.00	0.00	0.00	10.0

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	2.67	0%
Other Asphalt Surfaces	7.34	100%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005
2024	0.00	453	0.03	< 0.005
2025	0.00	453	0.03	< 0.005
2026	0.00	453	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Single Family Housing	2,327	2,327	2,327	849,270	1,163	1,163	1,163	424,635
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	121
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	121
Conventional Wood Stoves	0
Catalytic Wood Stoves	12
Non-Catalytic Wood Stoves	12
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
955597.5	318,533	0.00	0.00	19,184

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	2,150,524	453	0.0330	0.0040	8,835,662
Other Asphalt Surfaces	0.00	453	0.0330	0.0040	0.00
City Park	0.00	453	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	10,300,161	4,410,385
Other Asphalt Surfaces	0.00	691,524
City Park	0.00	4,638,099

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	244	—

Other Asphalt Surfaces	0.00	—
City Park	0.29	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

8. User Changes to Default Data

Screen	Justification
Land Use	The project includes the development of 242 single-family residential units and two parks (3.32 total acres) on a 48.9-acre site.
Construction: Construction Phases	Vertical home construction (site preparation, grading, and paving for internal streets included in a separate run). Adjusted schedule based on applicant-provided construction schedule: October 2023 (site preparation/grading) to June 2026 (end home construction)
Construction: Off-Road Equipment	Adjusted construction equipment usage to match CalEEMod default total building construction HP hours.
Operations: Vehicle Data	Project-specific trip generation, consistent with the traffic analysis (2,327 daily trips) Trip lengths updated to 0.5 mile to account for on-site and localized emissions from mobile sources.
Operations: Fleet Mix	SJVAPCD-approved residential fleet mix for the 2024 operational year applied to single-family homes.
Operations: Hearths	SJVAPCD Rule 4901 Woodburning No woodburning fireplaces or wood stoves
Construction: Trips and VMT	Trip lengths updated to 0.5 mile to account for on-site and localized emissions from construction vehicles.

ATTACHMENT B

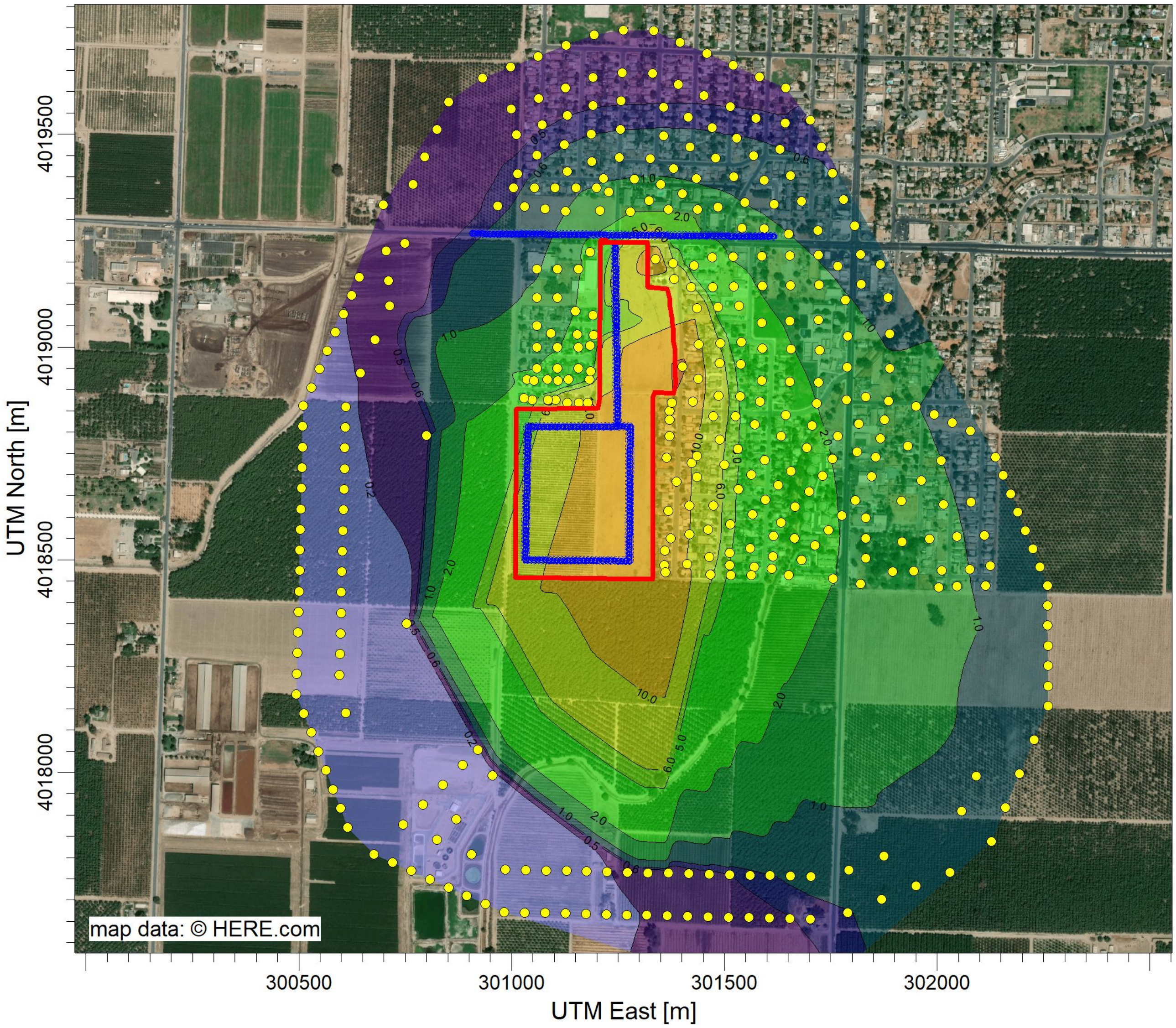
Construction Health Risk Assessment and Operational Health Risk Screening

Health Risk Assessment

General Parameters

PROJECT TITLE:

Air Dispersion Concentrations and Graphical Representation of Model Inputs
Construction for the Entire Site - Offsite Receptors Scenario (Unit Emissions)



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: AREA

ug/m^3

Max: 22.1 [ug/m^3] at (301401.20, 4018953.77)

0.0 | 0.2 | 0.5 | 0.6 | 1.0 | 2.0 | 5.0 | 6.0 | 10.0 | 20.0 | 22.1

COMMENTS:

SOURCES:

3

COMPANY NAME:

RECEPTORS:

394

MODELER:

OUTPUT TYPE:

Concentration

SCALE:

1:16,215

0 0.5 km

MAX:

22.1 ug/m^3

DATE:

6/23/2023

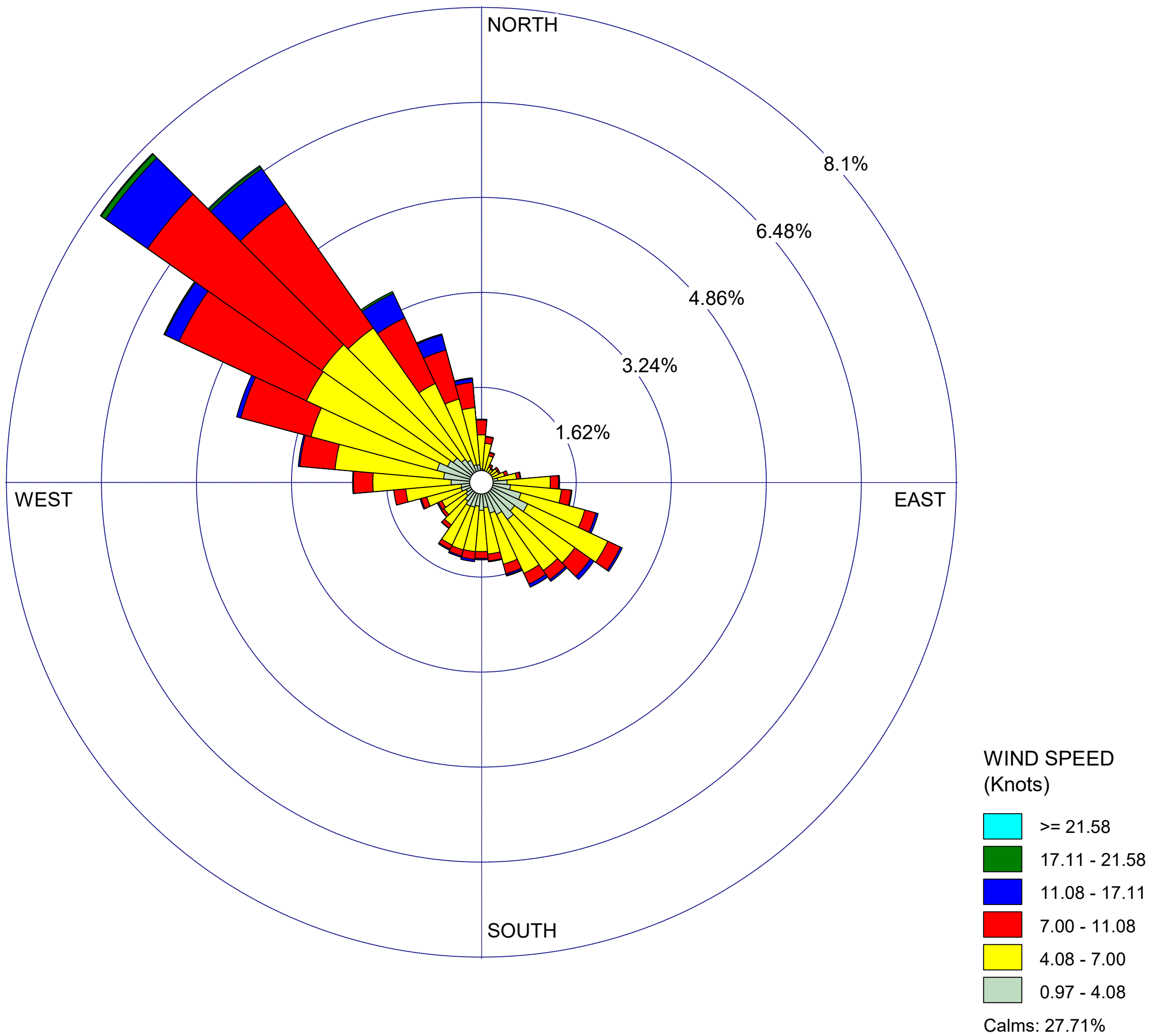
PROJECT NO.:

WIND ROSE PLOT:

Wind Rose - Visalia Station (#93144) – Blowing From

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

Start Date: 1/1/2007 - 00:00
End Date: 12/31/2010 - 23:59

COMPANY NAME:

MODELER:

CALM WINDS:

27.71%

TOTAL COUNT:

34417 hrs.

AVG. WIND SPEED:

4.39 Knots

DATE:

5/28/2023

PROJECT NO.:

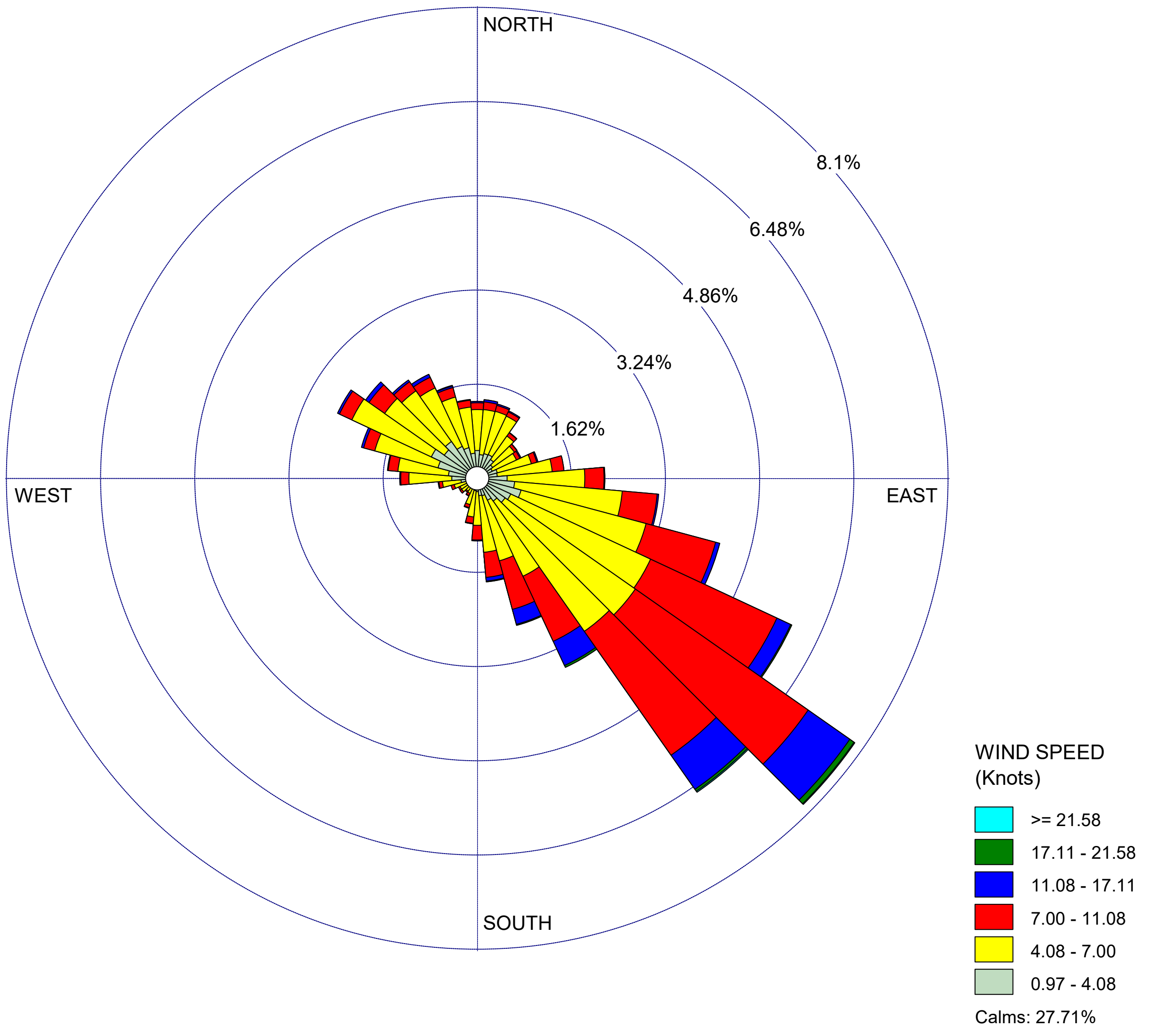
WRPLOT View - Lakes Environmental Software

WIND ROSE PLOT:

Wind Rose - Visalia Station (#93144) – Blowing To

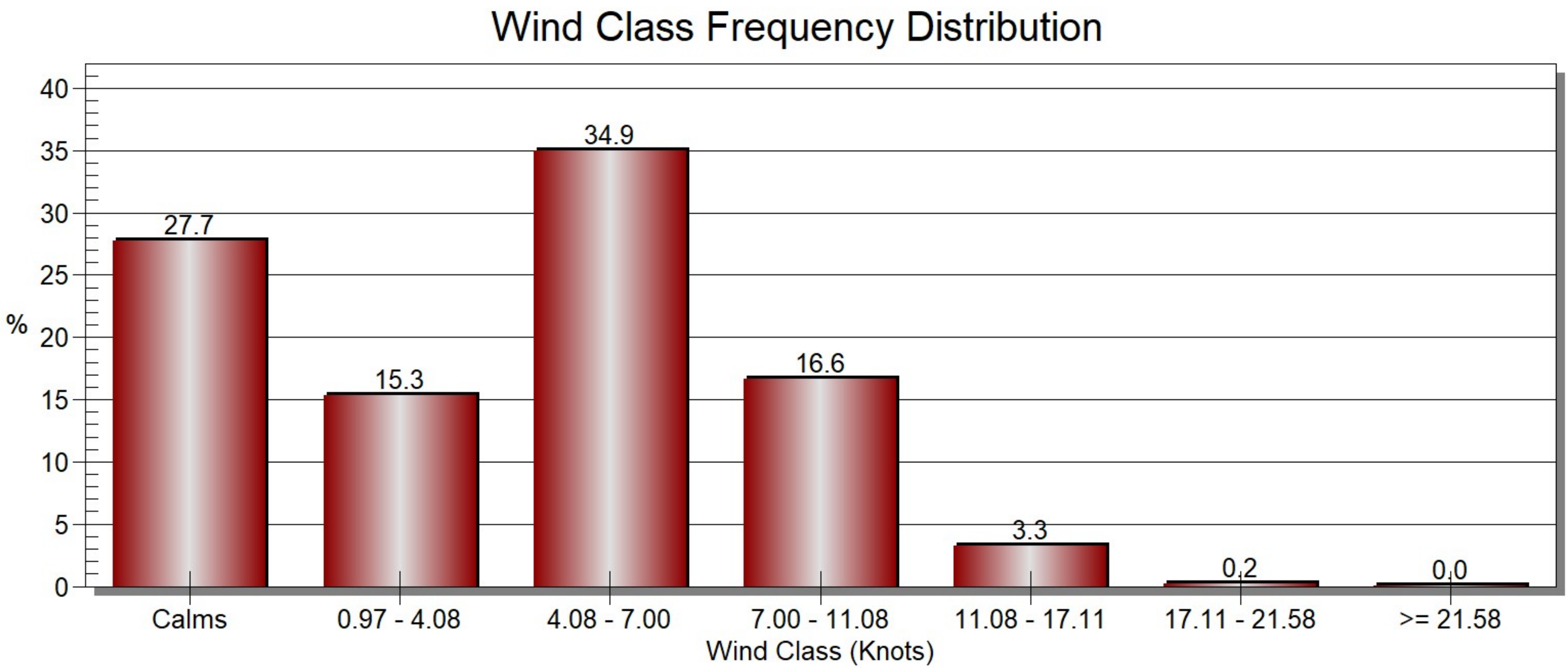
DISPLAY:

Wind Speed
Flow Vector (blowing to)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	Start Date: 1/1/2007 - 00:00 **End Date: 12/31/2010 - 23:59**	MODELER:	
	CALM WINDS: **27.71%**	TOTAL COUNT: **34417 hrs.**	
	AVG. WIND SPEED: **4.39 Knots**	DATE: **5/28/2023**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software



Wind Class Frequency Distribution
40
35
30
25
20
15
10
5
0
%
27.7
15.3
34.9
16.6
3.3
0.2
0.0
Calms
0.97 - 4.08
4.08 - 7.00
7.00 - 11.08
11.08 - 17.11
17.11 - 21.58
>= 21.58
Wind Class (Knots)

Health Risk Assessment

Unmitigated Construction

Eagle Meadows Residential Project (Unmitigated Construction)

Estimation of Annual Onsite Construction Emissions

Start of Construction	10/2/2023	
End of Construction	6/30/2026	**Total**
Number of Days	1,002	1,002
Number of Hours	24,048	24,048

Size of the construction area source: 187,484.2 sq-meters

Run	Year	On-site Construction Activity	Unmitigated On-site DPM (pounds)
Site Work	2023	On-site Site Preparation	54.1523
Site Work	2023	On-site Grading	58.0787
Site Work	2024	On-site Grading	55.8535
Site Work	2024	Paving	21.4063
Home Construction	2023	On-site Building Construction 2023	17.5929
Home Construction	2024	On-site Building Construction 2024	141.4186
Home Construction	2024	On-site Paving 2024	141.4186
Home Construction	2025	On-site Building Construction 2025	122.3538
Home Construction	2026	On-site Building Construction 2026	48.9456
Home Construction	2026	On-site Architectural Coating	1.2734

Total Unmitigated DPM (On-site) 6.625E+02 pounds

Factor in AERMOD to Account for 5 days per week/8 hours per day: 4.2

Average Emission for AREA1	3.008E+05	grams
	3.474E-03	grams/sec
	1.853E-08	grams/m2-sec

Pounds/Construction Period	6.625E+02
Pounds/Day	6.612E-01
Pounds/Hour	2.755E-02
Pounds/Year	2.413E+02
Years	2.74521

Eagle Meadows Residential Project (Unmitigated Construction)

Estimation of Annual Offsite Construction DPM Emissions (Unmitigated)

		Total
Start of Construction	10/2/2023	
End of Construction	6/30/2026	
Number of Days	1,002	1,002
Number of Hours	24,048	24,048

	2023	2023	2024	2024	2023	2024	2024	2025	2026	2026	
	Site Work	Site Work	Site Work	Site Work	Home Construction	Home Construction	Home Construction	Home Construction	Home Construction	Home Construction	
Construction Trip Type	Site Preparation	Grading	Grading	Paving	Building Construction	Building Construction	Paving	Building Construction	Building Construction	Architectural Coating	**Total (pounds)**
Total (pounds)	0.01997	0.42581	0.45086	0.036618782	0.228123333	2.03642	0.06778	2.03085	1.00708	0.03480	**6.33832**

	Haul Truck	**Vendor Truck**	**Worker**	**Total**
Site Preparation 2023 (Site Work)	525.00	60.00	0.00	585.00
Grading 2023 (Site Work)	700.00	70.00	291.67	1061.67
Grading 2024 (Site Work)	780.00	78.00	325.00	1183.00
Paving 2024 (Site Work)	825.00	110.00	0.00	935.00
Building Construction 2023 (Home Construction)	2526.48	750.22	0.00	3276.70
Building Construction 2024 (Home Construction)	22825.44	6777.89	0.00	29603.33
Building Construction 2025 (Home Construction)	22738.32	6752.02	0.00	29490.34
Building Construction 2026 (Home Construction)	11238.48	3337.20	0.00	14575.68
Paving 2024 (Home Construction)	825.00	220.00	0.00	1045.00
Architectural Coating 2026 (Home Construction)	958.32	110.00	0.00	1068.32
Total	**63942.04**	**18265.33**	**616.67**	**82824.04**

	Haul Truck (pounds)	**Vendor Truck (pounds)**	**Worker (pounds)**	**Total (pounds)**
Total DPM	4.893E+00	1.398E+00	4.719E-02	6.338E+00
Average Emissions				
Grams	2.222E+03	6.346E+02	2.143E+01	
Grams/sec	2.566E-05	7.330E-06	2.475E-07	
Default Distance	20	6.8	7.7	Default Vehicle Travel Distance in CalEEMod
Vehicle Travel Distances in the Construction HRA (miles)				
Off-site (mi)	0.44	0.44	0.44	miles
On-site (mi)	0.96	0.96	0.96	miles
Trip Distribution (percent)				
Off-site Road Segment	100.0%	100.0%	100.0%	off-site
On-site Road Segment	100.0%	100.0%	100.0%	on-site
Total Average Offsite Vehicle Emissions Along Travel Distance (g/sec)				**Total**
Off-site Road Segment	5.635E-07	4.735E-07	1.412E-08	1.051E-06
On-site Road Segment	1.233E-06	1.036E-06	3.089E-08	2.300E-06

	Grams/sec	Pounds/Hour	Pounds/Day	Pounds/year	Tons/year
Off-site Road Segment	1.051E-06	8.342E-06	2.002E-04	7.308E-02	3.654E-05
On-site Road Segment	2.300E-06	1.826E-05	4.381E-04	1.599E-01	7.996E-05

Health Risk Summary - Unmitigated Construction (Summary of HARP2 Results)

Eagle Meadows Residential Project (Unmitigated Construction)

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	2.8470E-05	28.47	1.5336E-02	0.00E+00

	X	Y
MEI UTM	301401.20	4018953.77
Lat/Long	36°17'42.5"N	119°12'41.9"W
Receptor # 158		

*HARP - HRACalc v22118 6/22/2023 8:30:09 AM - Cancer Risk - Input File: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionHRAInput.hra
*HARP - HRACalc v22118 6/22/2023 8:30:09 AM - Chronic Risk - Input File: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionHRAInput.hra
*HARP - HRACalc v22118 6/22/2023 8:30:09 AM - Acute Risk - Input File: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionHRAInput.hra

Health Risk Summary - Unmitigated Construction (Summary of HARP2 Results)

Eagle Meadows Residential Project (Unmitigated Construction)

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	2.8470E-05	28.47	1.5336E-02	0.00E+00

	X	Y
MEI UTM	301401.20	4018953.77
Lat/Long	36°17'42.5"N	119°12'41.9"W
Receptor # 158		

*HARP - HRACalc v22118 6/22/2023 8:30:09 AM - Cancer Risk - Input File: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionHRAInput.hra
*HARP - HRACalc v22118 6/22/2023 8:30:09 AM - Chronic Risk - Input File: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionHRAInput.hra
*HARP - HRACalc v22118 6/22/2023 8:30:09 AM - Acute Risk - Input File: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionHRAInput.hra

REC	GRP	X	Y	RISK_SUM	SCENARIO	MAXHI NonCancerChronic	MAXHI Acute
1	ALL	301379.58	4019196.68	8.18060E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4067E-03	0.00E+00
2	ALL	301381.93	4019160.36	1.14640E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1751E-03	0.00E+00
3	ALL	301368.18	4019323.61	2.18970E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1795E-03	0.00E+00
4	ALL	301429.21	4019192.24	4.92520E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6531E-03	0.00E+00
5	ALL	301421.92	4019140.22	8.18120E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4070E-03	0.00E+00
6	ALL	301437.28	4019323.29	1.80490E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.7225E-04	0.00E+00
7	ALL	301400.86	4019360.04	1.55610E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.3821E-04	0.00E+00
8	ALL	301349.73	4019382.21	1.43050E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.7054E-04	0.00E+00
9	ALL	301470.54	4019211.27	3.19240E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7196E-03	0.00E+00
10	ALL	301471.91	4019141.20	4.87630E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6267E-03	0.00E+00
11	ALL	301540.74	4019278.80	1.68600E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0819E-04	0.00E+00
12	ALL	301485.10	4019329.40	1.54000E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.2955E-04	0.00E+00
13	ALL	301434.66	4019395.97	1.21710E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.5562E-04	0.00E+00
14	ALL	301380.13	4019419.63	1.13530E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1158E-04	0.00E+00
15	ALL	301520.53	4019212.25	2.44250E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3157E-03	0.00E+00
16	ALL	301521.90	4019142.18	3.38820E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8251E-03	0.00E+00
17	ALL	301593.67	4019278.31	1.45650E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.8455E-04	0.00E+00
18	ALL	301547.89	4019339.83	1.28000E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.8952E-04	0.00E+00
19	ALL	301522.15	4019400.66	1.06490E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7361E-04	0.00E+00
20	ALL	301478.99	4019444.22	9.50190E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1184E-04	0.00E+00
21	ALL	301418.39	4019470.50	8.92780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8091E-04	0.00E+00
22	ALL	301357.79	4019496.78	8.20830E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4216E-04	0.00E+00
23	ALL	301587.18	4019213.55	1.85610E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.9985E-04	0.00E+00
24	ALL	301588.56	4019143.49	2.37150E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2775E-03	0.00E+00
25	ALL	301651.45	4019265.97	1.29510E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.9761E-04	0.00E+00
26	ALL	301616.96	4019335.43	1.13350E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1058E-04	0.00E+00
27	ALL	301592.83	4019392.46	9.91570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3413E-04	0.00E+00
28	ALL	301568.70	4019449.49	8.60660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6361E-04	0.00E+00
29	ALL	301528.23	4019490.32	7.87210E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2404E-04	0.00E+00
30	ALL	301471.42	4019514.96	7.50550E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0430E-04	0.00E+00
31	ALL	301414.61	4019539.60	7.05770E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8018E-04	0.00E+00
32	ALL	301357.80	4019564.24	6.59510E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5526E-04	0.00E+00
33	ALL	301653.84	4019214.86	1.49160E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0351E-04	0.00E+00
34	ALL	301655.21	4019144.79	1.81280E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.7652E-04	0.00E+00
35	ALL	301720.07	4019273.32	1.09050E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.8743E-04	0.00E+00
36	ALL	301681.20	4019342.44	9.91000E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3382E-04	0.00E+00
37	ALL	301655.46	4019403.27	8.83600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.7597E-04	0.00E+00
38	ALL	301629.72	4019464.10	7.80500E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2043E-04	0.00E+00
39	ALL	301573.69	4019538.07	6.73780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6295E-04	0.00E+00
40	ALL	301513.09	4019564.35	6.43940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4687E-04	0.00E+00
41	ALL	301452.49	4019590.64	6.08240E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.2764E-04	0.00E+00
42	ALL	301391.90	4019616.92	5.72040E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0814E-04	0.00E+00
43	ALL	301720.49	4019216.17	1.24680E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.7164E-04	0.00E+00
44	ALL	301721.86	4019146.10	1.46540E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.8938E-04	0.00E+00
45	ALL	301806.62	4019284.26	9.10700E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9057E-04	0.00E+00
46	ALL	301780.30	4019346.48	8.42100E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5362E-04	0.00E+00
47	ALL	301753.98	4019408.69	7.71620E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1565E-04	0.00E+00
48	ALL	301727.66	4019470.90	7.00980E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7760E-04	0.00E+00
49	ALL	301701.34	4019533.11	6.31940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4041E-04	0.00E+00
50	ALL	301644.03	4019608.77	5.57900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0053E-04	0.00E+00
51	ALL	301582.05	4019635.64	5.36320E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8890E-04	0.00E+00
52	ALL	301520.08	4019662.52	5.10710E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7510E-04	0.00E+00
53	ALL	301458.10	4019689.40	4.84370E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6092E-04	0.00E+00
54	ALL	301396.13	4019716.28	4.59840E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4770E-04	0.00E+00
55	ALL	301820.47	4019218.12	1.00540E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4160E-04	0.00E+00
56	ALL	301821.84	4019148.06	1.14090E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1455E-04	0.00E+00
57	ALL	301338.60	4019206.36	1.67440E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0194E-03	0.00E+00
58	ALL	301435.06	4019091.43	9.96400E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3673E-03	0.00E+00
59	ALL	301439.86	4019005.57	1.35550E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3018E-03	0.00E+00
60	ALL	301484.98	4019094.23	5.64100E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0386E-03	0.00E+00
61	ALL	301489.78	4019008.37	7.56900E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0772E-03	0.00E+00
62	ALL	301534.90	4019097.02	3.79970E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0468E-03	0.00E+00
63	ALL	301539.71	4019011.16	4.95360E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6684E-03	0.00E+00
64	ALL	301587.22	4019056.89	3.19090E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7189E-03	0.00E+00
65	ALL	301653.79	4019060.62	2.29150E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2344E-03	0.00E+00
66	ALL	301720.35	4019064.34	1.77230E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5466E-04	0.00E+00
67	ALL	301766.53	4019190.04	1.18740E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3962E-04	0.00E+00
68	ALL	301784.51	4019111.00	1.33550E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1941E-04	0.00E+00
69	ALL	301789.31	4019025.14	1.55270E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.3642E-04	0.00E+00
70	ALL	301866.80	4019194.63	9.62530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1849E-04	0.00E+00
71	ALL	301642.91	4019526.53	6.66150E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5884E-04	0.00E+00
72	ALL	301884.35	4019116.59	1.05810E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.6999E-04	0.00E+00
73	ALL	301889.16	4019030.73	1.20340E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4824E-04	0.00E+00
74	ALL	301437.67	4018924.94	1.53780E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.2839E-03	0.00E+00
75	ALL	301488.77	4018961.65	8.48760E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5720E-03	0.00E+00
76	ALL	301486.53	4018885.28	9.11410E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9095E-03	0.00E+00
77	ALL	301538.75	4018960.18	5.63400E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0349E-03	0.00E+00
78	ALL	301536.51	4018883.81	6.30290E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3952E-03	0.00E+00
79	ALL	301589.85	4018996.90	3.71630E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0019E-03	0.00E+00
80	ALL	301587.61	4018920.53	4.39220E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3660E-03	0.00E+00
81	ALL	301656.49	4018994.94	2.65560E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4305E-03	0.00E+00
82	ALL	301654.24	4018918.57	3.11680E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6789E-03	0.00E+00
83	ALL	301723.13	4018992.98	2.04010E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0990E-03	0.00E+00
84	ALL	301720.88	4018916.61	2.36240E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2726E-03	0.00E+00
85	ALL	301788.64	4018952.83	1.76690E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5180E-04	0.00E+00
86	ALL	301786.40	4018876.46	1.98790E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0708E-03	0.00E+00
87	ALL	301888.60	4018949.89	1.34420E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.2406E-04	0.00E+00
88	ALL	301886.35	4018873.52	1.49000E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0261E-04	0.00E+00
89	ALL	301425.74	4018872.07	1.59190E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.5749E-03	0.00E+00
90	ALL	301473.33	4018837.19	9.70360E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2271E-03	0.00E+00
91	ALL	301525.80	4018836.76	6.83120E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6797E-03	0.00E+00
92	ALL	301571.81	4018817.81	5.25650E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8315E-03	0.00E+00
93	ALL	301584.04	4018871.58	4.76070E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5645E-03	0.00E+00
94	ALL	301632.57	4018790.04	3.94990E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1277E-03	0.00E+00
95	ALL	301643.99	4018840.23	3.61390E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9467E-03	0.00E+00
96	ALL	301693.60	4018763.40	3.11230E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6765E-03	0.00E+00
97	ALL	301705.49	4018815.68	2.84920E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5348E-03	0.00E+00
98	ALL	301717.38	4018867.96	2.56510E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3818E-03	0.00E+00
99	ALL	301754.60	4018736.65	2.54080E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3686E-03	0.00E+00
100	ALL	301766.83	4018790.42	2.33010E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2552E-03	0.00E+00
101	ALL	301846.07	4018696.38	1.96840E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0603E-03	0.00E+00
102	ALL	301856.14	4018740.67	1.85130E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.9724E-04	0.00E+00
103	ALL	301866.21	4018784.95	1.72950E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3166E-04	0.00E+00
104	ALL	301876.28	4018829.23	1.60840E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.6640E-04	0.00E+00
105	ALL	301371.16	4018849.58	2.34390E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2626E-02	0.00E+00
106	ALL	301370.38	4018829.15	2.23870E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2059E-02	0.00E+00
107	ALL	301423.52	4018727.42	1.24290E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6953E-03	0.00E+00
108	ALL	301435.33	4018743.37	1.13690E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1243E-03	0.00E+00
109	ALL	301488.39	4018782.62	8.31860E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4810E-03	0.00E+00
110	ALL	301363.53	4018739.87	2.44370E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3163E-02	0.00E+00
111	ALL	301387.32	4018683.95	1.79050E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.6451E-03	0.00E+00
112	ALL	301435.18	4018694.58	1.13400E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1086E-03	0.00E+00
113	ALL	301499.38	4018723.49	7.57160E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0786E-03	0.00E+00
114	ALL	301532.05	4018760.05	6.45830E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4789E-03	0.00E+00
115	ALL	301368.51	4018614.32	2.31940E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2494E-02	0.00E+00
116	ALL	301417.50	4018627.96	1.32010E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1111E-03	0.00E+00
117	ALL	301473.51	4018627.40	8.66100E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6654E-03	0.00E+00
118	ALL	301532.30	4018665.10	6.28910E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3878E-03	0.00E+00
119	ALL	301563.42	4018699.92	5.46420E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9434E-03	0.00E+00

120	ALL	301594.54	4018734.74	4.75820E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5631E-03	0.00E+00
121	ALL	301373.18	4018550.80	2.11870E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1413E-02	0.00E+00
122	ALL	301417.50	4018560.64	1.29700E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.9864E-03	0.00E+00
123	ALL	301461.81	4018570.48	9.21770E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9653E-03	0.00E+00
124	ALL	301513.12	4018582.83	6.80370E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6650E-03	0.00E+00
125	ALL	301565.58	4018607.10	5.31340E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8622E-03	0.00E+00
126	ALL	301595.83	4018640.95	4.70110E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5323E-03	0.00E+00
127	ALL	301626.08	4018674.80	4.16900E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2457E-03	0.00E+00
128	ALL	301656.33	4018708.65	3.68530E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9851E-03	0.00E+00
129	ALL	301358.34	4018487.42	2.41590E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3014E-02	0.00E+00
130	ALL	301412.46	4018489.71	1.24860E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.7260E-03	0.00E+00
131	ALL	301464.50	4018506.07	8.61730E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6419E-03	0.00E+00
132	ALL	301512.36	4018516.71	6.58640E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5479E-03	0.00E+00
133	ALL	301560.22	4018527.34	5.27000E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8388E-03	0.00E+00
134	ALL	301615.80	4018555.72	4.25220E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2906E-03	0.00E+00
135	ALL	301633.16	4018587.49	4.01960E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1652E-03	0.00E+00
136	ALL	301665.83	4018624.05	3.58570E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9315E-03	0.00E+00
137	ALL	301698.50	4018660.61	3.18460E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7155E-03	0.00E+00
138	ALL	301731.18	4018697.17	2.81220E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5148E-03	0.00E+00
139	ALL	301650.42	4018463.95	3.58440E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9308E-03	0.00E+00
140	ALL	301681.83	4018499.10	3.30090E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7781E-03	0.00E+00
141	ALL	301713.25	4018534.25	3.02600E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6300E-03	0.00E+00
142	ALL	301744.66	4018569.41	2.76150E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4875E-03	0.00E+00
143	ALL	301776.08	4018604.56	2.50740E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3507E-03	0.00E+00
144	ALL	301807.49	4018639.71	2.26400E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2196E-03	0.00E+00
145	ALL	301467.66	4018465.95	7.96510E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2906E-03	0.00E+00
146	ALL	301515.04	4018464.61	6.14750E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3115E-03	0.00E+00
147	ALL	301613.97	4018508.44	4.18970E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2569E-03	0.00E+00
148	ALL	301611.09	4018478.77	4.15450E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2379E-03	0.00E+00
149	ALL	301665.33	4018551.00	3.55200E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9134E-03	0.00E+00
150	ALL	301754.73	4018455.95	2.61690E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4096E-03	0.00E+00
151	ALL	301832.00	4018882.42	1.70420E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1802E-04	0.00E+00
152	ALL	301832.00	4018598.35	2.14160E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1536E-03	0.00E+00
153	ALL	301832.00	4018551.00	2.16020E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1636E-03	0.00E+00
154	ALL	301832.00	4018503.66	2.16180E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1645E-03	0.00E+00
155	ALL	301819.37	4018444.04	2.20770E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1892E-03	0.00E+00
156	ALL	301371.05	4018791.22	2.16320E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1653E-02	0.00E+00
157	ALL	301376.12	4018868.74	2.54500E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3709E-02	0.00E+00
158	ALL	301401.20	4018953.77	2.84700E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5336E-02	0.00E+00
159	ALL	301895.31	4018472.79	1.85440E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.9892E-04	0.00E+00
160	ALL	301945.31	4018473.00	1.66140E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.9492E-04	0.00E+00
161	ALL	301917.40	4018541.89	1.75220E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.4383E-04	0.00E+00
162	ALL	302004.41	4018434.90	1.47670E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.9545E-04	0.00E+00
163	ALL	302011.05	4018475.57	1.45260E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.8246E-04	0.00E+00
164	ALL	301981.28	4018549.06	1.51850E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.1796E-04	0.00E+00
165	ALL	301915.38	4018638.86	1.70000E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1576E-04	0.00E+00
166	ALL	302046.18	4018437.25	1.36540E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3549E-04	0.00E+00
167	ALL	302077.09	4018477.37	1.28350E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.9136E-04	0.00E+00
168	ALL	302046.08	4018553.92	1.33060E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1673E-04	0.00E+00
169	ALL	302015.07	4018630.47	1.36760E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3670E-04	0.00E+00
170	ALL	301961.93	4018685.75	1.48250E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.9856E-04	0.00E+00
171	ALL	301811.39	4018753.75	2.08530E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1233E-03	0.00E+00
172	ALL	302114.23	4018438.90	1.21190E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.5282E-04	0.00E+00
173	ALL	302123.96	4018486.34	1.18070E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3601E-04	0.00E+00
174	ALL	302111.42	4018557.48	1.17910E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3515E-04	0.00E+00
175	ALL	302079.52	4018636.21	1.20340E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4824E-04	0.00E+00
176	ALL	302008.91	4018732.44	1.29540E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.9778E-04	0.00E+00
177	ALL	301931.49	4018767.41	1.49130E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0333E-04	0.00E+00
178	ALL	301815.36	4018819.87	1.92850E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0388E-03	0.00E+00
179	ALL	302241.82	4018482.84	9.83750E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2992E-04	0.00E+00
180	ALL	302224.38	4018525.90	9.95350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3617E-04	0.00E+00
181	ALL	302206.93	4018568.96	1.00500E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4136E-04	0.00E+00
182	ALL	302189.49	4018612.02	1.01230E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4532E-04	0.00E+00
183	ALL	302172.05	4018655.08	1.01710E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4791E-04	0.00E+00
184	ALL	302154.60	4018698.14	1.01920E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4900E-04	0.00E+00
185	ALL	302137.16	4018741.20	1.01820E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4847E-04	0.00E+00
186	ALL	302077.37	4018803.38	1.07260E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7775E-04	0.00E+00
187	ALL	302035.03	4018822.51	1.13870E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1337E-04	0.00E+00
188	ALL	301992.69	4018841.63	1.21410E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.5398E-04	0.00E+00
189	ALL	301950.35	4018860.76	1.30100E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.0082E-04	0.00E+00
190	ALL	302259.27	4018439.78	9.70480E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2277E-04	0.00E+00
191	ALL	302259.46	4018392.56	9.79170E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2745E-04	0.00E+00
192	ALL	302259.65	4018345.34	9.84700E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3043E-04	0.00E+00
193	ALL	302259.85	4018298.13	9.87020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3168E-04	0.00E+00
194	ALL	302260.04	4018250.91	9.86000E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3113E-04	0.00E+00
195	ALL	302260.23	4018203.69	9.81670E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2880E-04	0.00E+00
196	ALL	302260.43	4018156.48	9.74070E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2471E-04	0.00E+00
197	ALL	301792.67	4017770.88	9.33110E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0264E-04	0.00E+00
198	ALL	301875.32	4017803.58	1.00330E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4045E-04	0.00E+00
199	ALL	302057.74	4017909.98	1.05500E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.6831E-04	0.00E+00
200	ALL	302091.97	4017992.01	1.09580E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9030E-04	0.00E+00
201	ALL	301703.45	4017755.62	8.52270E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5909E-04	0.00E+00
202	ALL	301655.55	4017756.71	8.12040E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.3742E-04	0.00E+00
203	ALL	301607.66	4017757.80	7.62680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1083E-04	0.00E+00
204	ALL	301559.76	4017758.89	7.05430E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7999E-04	0.00E+00
205	ALL	301511.87	4017759.98	6.42240E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4596E-04	0.00E+00
206	ALL	301463.98	4017761.07	5.75610E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.1007E-04	0.00E+00
207	ALL	301416.08	4017762.15	5.08230E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7377E-04	0.00E+00
208	ALL	301368.19	4017763.24	4.42750E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3849E-04	0.00E+00
209	ALL	301320.30	4017764.33	3.81370E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0543E-04	0.00E+00
210	ALL	301272.40	4017765.42	3.25700E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7545E-04	0.00E+00
211	ALL	301224.51	4017766.51	2.76580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4899E-04	0.00E+00
212	ALL	301176.61	4017767.60	2.34160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2613E-04	0.00E+00
213	ALL	301128.72	4017768.69	1.98060E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0669E-04	0.00E+00
214	ALL	301080.83	4017769.78	1.67580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0273E-05	0.00E+00
215	ALL	301032.93	4017770.86	1.41970E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.6474E-05	0.00E+00
216	ALL	300985.04	4017771.95	1.20510E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4918E-05	0.00E+00
217	ALL	301789.25	4017670.45	7.62170E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1056E-04	0.00E+00
218	ALL	301869.60	4017702.24	8.42750E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5397E-04	0.00E+00
219	ALL	301949.96	4017734.03	8.94550E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8187E-04	0.00E+00
220	ALL	302030.32	4017765.81	9.16780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9384E-04	0.00E+00
221	ALL	302127.31	4017837.47	9.38260E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0542E-04	0.00E+00
222	ALL	302160.59	4017917.22	9.74090E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2471E-04	0.00E+00
223	ALL	302193.87	4017996.98	9.91190E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3393E-04	0.00E+00
224	ALL	302227.15	4018076.73	9.90580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3360E-04	0.00E+00
225	ALL	301701.17	4017655.65	6.78110E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6528E-04	0.00E+00
226	ALL	301653.28	4017656.74	6.37220E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4325E-04	0.00E+00
227	ALL	301605.39	4017657.83	5.91260E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.1849E-04	0.00E+00
228	ALL	301557.49	4017658.91	5.41520E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9170E-04	0.00E+00
229	ALL	301509.60	4017660.00	4.89680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6378E-04	0.00E+00
230	ALL	301461.70	4017661.09	4.37470E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3565E-04	0.00E+00
231	ALL	301413.81	4017662.18	3.86590E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0825E-04	0.00E+00
232	ALL	301365.92	4017663.27	3.38530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8236E-04	0.00E+00
233	ALL	301318.02	4017664.36	2.94360E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5857E-04	0.00E+00
234	ALL	301270.13	4017665.45	2.54760E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3723E-04	0.00E+00
235	ALL	301222.24	4017666.54	2.19950E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1848E-04	0.00E+00
236	ALL	301174.34	4017667.62	1.89720E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0220E-04	0.00E+00
237	ALL	301126.45	4017668.71	1.63710E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.8185E-05	0.00E+00
238	ALL	301078.55	4017669.80	1.41380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.6157E-05	0.00E+00
239	ALL	301030.66	4017670.89	1.22200E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.5824E-05	0.00E+00
240	ALL	300982.77	4017671.98	1.05750E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.6962E-05	0.00E+00
241	ALL	300920.65	4018052.82	1.41890E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.6434E-05	0.00E+00
242	ALL	300753.09	4018350.56	1.39770E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.5288E-05	0.00E+00
243	ALL	300799.54	4018791.53	5.25120E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8287E-04	0.00E+00
244	ALL	300884.48	4018018.30	1.14520E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1690E-05	0.00E+00
245	ALL	300838.59	4017971.24	9.03710E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8680E-05	0.00E+00
246	ALL	300954.82	4017992.75	1.49580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0577E-05	0.00E+00
247	ALL	300791.92	4017924.53	7.37320E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9717E-05	0.00E+00
248	ALL	300869.77	4017890.16	9.23200E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9730E-05	0.00E+00
249	ALL	300610.03	4018140.62	6.30230E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3949E-05	0.00E+00
250	ALL	300744.80	4017878.01	6.18050E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3292E-05	0.00E+00
251	ALL	300824.88	4017842.66	7.58950E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0882E-05	0.00E+00
252	ALL	300904.96	4017807.31	9.55510E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1470E-05	0.00E+00
253	ALL	300595.41	4018229.87	7.26100E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9113E-05	0.00E+00
254	ALL	300596.57	4018278.31	8.05120E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.3370E-05	0.00E+00
255	ALL	300597.73	4018326.74	8.95630E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8245E-05	0.00E+00
256	ALL	300598.89	4018375.17	9.95930E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3648E-05	0.00E+00
257	ALL	300600.05	4018423.60	1.10430E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9488E-05	0.00E+00

258	ALL	300601.21	4018472.04	1.22080E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.5758E-05	0.00E+00
259	ALL	300602.37	4018520.47	1.34590E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.2500E-05	0.00E+00
260	ALL	300603.54	4018568.90	1.47980E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.9712E-05	0.00E+00
261	ALL	300604.70	4018617.34	1.62230E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.7387E-05	0.00E+00
262	ALL	300605.86	4018665.77	1.77380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5547E-05	0.00E+00
263	ALL	300607.02	4018714.20	1.93290E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0412E-04	0.00E+00
264	ALL	300608.18	4018762.63	2.09610E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1291E-04	0.00E+00
265	ALL	300609.34	4018811.07	2.25820E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2164E-04	0.00E+00
266	ALL	300610.50	4018859.50	2.41300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2998E-04	0.00E+00
267	ALL	300511.54	4018139.19	5.41770E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9184E-05	0.00E+00
268	ALL	300528.81	4018094.54	5.16290E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7811E-05	0.00E+00
269	ALL	300546.08	4018049.89	4.96480E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6744E-05	0.00E+00
270	ALL	300563.35	4018005.24	4.81560E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5940E-05	0.00E+00
271	ALL	300580.61	4017960.59	4.70890E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5366E-05	0.00E+00
272	ALL	300597.88	4017915.95	4.63700E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4978E-05	0.00E+00
273	ALL	300615.15	4017871.30	4.59870E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4772E-05	0.00E+00
274	ALL	300676.21	4017807.31	4.96140E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6726E-05	0.00E+00
275	ALL	300720.00	4017787.98	5.42820E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9240E-05	0.00E+00
276	ALL	300763.80	4017768.65	6.00180E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.2330E-05	0.00E+00
277	ALL	300807.59	4017749.31	6.69270E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6052E-05	0.00E+00
278	ALL	300851.39	4017729.98	7.50220E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0412E-05	0.00E+00
279	ALL	300895.18	4017710.65	8.42370E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5376E-05	0.00E+00
280	ALL	300938.97	4017691.31	9.45080E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0909E-05	0.00E+00
281	ALL	300494.27	4018183.84	5.72920E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0861E-05	0.00E+00
282	ALL	300495.44	4018232.27	6.27870E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3821E-05	0.00E+00
283	ALL	300496.60	4018280.70	6.90040E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7171E-05	0.00E+00
284	ALL	300497.76	4018329.14	7.58150E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0839E-05	0.00E+00
285	ALL	300498.92	4018377.57	8.30380E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4730E-05	0.00E+00
286	ALL	300500.08	4018426.00	9.06080E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8808E-05	0.00E+00
287	ALL	300501.24	4018474.43	9.85130E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3066E-05	0.00E+00
288	ALL	300502.40	4018522.87	1.06770E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7511E-05	0.00E+00
289	ALL	300503.57	4018571.30	1.15380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2150E-05	0.00E+00
290	ALL	300504.73	4018619.73	1.24350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6982E-05	0.00E+00
291	ALL	300505.89	4018668.17	1.33750E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.2049E-05	0.00E+00
292	ALL	300507.05	4018716.60	1.43760E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.7441E-05	0.00E+00
293	ALL	300508.21	4018765.03	1.54340E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.3138E-05	0.00E+00
294	ALL	300509.37	4018813.46	1.65270E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.9029E-05	0.00E+00
295	ALL	300510.53	4018861.90	1.76180E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.4905E-05	0.00E+00
296	ALL	301035.86	4018923.38	2.82250E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5204E-03	0.00E+00
297	ALL	301084.62	4018923.38	3.74210E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0158E-03	0.00E+00
298	ALL	301133.39	4018923.38	4.65690E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5085E-03	0.00E+00
299	ALL	301182.15	4018923.38	6.31140E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3998E-03	0.00E+00
300	ALL	301109.08	4018920.70	4.31010E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3217E-03	0.00E+00
301	ALL	301059.16	4018949.91	2.61830E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4104E-03	0.00E+00
302	ALL	301107.92	4018949.91	3.30200E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7787E-03	0.00E+00
303	ALL	301156.69	4018949.91	4.28530E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3084E-03	0.00E+00
304	ALL	301184.98	4018942.67	5.78900E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.1183E-03	0.00E+00
305	ALL	301059.16	4018999.91	1.98210E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0677E-03	0.00E+00
306	ALL	301107.92	4018999.91	2.48640E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3393E-03	0.00E+00
307	ALL	301156.69	4018999.91	3.40480E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8341E-03	0.00E+00
308	ALL	301183.72	4019003.06	4.59980E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4778E-03	0.00E+00
309	ALL	301059.16	4019049.91	1.65110E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.8940E-04	0.00E+00
310	ALL	301091.99	4019032.39	2.02800E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0924E-03	0.00E+00
311	ALL	301153.73	4019029.20	3.03670E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6358E-03	0.00E+00
312	ALL	301192.85	4019028.49	5.11620E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7559E-03	0.00E+00
313	ALL	301059.16	4019116.58	1.39730E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.5271E-04	0.00E+00
314	ALL	301107.92	4019116.58	1.78870E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.6353E-04	0.00E+00
315	ALL	301149.40	4019084.04	2.58500E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3925E-03	0.00E+00
316	ALL	301191.57	4019074.93	4.64460E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5019E-03	0.00E+00
317	ALL	301059.16	4019183.24	1.23570E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6562E-04	0.00E+00
318	ALL	301107.92	4019183.24	1.58960E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.5625E-04	0.00E+00
319	ALL	301156.69	4019183.24	2.34430E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2628E-03	0.00E+00
320	ALL	301183.59	4019223.63	3.03010E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6322E-03	0.00E+00
321	ALL	300713.75	4019096.61	3.98310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1456E-04	0.00E+00
322	ALL	300679.34	4019017.57	3.50680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8890E-04	0.00E+00
323	ALL	300644.92	4018938.53	2.95650E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5926E-04	0.00E+00
324	ALL	300966.73	4019332.13	7.02230E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7827E-04	0.00E+00
325	ALL	300748.42	4019243.23	4.18660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2552E-04	0.00E+00
326	ALL	300704.76	4019225.46	3.72410E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0060E-04	0.00E+00
327	ALL	300642.28	4019164.45	3.14800E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6957E-04	0.00E+00
328	ALL	300623.46	4019121.23	2.97380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6019E-04	0.00E+00
329	ALL	300604.64	4019078.01	2.78350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4994E-04	0.00E+00
330	ALL	300585.82	4019034.79	2.58000E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3898E-04	0.00E+00
331	ALL	300567.00	4018991.56	2.36920E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2762E-04	0.00E+00
332	ALL	300548.18	4018948.34	2.15880E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1629E-04	0.00E+00
333	ALL	300529.35	4018905.12	1.95480E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0530E-04	0.00E+00
334	ALL	301004.70	4019373.50	7.30200E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9334E-04	0.00E+00
335	ALL	301053.46	4019373.50	8.43410E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5432E-04	0.00E+00
336	ALL	301102.23	4019373.50	9.88080E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3225E-04	0.00E+00
337	ALL	301150.99	4019373.50	1.16530E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2771E-04	0.00E+00
338	ALL	301199.76	4019373.50	1.34520E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.2460E-04	0.00E+00
339	ALL	301157.66	4018869.28	1.15520E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2230E-03	0.00E+00
340	ALL	301103.26	4018875.74	8.53910E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5998E-03	0.00E+00
341	ALL	301048.85	4018875.89	6.15360E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3148E-03	0.00E+00
342	ALL	301052.40	4018920.46	3.22930E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7395E-03	0.00E+00
343	ALL	300710.20	4019155.19	3.88040E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0902E-04	0.00E+00
344	ALL	301207.43	4019320.02	1.97550E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0641E-03	0.00E+00
345	ALL	301279.55	4019317.96	2.56390E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3811E-03	0.00E+00
346	ALL	301126.59	4019318.73	1.29510E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.9761E-04	0.00E+00
347	ALL	301227.84	4019364.09	1.52130E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.1950E-04	0.00E+00
348	ALL	301322.74	4019343.32	1.96280E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0573E-03	0.00E+00
349	ALL	301079.17	4019325.41	1.03050E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5512E-04	0.00E+00
350	ALL	301215.98	4019396.39	1.22610E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6044E-04	0.00E+00
351	ALL	301288.10	4019394.33	1.33090E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1693E-04	0.00E+00
352	ALL	301188.62	4019435.29	9.80270E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2804E-04	0.00E+00
353	ALL	301131.03	4019413.13	9.49650E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1155E-04	0.00E+00
354	ALL	301030.72	4019329.74	8.57160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6173E-04	0.00E+00
355	ALL	301253.47	4019445.34	9.98570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3790E-04	0.00E+00
356	ALL	301325.59	4019443.28	1.02640E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5290E-04	0.00E+00
357	ALL	301187.32	4019500.70	7.69980E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1476E-04	0.00E+00
358	ALL	301123.34	4019476.08	7.67140E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1324E-04	0.00E+00
359	ALL	301059.35	4019451.45	7.18410E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8699E-04	0.00E+00
360	ALL	301013.65	4019407.73	7.02870E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7861E-04	0.00E+00
361	ALL	301255.37	4019511.98	7.70310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1494E-04	0.00E+00
362	ALL	301191.22	4019568.11	6.31640E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4025E-04	0.00E+00
363	ALL	301131.24	4019545.02	6.41000E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4529E-04	0.00E+00
364	ALL	301071.26	4019521.94	6.25800E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3710E-04	0.00E+00
365	ALL	301011.27	4019498.86	5.88670E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.1710E-04	0.00E+00
366	ALL	301257.28	4019578.62	6.29000E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3882E-04	0.00E+00
367	ALL	301191.13	4019633.98	5.36020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8874E-04	0.00E+00
368	ALL	301127.14	4019609.35	5.46380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9432E-04	0.00E+00
369	ALL	301063.16	4019584.73	5.40220E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9100E-04	0.00E+00
370	ALL	300999.18	4019560.11	5.15630E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7776E-04	0.00E+00
371	ALL	301259.18	4019645.26	5.32540E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8687E-04	0.00E+00
372	ALL	301331.30	4019643.20	5.38070E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8984E-04	0.00E+00
373	ALL	301193.26	4019733.66	4.36570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3517E-04	0.00E+00
374	ALL	301127.82	4019708.47	4.45400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3993E-04	0.00E+00
375	ALL	301062.38	4019683.29	4.46190E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4035E-04	0.00E+00
376	ALL	300996.94	4019658.11	4.35550E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3462E-04	0.00E+00
377	ALL	300931.50	4019632.93	4.14510E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2328E-04	0.00E+00
378	ALL	300852.04	4019575.62	3.93310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1186E-04	0.00E+00
379	ALL	300823.98	4019511.36	4.01760E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1641E-04	0.00E+00
380	ALL	300795.93	4019447.10	4.04660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1798E-04	0.00E+00
381	ALL	300767.87	4019382.85	4.01090E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1605E-04	0.00E+00
382	ALL	300697.54	4019334.04	3.48380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8766E-04	0.00E+00
383	ALL	301262.04	4019745.22	4.33860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3371E-04	0.00E+00
384	ALL	301334.16	4019743.16	4.37410E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3562E-04	0.00E+00
385	ALL	301028.80	4018880.00	4.47800E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4121E-03	0.00E+00
386	ALL	301085.56	4018876.00	7.87630E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2428E-03	0.00E+00
387	ALL	301130.33	4018869.01	1.08630E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.8518E-03	0.00E+00
388	ALL	301179.09	4018869.01	1.23980E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6783E-03	0.00E+00
389	ALL	301360.80	4018470.65	2.17610E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1722E-02	0.00E+00
390	ALL	301360.02	4018521.48	2.51250E-05	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3534E-02	0.00E+00
391	ALL	301512.90	4018486.99	6.38540E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4396E-03	0.00E+00
392	ALL	301570.27	4018482.66	4.88660E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6323E-03	0.00E+00
393	ALL	301562.69	4018463.89	4.95430E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6687E-03	0.00E+00
394	ALL	301681.29	4017451.29	4.31150E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3225E-04	0.00E+00

HARP2 - HRACalc (dated 22118) 6/22/2023 8:30:09 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: HighEnd

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 2.75

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0.75
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True

Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

```
*********************************
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment.  Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionCancerRisk.csv
Cancer risk total by receptor saved to: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionNCChronicRisk.csv
Chronic risk total by receptor saved to: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionNCAcuteRisk.csv
Acute risk total by receptor saved to: F:\Move\0014.001\V2\HARP\01 - EM UNMIT CON\hra\EM Unmit ConstructionNCAcuteRiskSumByRec.csv
HRA ran successfully
```

Health Risk Assessment

Mitigated Construction

Eagle Meadows (Mitigated Construction - Tier 4 Interim Scenario)

Estimation of Annual Onsite Construction Emissions

Start of Construction	10/2/2023	
End of Construction	6/30/2026	**Total**
Number of Days	1,002	1,002
Number of Hours	24,048	24,048

Size of the construction area source: **187,484.2** **sq-meters**

Run	**Year**	**On-site Construction Activity**	**Mitigated Tier 4 On-site DPM (pounds)**
Site Work	2023	On-site Site Preparation	2.9880
Site Work	2023	On-site Grading	6.7837
Site Work	2024	On-site Grading	6.8146
Site Work	2024	Paving	6.3733
Home Construction	2023	On-site Building Construction 2023	4.0825
Home Construction	2024	On-site Building Construction 2024	34.1186
Home Construction	2024	On-site Paving 2024	6.3733
Home Construction	2025	On-site Building Construction 2025	31.9975
Home Construction	2026	On-site Building Construction 2026	14.9138
Home Construction	2026	On-site Architectural Coating	1.2734

Total Unmitigated DPM (On-site) 1.157E+02 pounds

Factor in AERMOD to Account for 5 days per week/8 hours per day: 4.2

Average Emission for AREA1	5.254E+04	grams
	6.068E-04	grams/sec
	3.237E-09	grams/m2-sec

Pounds/Construction Period	1.157E+02
Pounds/Day	1.155E-01
Pounds/Hour	4.812E-03
Pounds/Year	4.215E+01
Years	2.74521

Eagle Meadows (Mitigated Construction - Tier 4 Interim Scenario)

Estimation of Annual Offsite Construction DPM Emissions (Mitigated- No Change Compared to Unmitigated Scenario)

Start of Construction	10/2/2023	
End of Construction	6/30/2026	**Total**
Number of Days	1,002	1,002
Number of Hours	24,048	24,048

	2023	2023	2024	2024	2023	2024	2024	2025	2026	2026	
	Site Work	Site Work	Site Work	Site Work	Home Construction	Home Construction	Home Construction	Home Construction	Home Construction	Home Construction	
Construction Trip Type	Site Preparation	Grading	Grading	Paving	Building Construction	Building Construction	Paving	Building Construction	Building Construction	Architectural Coating	**Total (pounds)**
Total (pounds)	0.01997	0.42581	0.45086	0.036618782	0.228123333	2.03642	0.06778	2.03085	1.00708	0.03480	**6.33832**

	Haul Truck	**Vendor Truck**	**Worker**	**Total**
Site Preparation 2023 (Site Work)	525.00	60.00	0.00	585.00
Grading 2023 (Site Work)	700.00	70.00	291.67	1061.67
Grading 2024 (Site Work)	780.00	78.00	325.00	1183.00
Paving 2024 (Site Work)	825.00	110.00	0.00	935.00
Building Construction 2023 (Home Construction)	2526.48	750.22	0.00	3276.70
Building Construction 2024 (Home Construction)	22825.44	6777.89	0.00	29603.33
Building Construction 2025 (Home Construction)	22738.32	6752.02	0.00	29490.34
Building Construction 2026 (Home Construction)	11238.48	3337.20	0.00	14575.68
Paving 2024 (Home Construction)	825.00	220.00	0.00	1045.00
Architectural Coating 2026 (Home Construction)	958.32	110.00	0.00	1068.32
Total	**63942.04**	**18265.33**	**616.67**	**82824.04**

	Haul Truck (pounds)	**Vendor Truck (pounds)**	**Worker (pounds)**	**Total (pounds)**	
Total DPM	4.893E+00	1.398E+00	4.719E-02	6.338E+00	
Average Emissions					
Grams	2.222E+03	6.346E+02	2.143E+01		
Grams/sec	2.566E-05	7.330E-06	2.475E-07		
Default Distance	20	6.8	7.7	Default Vehicle Travel Distance in CalEEMod	
Vehicle Travel Distances in the Construction HRA (miles)					
Off-site (mi)	0.44	0.44	0.44	miles	
On-site (mi)	0.96	0.96	0.96	miles	
Trip Distribution (percent)					
Off-site Road Segment	100.0%	100.0%	100.0%	off-site	
On-site Road Segment	100.0%	100.0%	100.0%	on-site	
Total Average Offsite Vehicle Emissions Along Travel Distance (g/sec)				**Total**	
Off-site Road Segment	5.635E-07	4.735E-07	1.412E-08	1.051E-06	
On-site Road Segment	1.233E-06	1.036E-06	3.089E-08	2.300E-06	
	Grams/sec	Pounds/Hour	Pounds/Day	Pounds/year	Tons/year
Off-site Road Segment	1.051E-06	8.342E-06	2.002E-04	7.308E-02	3.654E-05
On-site Road Segment	2.300E-06	1.826E-05	4.381E-04	1.599E-01	7.996E-05

Health Risk Summary - Tier 4 Mitigated Construction (Summary of HARP2 Results)

Eagle Meadows Residential Project (Mitigated Construction - Tier 4 Interim Scenario)

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	4.9774E-06	4.98	2.6812E-03	0.00E+00

	X	Y
MEI UTM	301401.20	4018953.77
Lat/Long	36°17'42.5"N	119°12'41.9"W
Receptor # 158		

*HARP - HRACalc v22118 6/22/2023 12:13:41 PM - Cancer Risk - Input File: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction (T4)HRAInput.hra
*HARP - HRACalc v22118 6/22/2023 12:13:41 PM - Acute Risk - Input File: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction (T4)HRAInput.hra
*HARP - HRACalc v22118 6/22/2023 12:13:41 PM - Chronic Risk - Input File: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction (T4)HRAInput.hra

Health Risk Summary - Tier 4 Mitigated Construction (Summary of HARP2 Results)

Eagle Meadows Residential Project (Mitigated Construction - Tier 4 Interim Scenario)

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	4.9774E-06	4.98	2.6812E-03	0.00E+00

	X	Y
MEI UTM	301401.20	4018953.77
Lat/Long	36°17'42.5"N 119°12'41.9"W	
Receptor # 158		

*HARP - HRACalc v22118 6/22/2023 12:13:41 PM - Cancer Risk - Input File: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction (T4)HRAInput.hra
*HARP - HRACalc v22118 6/22/2023 12:13:41 PM - Acute Risk - Input File: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction (T4)HRAInput.hra
*HARP - HRACalc v22118 6/22/2023 12:13:41 PM - Chronic Risk - Input File: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction (T4)HRAInput.hra

REC	GRP	X	Y	RISK_SUM	SCENARIO	MAXHI NonCancerChronic	MAXHI Acute
1	ALL	301379.58	4019196.68	1.43870E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.7497E-04	0.00E+00
2	ALL	301381.93	4019160.36	2.00930E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0824E-03	0.00E+00
3	ALL	301368.18	4019323.61	3.89180E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0964E-04	0.00E+00
4	ALL	301429.21	4019192.24	8.68860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6803E-04	0.00E+00
5	ALL	301421.92	4019140.22	1.43450E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.7270E-04	0.00E+00
6	ALL	301437.28	4019323.29	3.21600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7324E-04	0.00E+00
7	ALL	301400.86	4019360.04	2.75620E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4847E-04	0.00E+00
8	ALL	301349.73	4019382.21	2.53020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3629E-04	0.00E+00
9	ALL	301470.54	4019211.27	5.68940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0647E-04	0.00E+00
10	ALL	301471.91	4019141.20	8.56630E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6144E-04	0.00E+00
11	ALL	301540.74	4019278.80	3.16790E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7064E-04	0.00E+00
12	ALL	301485.10	4019329.40	2.74380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4780E-04	0.00E+00
13	ALL	301434.66	4019395.97	2.15140E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1589E-04	0.00E+00
14	ALL	301380.13	4019419.63	2.00530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0802E-04	0.00E+00
15	ALL	301520.53	4019212.25	4.37840E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3585E-04	0.00E+00
16	ALL	301521.90	4019142.18	5.96320E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.2122E-04	0.00E+00
17	ALL	301593.67	4019278.31	2.73890E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4754E-04	0.00E+00
18	ALL	301547.89	4019339.83	2.27570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2259E-04	0.00E+00
19	ALL	301522.15	4019400.66	1.88100E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0132E-04	0.00E+00
20	ALL	301478.99	4019444.22	1.67610E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0289E-05	0.00E+00
21	ALL	301418.39	4019470.50	1.57460E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.4818E-05	0.00E+00
22	ALL	301357.79	4019496.78	1.44760E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.7979E-05	0.00E+00
23	ALL	301587.18	4019213.55	3.34470E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8017E-04	0.00E+00
24	ALL	301588.56	4019143.49	4.18210E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2528E-04	0.00E+00
25	ALL	301651.45	4019265.97	2.31150E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2452E-04	0.00E+00
26	ALL	301616.96	4019335.43	2.00870E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0820E-04	0.00E+00
27	ALL	301592.83	4019392.46	1.74990E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.4260E-05	0.00E+00
28	ALL	301568.70	4019449.49	1.51630E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.1680E-05	0.00E+00
29	ALL	301528.23	4019490.32	1.38650E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4685E-05	0.00E+00
30	ALL	301471.42	4019514.96	1.32220E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1221E-05	0.00E+00
31	ALL	301414.61	4019539.60	1.24350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6982E-05	0.00E+00
32	ALL	301357.80	4019564.24	1.16210E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2598E-05	0.00E+00
33	ALL	301653.84	4019214.86	2.65900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4323E-04	0.00E+00
34	ALL	301655.21	4019144.79	3.19850E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7229E-04	0.00E+00
35	ALL	301720.07	4019273.32	1.92050E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0345E-04	0.00E+00
36	ALL	301681.20	4019342.44	1.74630E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.4068E-05	0.00E+00
37	ALL	301655.46	4019403.27	1.55580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.3805E-05	0.00E+00
38	ALL	301629.72	4019464.10	1.37330E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3977E-05	0.00E+00
39	ALL	301573.69	4019538.07	1.18540E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3852E-05	0.00E+00
40	ALL	301513.09	4019564.35	1.13330E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1047E-05	0.00E+00
41	ALL	301452.49	4019590.64	1.07080E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7679E-05	0.00E+00
42	ALL	301391.90	4019616.92	1.00720E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4258E-05	0.00E+00
43	ALL	301720.49	4019216.17	2.19750E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1837E-04	0.00E+00
44	ALL	301721.86	4019146.10	2.58020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3899E-04	0.00E+00
45	ALL	301806.62	4019284.26	1.59940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.6153E-05	0.00E+00
46	ALL	301780.30	4019346.48	1.47920E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.9683E-05	0.00E+00
47	ALL	301753.98	4019408.69	1.35570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3026E-05	0.00E+00
48	ALL	301727.66	4019470.90	1.23160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6343E-05	0.00E+00
49	ALL	301701.34	4019533.11	1.11030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9810E-05	0.00E+00
50	ALL	301644.03	4019608.77	9.80450E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2814E-05	0.00E+00
51	ALL	301582.05	4019635.64	9.42910E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0792E-05	0.00E+00
52	ALL	301520.08	4019662.52	8.98210E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8384E-05	0.00E+00
53	ALL	301458.10	4019689.40	8.52150E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5903E-05	0.00E+00
54	ALL	301396.13	4019716.28	8.09150E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.3587E-05	0.00E+00
55	ALL	301820.47	4019218.12	1.76560E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5108E-05	0.00E+00
56	ALL	301821.84	4019148.06	2.00340E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0792E-04	0.00E+00
57	ALL	301338.60	4019206.36	2.93690E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5820E-03	0.00E+00
58	ALL	301435.06	4019091.43	1.74470E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3982E-04	0.00E+00
59	ALL	301439.86	4019005.57	2.37140E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2774E-03	0.00E+00
60	ALL	301484.98	4019094.23	9.89000E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3275E-04	0.00E+00
61	ALL	301489.78	4019008.37	1.32510E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1378E-04	0.00E+00
62	ALL	301534.90	4019097.02	6.67030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5931E-04	0.00E+00
63	ALL	301539.71	4019011.16	8.67800E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6746E-04	0.00E+00
64	ALL	301587.22	4019056.89	5.59890E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0159E-04	0.00E+00
65	ALL	301653.79	4019060.62	4.02450E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1679E-04	0.00E+00
66	ALL	301720.35	4019064.34	3.11350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6771E-04	0.00E+00
67	ALL	301766.53	4019190.04	2.08790E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1247E-04	0.00E+00
68	ALL	301784.51	4019111.00	2.34640E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2639E-04	0.00E+00
69	ALL	301789.31	4019025.14	2.72520E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4680E-04	0.00E+00
70	ALL	301866.80	4019194.63	1.68920E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0994E-05	0.00E+00
71	ALL	301642.91	4019526.53	1.17120E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3087E-05	0.00E+00
72	ALL	301884.35	4019116.59	1.85660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0001E-04	0.00E+00
73	ALL	301889.16	4019030.73	2.11090E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1371E-04	0.00E+00
74	ALL	301437.67	4018924.94	2.68980E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4489E-03	0.00E+00
75	ALL	301488.77	4018961.65	1.48540E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0015E-04	0.00E+00
76	ALL	301486.53	4018885.28	1.59480E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.5908E-04	0.00E+00
77	ALL	301538.75	4018960.18	9.86490E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.3140E-04	0.00E+00
78	ALL	301536.51	4018883.81	1.10320E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9429E-04	0.00E+00
79	ALL	301589.85	4018996.90	6.51300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5083E-04	0.00E+00
80	ALL	301587.61	4018920.53	7.69180E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1434E-04	0.00E+00
81	ALL	301656.49	4018994.94	4.65690E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5086E-04	0.00E+00
82	ALL	301654.24	4018918.57	5.46070E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9415E-04	0.00E+00
83	ALL	301723.13	4018992.98	3.57900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9279E-04	0.00E+00
84	ALL	301720.88	4018916.61	4.14060E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2304E-04	0.00E+00
85	ALL	301788.64	4018952.83	3.09870E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6692E-04	0.00E+00
86	ALL	301786.40	4018876.46	3.48400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8767E-04	0.00E+00
87	ALL	301888.60	4018949.89	2.35700E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2696E-04	0.00E+00
88	ALL	301886.35	4018873.52	2.61160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4068E-04	0.00E+00
89	ALL	301425.74	4018872.07	2.78450E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4999E-03	0.00E+00
90	ALL	301473.33	4018837.19	1.69800E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1467E-04	0.00E+00
91	ALL	301525.80	4018836.76	1.19560E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4404E-04	0.00E+00
92	ALL	301571.81	4018817.81	9.20180E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9567E-04	0.00E+00
93	ALL	301584.04	4018871.58	8.33510E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4899E-04	0.00E+00
94	ALL	301632.57	4018790.04	6.91580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7254E-04	0.00E+00
95	ALL	301643.99	4018840.23	6.32870E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4091E-04	0.00E+00
96	ALL	301693.60	4018763.40	5.45010E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9358E-04	0.00E+00
97	ALL	301705.49	4018815.68	4.99040E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6882E-04	0.00E+00
98	ALL	301717.38	4018867.96	4.49420E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4209E-04	0.00E+00
99	ALL	301754.60	4018736.65	4.44970E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3969E-04	0.00E+00
100	ALL	301766.83	4018790.42	4.08170E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1987E-04	0.00E+00
101	ALL	301846.07	4018696.38	3.44780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8572E-04	0.00E+00
102	ALL	301856.14	4018740.67	3.24300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7469E-04	0.00E+00
103	ALL	301866.21	4018784.95	3.03030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6323E-04	0.00E+00
104	ALL	301876.28	4018829.23	2.81860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5183E-04	0.00E+00
105	ALL	301371.16	4018849.58	4.10030E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2087E-03	0.00E+00
106	ALL	301370.38	4018829.15	3.91680E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1099E-03	0.00E+00
107	ALL	301423.52	4018727.42	2.17570E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1720E-03	0.00E+00
108	ALL	301435.33	4018743.37	1.99010E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0720E-03	0.00E+00
109	ALL	301488.39	4018782.62	1.45590E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.8427E-04	0.00E+00
110	ALL	301363.53	4018739.87	4.27700E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3039E-03	0.00E+00
111	ALL	301387.32	4018683.95	3.13410E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6883E-03	0.00E+00
112	ALL	301435.18	4018694.58	1.98510E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0693E-03	0.00E+00
113	ALL	301499.38	4018723.49	1.32540E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1394E-04	0.00E+00
114	ALL	301532.05	4018760.05	1.13050E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0894E-04	0.00E+00
115	ALL	301368.51	4018614.32	4.05880E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1863E-03	0.00E+00
116	ALL	301417.50	4018627.96	2.31080E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2447E-03	0.00E+00
117	ALL	301473.51	4018627.40	1.51620E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.1671E-04	0.00E+00
118	ALL	301532.30	4018665.10	1.10090E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9305E-04	0.00E+00
119	ALL	301563.42	4018699.92	9.56540E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1526E-04	0.00E+00

120	ALL	301594.54	4018734.74	8.32980E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4870E-04	0.00E+00
121	ALL	301373.18	4018550.80	3.70740E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9971E-03	0.00E+00
122	ALL	301417.50	4018560.64	2.27000E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2228E-03	0.00E+00
123	ALL	301461.81	4018570.48	1.61350E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.6917E-04	0.00E+00
124	ALL	301513.12	4018582.83	1.19110E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4158E-04	0.00E+00
125	ALL	301565.58	4018607.10	9.30190E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0106E-04	0.00E+00
126	ALL	301595.83	4018640.95	8.22990E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4332E-04	0.00E+00
127	ALL	301626.08	4018674.80	7.29860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9316E-04	0.00E+00
128	ALL	301656.33	4018708.65	6.45220E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4756E-04	0.00E+00
129	ALL	301358.34	4018487.42	4.22690E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2769E-03	0.00E+00
130	ALL	301412.46	4018489.71	2.18530E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1771E-03	0.00E+00
131	ALL	301464.50	4018506.07	1.50840E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.1252E-04	0.00E+00
132	ALL	301512.36	4018516.71	1.15300E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2108E-04	0.00E+00
133	ALL	301560.22	4018527.34	9.22600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9698E-04	0.00E+00
134	ALL	301615.80	4018555.72	7.44450E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0101E-04	0.00E+00
135	ALL	301633.16	4018587.49	7.03720E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7907E-04	0.00E+00
136	ALL	301665.83	4018624.05	6.27780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3817E-04	0.00E+00
137	ALL	301698.50	4018660.61	5.57600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0036E-04	0.00E+00
138	ALL	301731.18	4018697.17	4.92430E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6526E-04	0.00E+00
139	ALL	301650.42	4018463.95	6.27570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3806E-04	0.00E+00
140	ALL	301681.83	4018499.10	5.77940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.1132E-04	0.00E+00
141	ALL	301713.25	4018534.25	5.29820E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8540E-04	0.00E+00
142	ALL	301744.66	4018569.41	4.83510E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6045E-04	0.00E+00
143	ALL	301776.08	4018604.56	4.39060E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3651E-04	0.00E+00
144	ALL	301807.49	4018639.71	3.96470E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1357E-04	0.00E+00
145	ALL	301467.66	4018465.95	1.39420E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.5104E-04	0.00E+00
146	ALL	301515.04	4018464.61	1.07620E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7971E-04	0.00E+00
147	ALL	301613.97	4018508.44	7.33520E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9513E-04	0.00E+00
148	ALL	301611.09	4018478.77	7.27350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9180E-04	0.00E+00
149	ALL	301665.33	4018551.00	6.21880E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3499E-04	0.00E+00
150	ALL	301754.73	4018455.95	4.58200E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4682E-04	0.00E+00
151	ALL	301832.00	4018882.42	2.98720E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6091E-04	0.00E+00
152	ALL	301832.00	4018598.35	3.75030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0202E-04	0.00E+00
153	ALL	301832.00	4018551.00	3.78270E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0376E-04	0.00E+00
154	ALL	301832.00	4018503.66	3.78540E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0391E-04	0.00E+00
155	ALL	301819.37	4018444.04	3.86580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0824E-04	0.00E+00
156	ALL	301371.05	4018791.22	3.78560E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0392E-03	0.00E+00
157	ALL	301376.12	4018868.74	4.45100E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3976E-03	0.00E+00
158	ALL	301401.20	4018953.77	4.97740E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6812E-03	0.00E+00
159	ALL	301895.31	4018472.79	3.24740E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7493E-04	0.00E+00
160	ALL	301945.31	4018473.00	2.90940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5672E-04	0.00E+00
161	ALL	301917.40	4018541.89	3.06850E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6529E-04	0.00E+00
162	ALL	302004.41	4018434.90	2.58610E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3931E-04	0.00E+00
163	ALL	302011.05	4018475.57	2.54390E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3703E-04	0.00E+00
164	ALL	301981.28	4018549.06	2.65940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4326E-04	0.00E+00
165	ALL	301915.38	4018638.86	2.97760E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6040E-04	0.00E+00
166	ALL	302046.18	4018437.25	2.39120E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2881E-04	0.00E+00
167	ALL	302077.09	4018477.37	2.24790E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2109E-04	0.00E+00
168	ALL	302046.08	4018553.92	2.33050E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2553E-04	0.00E+00
169	ALL	302015.07	4018630.47	2.39560E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2904E-04	0.00E+00
170	ALL	301961.93	4018685.75	2.59690E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3989E-04	0.00E+00
171	ALL	301811.39	4018753.75	3.65280E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9677E-04	0.00E+00
172	ALL	302114.23	4018438.90	2.12250E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1433E-04	0.00E+00
173	ALL	302123.96	4018486.34	2.06790E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1139E-04	0.00E+00
174	ALL	302111.42	4018557.48	2.06520E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1125E-04	0.00E+00
175	ALL	302079.52	4018636.21	2.10800E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1355E-04	0.00E+00
176	ALL	302008.91	4018732.44	2.26940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2225E-04	0.00E+00
177	ALL	301931.49	4018767.41	2.61290E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4075E-04	0.00E+00
178	ALL	301815.36	4018819.87	3.37900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8202E-04	0.00E+00
179	ALL	302241.82	4018482.84	1.72300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.2813E-05	0.00E+00
180	ALL	302224.38	4018525.90	1.74330E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3909E-05	0.00E+00
181	ALL	302206.93	4018568.96	1.76030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.4822E-05	0.00E+00
182	ALL	302189.49	4018612.02	1.77320E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5519E-05	0.00E+00
183	ALL	302172.05	4018655.08	1.78170E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5976E-05	0.00E+00
184	ALL	302154.60	4018698.14	1.78540E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.6172E-05	0.00E+00
185	ALL	302137.16	4018741.20	1.78380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.6086E-05	0.00E+00
186	ALL	302077.37	4018803.38	1.87930E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0123E-04	0.00E+00
187	ALL	302035.03	4018822.51	1.99530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0748E-04	0.00E+00
188	ALL	301992.69	4018841.63	2.12760E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1461E-04	0.00E+00
189	ALL	301950.35	4018860.76	2.28020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2283E-04	0.00E+00
190	ALL	302259.27	4018439.78	1.69970E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1559E-05	0.00E+00
191	ALL	302259.46	4018392.56	1.71490E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.2377E-05	0.00E+00
192	ALL	302259.65	4018345.34	1.72460E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.2898E-05	0.00E+00
193	ALL	302259.85	4018298.13	1.72860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3116E-05	0.00E+00
194	ALL	302260.04	4018250.91	1.72680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3019E-05	0.00E+00
195	ALL	302260.23	4018203.69	1.71920E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.2611E-05	0.00E+00
196	ALL	302260.43	4018156.48	1.70600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1895E-05	0.00E+00
197	ALL	301792.67	4017770.88	1.63480E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.8061E-05	0.00E+00
198	ALL	301875.32	4017803.58	1.75760E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.4677E-05	0.00E+00
199	ALL	302057.74	4017909.98	1.84790E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.9542E-05	0.00E+00
200	ALL	302091.97	4017992.01	1.91930E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0339E-04	0.00E+00
201	ALL	301703.45	4017755.62	1.49330E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0442E-05	0.00E+00
202	ALL	301655.55	4017756.71	1.42300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.6652E-05	0.00E+00
203	ALL	301607.66	4017757.80	1.33660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1999E-05	0.00E+00
204	ALL	301559.76	4017758.89	1.23640E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6603E-05	0.00E+00
205	ALL	301511.87	4017759.98	1.12590E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0648E-05	0.00E+00
206	ALL	301463.98	4017761.07	1.00930E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4368E-05	0.00E+00
207	ALL	301416.08	4017762.15	8.91390E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8016E-05	0.00E+00
208	ALL	301368.19	4017763.24	7.76820E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1845E-05	0.00E+00
209	ALL	301320.30	4017764.33	6.69430E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6060E-05	0.00E+00
210	ALL	301272.40	4017765.42	5.72040E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0814E-05	0.00E+00
211	ALL	301224.51	4017766.51	4.86110E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6185E-05	0.00E+00
212	ALL	301176.61	4017767.60	4.11900E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2188E-05	0.00E+00
213	ALL	301128.72	4017768.69	3.48750E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8786E-05	0.00E+00
214	ALL	301080.83	4017769.78	2.95440E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5914E-05	0.00E+00
215	ALL	301032.93	4017770.86	2.50620E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3500E-05	0.00E+00
216	ALL	300985.04	4017771.95	2.13080E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1478E-05	0.00E+00
217	ALL	301789.25	4017670.45	1.33550E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1938E-05	0.00E+00
218	ALL	301869.60	4017702.24	1.47650E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.9534E-05	0.00E+00
219	ALL	301949.96	4017734.03	1.56710E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.4415E-05	0.00E+00
220	ALL	302030.32	4017765.81	1.60590E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.6508E-05	0.00E+00
221	ALL	302127.31	4017837.47	1.64350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.8528E-05	0.00E+00
222	ALL	302160.59	4017917.22	1.70610E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1904E-05	0.00E+00
223	ALL	302193.87	4017996.98	1.73600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3514E-05	0.00E+00
224	ALL	302227.15	4018076.73	1.73490E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3454E-05	0.00E+00
225	ALL	301701.17	4017655.65	1.18840E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4014E-05	0.00E+00
226	ALL	301653.28	4017656.74	1.11680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0160E-05	0.00E+00
227	ALL	301605.39	4017657.83	1.03640E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5828E-05	0.00E+00
228	ALL	301557.49	4017658.91	9.49370E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1140E-05	0.00E+00
229	ALL	301509.60	4017660.00	8.58660E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6254E-05	0.00E+00
230	ALL	301461.70	4017661.09	7.67300E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1332E-05	0.00E+00
231	ALL	301413.81	4017662.18	6.78290E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6537E-05	0.00E+00
232	ALL	301365.92	4017663.27	5.94200E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.2008E-05	0.00E+00
233	ALL	301318.02	4017664.36	5.16930E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7845E-05	0.00E+00
234	ALL	301270.13	4017665.45	4.47650E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4113E-05	0.00E+00
235	ALL	301222.24	4017666.54	3.86760E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0834E-05	0.00E+00
236	ALL	301174.34	4017667.62	3.33880E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7985E-05	0.00E+00
237	ALL	301126.45	4017668.71	2.88380E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5534E-05	0.00E+00
238	ALL	301078.55	4017669.80	2.49320E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3430E-05	0.00E+00
239	ALL	301030.66	4017670.89	2.15760E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1622E-05	0.00E+00
240	ALL	300982.77	4017671.98	1.86970E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0072E-05	0.00E+00
241	ALL	300920.65	4018052.82	2.51790E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3563E-05	0.00E+00
242	ALL	300753.09	4018350.56	2.49890E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3461E-05	0.00E+00
243	ALL	300799.54	4018791.53	9.28620E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0022E-05	0.00E+00
244	ALL	300884.48	4018018.30	2.03580E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0966E-05	0.00E+00
245	ALL	300838.59	4017971.24	1.60970E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.6709E-06	0.00E+00
246	ALL	300954.82	4017992.75	2.64890E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4269E-05	0.00E+00
247	ALL	300791.92	4017924.53	1.31570E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.0876E-06	0.00E+00
248	ALL	300869.77	4017890.16	1.64080E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.8384E-06	0.00E+00
249	ALL	300610.03	4018140.62	1.13190E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0974E-06	0.00E+00
250	ALL	300744.80	4017878.01	1.10480E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9511E-06	0.00E+00
251	ALL	300824.88	4017842.66	1.35120E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.2786E-06	0.00E+00
252	ALL	300904.96	4017807.31	1.69470E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1290E-06	0.00E+00
253	ALL	300595.41	4018229.87	1.30250E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.0162E-06	0.00E+00
254	ALL	300596.57	4018278.31	1.44280E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.7720E-06	0.00E+00
255	ALL	300597.73	4018326.74	1.60330E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.6364E-06	0.00E+00
256	ALL	300598.89	4018375.17	1.78090E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5933E-06	0.00E+00
257	ALL	300600.05	4018423.60	1.97270E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0627E-05	0.00E+00

258	ALL	300601.21	4018472.04	2.17840E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1734E-05	0.00E+00
259	ALL	300602.37	4018520.47	2.39920E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2924E-05	0.00E+00
260	ALL	300603.54	4018568.90	2.63510E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4195E-05	0.00E+00
261	ALL	300604.70	4018617.34	2.88570E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5545E-05	0.00E+00
262	ALL	300605.86	4018665.77	3.15180E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6978E-05	0.00E+00
263	ALL	300607.02	4018714.20	3.43100E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8482E-05	0.00E+00
264	ALL	300608.18	4018762.63	3.71700E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0022E-05	0.00E+00
265	ALL	300609.34	4018811.07	4.00080E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1551E-05	0.00E+00
266	ALL	300610.50	4018859.50	4.27170E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3010E-05	0.00E+00
267	ALL	300511.54	4018139.19	9.73800E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2456E-06	0.00E+00
268	ALL	300528.81	4018094.54	9.28530E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0018E-06	0.00E+00
269	ALL	300546.08	4018049.89	8.93130E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8111E-06	0.00E+00
270	ALL	300563.35	4018005.24	8.66260E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6663E-06	0.00E+00
271	ALL	300580.61	4017960.59	8.46810E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5615E-06	0.00E+00
272	ALL	300597.88	4017915.95	8.33440E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4895E-06	0.00E+00
273	ALL	300615.15	4017871.30	8.25950E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4491E-06	0.00E+00
274	ALL	300676.21	4017807.31	8.88730E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.7873E-06	0.00E+00
275	ALL	300720.00	4017787.98	9.70420E-09	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2274E-06	0.00E+00
276	ALL	300763.80	4017768.65	1.07080E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7679E-06	0.00E+00
277	ALL	300807.59	4017749.31	1.19160E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4186E-06	0.00E+00
278	ALL	300851.39	4017729.98	1.33300E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1806E-06	0.00E+00
279	ALL	300895.18	4017710.65	1.49400E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0479E-06	0.00E+00
280	ALL	300938.97	4017691.31	1.67350E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0145E-06	0.00E+00
281	ALL	300494.27	4018183.84	1.02890E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5425E-06	0.00E+00
282	ALL	300495.44	4018232.27	1.12640E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0675E-06	0.00E+00
283	ALL	300496.60	4018280.70	1.23650E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6607E-06	0.00E+00
284	ALL	300497.76	4018329.14	1.35700E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3100E-06	0.00E+00
285	ALL	300498.92	4018377.57	1.48480E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.9980E-06	0.00E+00
286	ALL	300500.08	4018426.00	1.61850E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.7185E-06	0.00E+00
287	ALL	300501.24	4018474.43	1.75810E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.4702E-06	0.00E+00
288	ALL	300502.40	4018522.87	1.90360E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0254E-05	0.00E+00
289	ALL	300503.57	4018571.30	2.05520E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1071E-05	0.00E+00
290	ALL	300504.73	4018619.73	2.21300E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1921E-05	0.00E+00
291	ALL	300505.89	4018668.17	2.37820E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2811E-05	0.00E+00
292	ALL	300507.05	4018716.60	2.55390E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3757E-05	0.00E+00
293	ALL	300508.21	4018765.03	2.73930E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4756E-05	0.00E+00
294	ALL	300509.37	4018813.46	2.93090E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5788E-05	0.00E+00
295	ALL	300510.53	4018861.90	3.12190E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6817E-05	0.00E+00
296	ALL	301035.86	4018923.38	4.96530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6746E-04	0.00E+00
297	ALL	301084.62	4018923.38	6.57980E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5444E-04	0.00E+00
298	ALL	301133.39	4018923.38	8.18810E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4107E-04	0.00E+00
299	ALL	301182.15	4018923.38	1.11030E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9809E-04	0.00E+00
300	ALL	301109.08	4018920.70	7.57730E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0817E-04	0.00E+00
301	ALL	301059.16	4018949.91	4.60720E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4817E-04	0.00E+00
302	ALL	301107.92	4018949.91	5.80950E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.1294E-04	0.00E+00
303	ALL	301156.69	4018949.91	7.54200E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0626E-04	0.00E+00
304	ALL	301184.98	4018942.67	1.01900E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4888E-04	0.00E+00
305	ALL	301059.16	4018999.91	3.49160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8808E-04	0.00E+00
306	ALL	301107.92	4018999.91	4.38040E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3596E-04	0.00E+00
307	ALL	301156.69	4018999.91	6.00020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.2321E-04	0.00E+00
308	ALL	301183.72	4019003.06	8.10710E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.3671E-04	0.00E+00
309	ALL	301059.16	4019049.91	2.91350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5694E-04	0.00E+00
310	ALL	301091.99	4019032.39	3.57650E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9265E-04	0.00E+00
311	ALL	301153.73	4019029.20	5.35580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8850E-04	0.00E+00
312	ALL	301192.85	4019028.49	9.02110E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8594E-04	0.00E+00
313	ALL	301059.16	4019116.58	2.47770E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3347E-04	0.00E+00
314	ALL	301107.92	4019116.58	3.17030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7078E-04	0.00E+00
315	ALL	301149.40	4019084.04	4.56870E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4611E-04	0.00E+00
316	ALL	301191.57	4019074.93	8.19900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4166E-04	0.00E+00
317	ALL	301059.16	4019183.24	2.22480E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1984E-04	0.00E+00
318	ALL	301107.92	4019183.24	2.85160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5361E-04	0.00E+00
319	ALL	301156.69	4019183.24	4.18480E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2542E-04	0.00E+00
320	ALL	301183.59	4019223.63	5.46510E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9439E-04	0.00E+00
321	ALL	300713.75	4019096.61	7.03390E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7890E-05	0.00E+00
322	ALL	300679.34	4019017.57	6.19410E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3366E-05	0.00E+00
323	ALL	300644.92	4018938.53	5.22670E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8155E-05	0.00E+00
324	ALL	300966.73	4019332.13	1.27400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.8629E-05	0.00E+00
325	ALL	300748.42	4019243.23	7.40180E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9871E-05	0.00E+00
326	ALL	300704.76	4019225.46	6.57880E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5438E-05	0.00E+00
327	ALL	300642.28	4019164.45	5.55970E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9948E-05	0.00E+00
328	ALL	300623.46	4019121.23	5.25270E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8295E-05	0.00E+00
329	ALL	300604.64	4019078.01	4.91780E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6491E-05	0.00E+00
330	ALL	300585.82	4019034.79	4.55990E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4563E-05	0.00E+00
331	ALL	300567.00	4018991.56	4.18940E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2567E-05	0.00E+00
332	ALL	300548.18	4018948.34	3.81960E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0575E-05	0.00E+00
333	ALL	300529.35	4018905.12	3.46100E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8644E-05	0.00E+00
334	ALL	301004.70	4019373.50	1.30460E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.0273E-05	0.00E+00
335	ALL	301053.46	4019373.50	1.50500E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.1070E-05	0.00E+00
336	ALL	301102.23	4019373.50	1.75980E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.4794E-05	0.00E+00
337	ALL	301150.99	4019373.50	2.07110E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1156E-04	0.00E+00
338	ALL	301199.76	4019373.50	2.38650E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2855E-04	0.00E+00
339	ALL	301157.66	4018869.28	2.02760E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0922E-03	0.00E+00
340	ALL	301103.26	4018875.74	1.49900E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0749E-04	0.00E+00
341	ALL	301048.85	4018875.89	1.08100E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.8232E-04	0.00E+00
342	ALL	301052.40	4018920.46	5.67940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0593E-04	0.00E+00
343	ALL	300710.20	4019155.19	6.85390E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6920E-05	0.00E+00
344	ALL	301207.43	4019320.02	3.53100E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9021E-04	0.00E+00
345	ALL	301279.55	4019317.96	4.56060E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4566E-04	0.00E+00
346	ALL	301126.59	4019318.73	2.33890E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2599E-04	0.00E+00
347	ALL	301227.84	4019364.09	2.69860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4537E-04	0.00E+00
348	ALL	301322.74	4019343.32	3.47960E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8743E-04	0.00E+00
349	ALL	301079.17	4019325.41	1.86480E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0045E-04	0.00E+00
350	ALL	301215.98	4019396.39	2.17100E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1695E-04	0.00E+00
351	ALL	301288.10	4019394.33	2.35430E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2682E-04	0.00E+00
352	ALL	301188.62	4019435.29	1.73360E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3383E-05	0.00E+00
353	ALL	301131.03	4019413.13	1.68300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0660E-05	0.00E+00
354	ALL	301030.72	4019329.74	1.55400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.3710E-05	0.00E+00
355	ALL	301253.47	4019445.34	1.76420E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5032E-05	0.00E+00
356	ALL	301325.59	4019443.28	1.81240E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.7631E-05	0.00E+00
357	ALL	301187.32	4019500.70	1.35920E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3214E-05	0.00E+00
358	ALL	301123.34	4019476.08	1.35570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3028E-05	0.00E+00
359	ALL	301059.35	4019451.45	1.27180E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.8508E-05	0.00E+00
360	ALL	301013.65	4019407.73	1.24910E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.7287E-05	0.00E+00
361	ALL	301255.37	4019511.98	1.35900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.3205E-05	0.00E+00
362	ALL	301191.22	4019568.11	1.11370E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9990E-05	0.00E+00
363	ALL	301131.24	4019545.02	1.13080E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0914E-05	0.00E+00
364	ALL	301071.26	4019521.94	1.10490E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9517E-05	0.00E+00
365	ALL	301011.27	4019498.86	1.04040E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.6041E-05	0.00E+00
366	ALL	301257.28	4019578.62	1.10860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9719E-05	0.00E+00
367	ALL	301191.13	4019633.98	9.44370E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0870E-05	0.00E+00
368	ALL	301127.14	4019609.35	9.63020E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1875E-05	0.00E+00
369	ALL	301063.16	4019584.73	9.52640E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1316E-05	0.00E+00
370	ALL	300999.18	4019560.11	9.09850E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9011E-05	0.00E+00
371	ALL	301259.18	4019645.26	9.38000E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0527E-05	0.00E+00
372	ALL	301331.30	4019643.20	9.47520E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1040E-05	0.00E+00
373	ALL	301193.26	4019733.66	7.68580E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1401E-05	0.00E+00
374	ALL	301127.82	4019708.47	7.84340E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2250E-05	0.00E+00
375	ALL	301062.38	4019683.29	7.85960E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2337E-05	0.00E+00
376	ALL	300996.94	4019658.11	7.67470E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1342E-05	0.00E+00
377	ALL	300931.50	4019632.93	7.30660E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9358E-05	0.00E+00
378	ALL	300852.04	4019575.62	6.93730E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7369E-05	0.00E+00
379	ALL	300823.98	4019511.36	7.09210E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8203E-05	0.00E+00
380	ALL	300795.93	4019447.10	7.14890E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8509E-05	0.00E+00
381	ALL	300767.87	4019382.85	7.08870E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8185E-05	0.00E+00
382	ALL	300697.54	4019334.04	6.15190E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3138E-05	0.00E+00
383	ALL	301262.04	4019745.22	7.63650E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1135E-05	0.00E+00
384	ALL	301334.16	4019743.16	7.69770E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1465E-05	0.00E+00
385	ALL	301028.80	4018880.00	7.87280E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2409E-04	0.00E+00
386	ALL	301085.56	4018876.00	1.38290E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4493E-04	0.00E+00
387	ALL	301130.33	4018869.01	1.90650E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0270E-03	0.00E+00
388	ALL	301179.09	4018869.01	2.17650E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1724E-03	0.00E+00
389	ALL	301360.80	4018470.65	3.80740E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0510E-03	0.00E+00
390	ALL	301360.02	4018521.48	4.39610E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3680E-03	0.00E+00
391	ALL	301512.90	4018486.99	1.11780E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0213E-04	0.00E+00
392	ALL	301570.27	4018482.66	8.55510E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6084E-04	0.00E+00
393	ALL	301562.69	4018463.89	8.67350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6722E-04	0.00E+00
394	ALL	301681.29	4017451.29	7.55880E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0717E-05	0.00E+00

HARP2 - HRACalc (dated 22118) 6/22/2023 12:13:41 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: HighEnd

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 2.75

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0.75
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True

Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|

```
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM
Mit Construction (T4)CancerRisk.csv
Cancer risk total by receptor saved to: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction
(T4)CancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM
Mit Construction (T4)NCChronicRisk.csv
Chronic risk total by receptor saved to: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction
(T4)NCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM
Mit Construction (T4)NCAcuteRisk.csv
Acute risk total by receptor saved to: F:\Move\0014.001\V2\HARP\02 - EM Mit - T4\hra\EM Mit Construction
(T4)NCAcuteRiskSumByRec.csv
HRA ran successfully
```

Eagle Meadows (Mitigated Construction - Level 3 Filters Scenario)

Estimation of Annual Onsite Construction Emissions

Start of Construction	10/2/2023	
End of Construction	6/30/2026	**Total**
Number of Days	1,002	1,002
Number of Hours	24,048	24,048

Size of the construction area source: **187,484.2** **sq-meters**

Run	**Year**	**On-site Construction Activity**	**Mitigated Level 3 Filters On-site DPM (pounds)**
Site Work	2023	On-site Site Preparation	9.6698
Site Work	2023	On-site Grading	10.7877
Site Work	2024	On-site Grading	10.2632
Site Work	2024	Paving	7.5389
Home Construction	2023	On-site Building Construction 2023	5.0405
Home Construction	2024	On-site Building Construction 2024	40.6751
Home Construction	2024	On-site Paving 2024	7.5389
Home Construction	2025	On-site Building Construction 2025	36.0385
Home Construction	2026	On-site Building Construction 2026	15.9398
Home Construction	2026	On-site Architectural Coating	1.2734

Total Unmitigated DPM (On-site) 1.448E+02 pounds

Factor in AERMOD to Account for 5 days per week/8 hours per day: 4.2

Average Emission for AREA1	6.572E+04	grams
	7.592E-04	grams/sec
	4.049E-09	grams/m2-sec

Pounds/Construction Period	1.448E+02
Pounds/Day	1.445E-01
Pounds/Hour	6.020E-03
Pounds/Year	5.273E+01
Years	2.74521

Eagle Meadows (Mitigated Construction - Level 3 Filters Scenario)

Estimation of Annual Offsite Construction DPM Emissions (Mitigated- No Change Compared to Unmitigated Scenario)

		Total
Start of Construction	10/2/2023	
End of Construction	6/30/2026	
Number of Days	1,002	1,002
Number of Hours	24,048	24,048

	2023	2023	2024	2024	2023	2024	2024	2025	2026	2026	
	Site Work	Site Work	Site Work	Site Work	Home Construction	Home Construction	Home Construction	Home Construction	Home Construction	Home Construction	
Construction Trip Type	Site Preparation	Grading	Grading	Paving	Building Construction	Building Construction	Paving	Building Construction	Building Construction	Architectural Coating	**Total (pounds)**
Total (pounds)	0.01997	0.42581	0.45086	0.036618782	0.228123333	2.03642	0.06778	2.03085	1.00708	0.03480	**6.33832**

	Haul Truck	**Vendor Truck**	**Worker**	**Total**
Site Preparation 2023 (Site Work)	525.00	60.00	0.00	585.00
Grading 2023 (Site Work)	700.00	70.00	291.67	1061.67
Grading 2024 (Site Work)	780.00	78.00	325.00	1183.00
Paving 2024 (Site Work)	825.00	110.00	0.00	935.00
Building Construction 2023 (Home Construction)	2526.48	750.22	0.00	3276.70
Building Construction 2024 (Home Construction)	22825.44	6777.89	0.00	29603.33
Building Construction 2025 (Home Construction)	22738.32	6752.02	0.00	29490.34
Building Construction 2026 (Home Construction)	11238.48	3337.20	0.00	14575.68
Paving 2024 (Home Construction)	825.00	220.00	0.00	1045.00
Architectural Coating 2026 (Home Construction)	958.32	110.00	0.00	1068.32
Total	**63942.04**	**18265.33**	**616.67**	**82824.04**

	Haul Truck (pounds)	**Vendor Truck (pounds)**	**Worker (pounds)**	**Total (pounds)**	
Total DPM	4.893E+00	1.398E+00	4.719E-02	6.338E+00	
Average Emissions					
Grams	2.222E+03	6.346E+02	2.143E+01		
Grams/sec	2.566E-05	7.330E-06	2.475E-07		
Default Distance	20	6.8	7.7	Default Vehicle Travel Distance in CalEEMod	
Vehicle Travel Distances in the Construction HRA (miles)					
Off-site (mi)	0.44	0.44	0.44	miles	
On-site (mi)	0.96	0.96	0.96	miles	
Trip Distribution (percent)					
Off-site Road Segment	100.0%	100.0%	100.0%	off-site	
On-site Road Segment	100.0%	100.0%	100.0%	on-site	
Total Average Offsite Vehicle Emissions Along Travel Distance (g/sec)				**Total**	
Off-site Road Segment	5.635E-07	4.735E-07	1.412E-08	1.051E-06	
On-site Road Segment	1.233E-06	1.036E-06	3.089E-08	2.300E-06	
	Grams/sec	Pounds/Hour	Pounds/Day	Pounds/year	Tons/year
Off-site Road Segment	1.051E-06	8.342E-06	2.002E-04	7.308E-02	3.654E-05
On-site Road Segment	2.300E-06	1.826E-05	4.381E-04	1.599E-01	7.996E-05

Health Risk Summary - Level 3 Filters Mitigated Construction (Summary of HARP2 Results)

Eagle Meadows Residential Project (Mitigated Construction - Level 3 Filters Scenario)

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	6.2255E-06	6.23	3.3535E-03	0.00E+00

	X	Y
MEI UTM	301401.20	4018953.77
Lat/Long	36°17'42.5"N	119°12'41.9"W
Receptor # 158		

*HARP - HRACalc v22118 6/22/2023 3:07:58 PM - Cancer Risk - Input File: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)HRAInput.hra
*HARP - HRACalc v22118 6/22/2023 3:07:58 PM - Chronic Risk - Input File: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)HRAInput.hra
*HARP - HRACalc v22118 6/22/2023 3:07:58 PM - Acute Risk - Input File: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)HRAInput.hra

Health Risk Summary - Level 3 Filters Mitigated Construction (Summary of HARP2 Results)
Eagle Meadows Residential Project (Mitigated Construction - Level 3 Filters Scenario)

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	6.2255E-06	6.23	3.3535E-03	0.00E+00

	X	Y
MEI UTM	301401.20	4018953.77
Lat/Long	36°17'42.5"N 119°12'41.9"W	
Receptor # 158		

*HARP - HRACalc v22118 6/22/2023 3:07:58 PM - Cancer Risk - Input File: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)HRAInput.hra
*HARP - HRACalc v22118 6/22/2023 3:07:58 PM - Chronic Risk - Input File: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)HRAInput.hra
*HARP - HRACalc v22118 6/22/2023 3:07:58 PM - Acute Risk - Input File: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)HRAInput.hra

REC	GRP	X	Y	RISK_SUM	SCENARIO	MAXHI NonCancerChronic	MAXHI Acute
1	ALL	301379.58	4019196.68	1.79680E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.6791E-04	0.00E+00
2	ALL	301381.93	4019160.36	2.51160E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3529E-03	0.00E+00
3	ALL	301368.18	4019323.61	4.84830E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6117E-04	0.00E+00
4	ALL	301429.21	4019192.24	1.08440E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.8411E-04	0.00E+00
5	ALL	301421.92	4019140.22	1.79290E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.6577E-04	0.00E+00
6	ALL	301437.28	4019323.29	4.00400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1568E-04	0.00E+00
7	ALL	301400.86	4019360.04	3.43640E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8511E-04	0.00E+00
8	ALL	301349.73	4019382.21	3.15570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6999E-04	0.00E+00
9	ALL	301470.54	4019211.27	7.08310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8155E-04	0.00E+00
10	ALL	301471.91	4019141.20	1.07020E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7647E-04	0.00E+00
11	ALL	301540.74	4019278.80	3.89520E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0983E-04	0.00E+00
12	ALL	301485.10	4019329.40	3.41610E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8402E-04	0.00E+00
13	ALL	301434.66	4019395.97	2.68370E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4456E-04	0.00E+00
14	ALL	301380.13	4019419.63	2.50190E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3477E-04	0.00E+00
15	ALL	301520.53	4019212.25	5.44340E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9322E-04	0.00E+00
16	ALL	301521.90	4019142.18	7.44630E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0111E-04	0.00E+00
17	ALL	301593.67	4019278.31	3.36720E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8138E-04	0.00E+00
18	ALL	301547.89	4019339.83	2.83490E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5271E-04	0.00E+00
19	ALL	301522.15	4019400.66	2.34680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2641E-04	0.00E+00
20	ALL	301478.99	4019444.22	2.09190E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1268E-04	0.00E+00
21	ALL	301418.39	4019470.50	1.96520E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0586E-04	0.00E+00
22	ALL	301357.79	4019496.78	1.80680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.7326E-05	0.00E+00
23	ALL	301587.18	4019213.55	4.15310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2371E-04	0.00E+00
24	ALL	301588.56	4019143.49	5.21980E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8118E-04	0.00E+00
25	ALL	301651.45	4019265.97	2.87670E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5496E-04	0.00E+00
26	ALL	301616.96	4019335.43	2.50420E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3489E-04	0.00E+00
27	ALL	301592.83	4019392.46	2.18370E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1763E-04	0.00E+00
28	ALL	301568.70	4019449.49	1.89300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0197E-04	0.00E+00
29	ALL	301528.23	4019490.32	1.73100E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3245E-05	0.00E+00
30	ALL	301471.42	4019514.96	1.65060E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.8916E-05	0.00E+00
31	ALL	301414.61	4019539.60	1.55240E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.3621E-05	0.00E+00
32	ALL	301357.80	4019564.24	1.45070E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.8145E-05	0.00E+00
33	ALL	301653.84	4019214.86	3.31020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7831E-04	0.00E+00
34	ALL	301655.21	4019144.79	3.99160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1502E-04	0.00E+00
35	ALL	301720.07	4019273.32	2.39780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2916E-04	0.00E+00
36	ALL	301681.20	4019342.44	2.18000E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1743E-04	0.00E+00
37	ALL	301655.46	4019403.27	1.94250E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0464E-04	0.00E+00
38	ALL	301629.72	4019464.10	1.71500E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.2383E-05	0.00E+00
39	ALL	301573.69	4019538.07	1.48030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.9742E-05	0.00E+00
40	ALL	301513.09	4019564.35	1.41520E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.6231E-05	0.00E+00
41	ALL	301452.49	4019590.64	1.33700E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.2021E-05	0.00E+00
42	ALL	301391.90	4019616.92	1.25760E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.7745E-05	0.00E+00
43	ALL	301720.49	4019216.17	2.74310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4776E-04	0.00E+00
44	ALL	301721.86	4019146.10	3.22160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7354E-04	0.00E+00
45	ALL	301806.62	4019284.26	1.99820E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0764E-04	0.00E+00
46	ALL	301780.30	4019346.48	1.84800E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.9548E-05	0.00E+00
47	ALL	301753.98	4019408.69	1.69360E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1227E-05	0.00E+00
48	ALL	301727.66	4019470.90	1.53860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.2879E-05	0.00E+00
49	ALL	301701.34	4019533.11	1.38700E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4716E-05	0.00E+00
50	ALL	301644.03	4019608.77	1.22470E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.5974E-05	0.00E+00
51	ALL	301582.05	4019635.64	1.17770E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3441E-05	0.00E+00
52	ALL	301520.08	4019662.52	1.12180E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0428E-05	0.00E+00
53	ALL	301458.10	4019689.40	1.06420E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7325E-05	0.00E+00
54	ALL	301396.13	4019716.28	1.01050E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4430E-05	0.00E+00
55	ALL	301820.47	4019218.12	2.20590E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1883E-04	0.00E+00
56	ALL	301821.84	4019148.06	2.50300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3483E-04	0.00E+00
57	ALL	301338.60	4019206.36	3.67040E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9771E-03	0.00E+00
58	ALL	301435.06	4019091.43	2.18130E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1750E-03	0.00E+00
59	ALL	301439.86	4019005.57	2.96550E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5974E-03	0.00E+00
60	ALL	301484.98	4019094.23	1.23610E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6587E-04	0.00E+00
61	ALL	301489.78	4019008.37	1.65680E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.9246E-04	0.00E+00
62	ALL	301534.90	4019097.02	8.33450E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4896E-04	0.00E+00
63	ALL	301539.71	4019011.16	1.08490E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.8438E-04	0.00E+00
64	ALL	301587.22	4019056.89	6.99660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7689E-04	0.00E+00
65	ALL	301653.79	4019060.62	5.02810E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7085E-04	0.00E+00
66	ALL	301720.35	4019064.34	3.88960E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0952E-04	0.00E+00
67	ALL	301766.53	4019190.04	2.60780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4048E-04	0.00E+00
68	ALL	301784.51	4019111.00	2.93120E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5790E-04	0.00E+00
69	ALL	301789.31	4019025.14	3.40530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8343E-04	0.00E+00
70	ALL	301866.80	4019194.63	2.11080E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1370E-04	0.00E+00
71	ALL	301642.91	4019526.53	1.46280E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.8799E-05	0.00E+00
72	ALL	301884.35	4019116.59	2.32010E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2498E-04	0.00E+00
73	ALL	301889.16	4019030.73	2.63810E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4211E-04	0.00E+00
74	ALL	301437.67	4018924.94	3.36390E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8120E-03	0.00E+00
75	ALL	301488.77	4018961.65	1.85740E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0005E-03	0.00E+00
76	ALL	301486.53	4018885.28	1.99430E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0743E-03	0.00E+00
77	ALL	301538.75	4018960.18	1.23340E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.6439E-04	0.00E+00
78	ALL	301536.51	4018883.81	1.37950E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4308E-04	0.00E+00
79	ALL	301589.85	4018996.90	8.14120E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.3854E-04	0.00E+00
80	ALL	301587.61	4018920.53	9.61650E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1802E-04	0.00E+00
81	ALL	301656.49	4018994.94	5.82030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.1352E-04	0.00E+00
82	ALL	301654.24	4018918.57	6.82640E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6772E-04	0.00E+00
83	ALL	301723.13	4018992.98	4.47270E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4093E-04	0.00E+00
84	ALL	301720.88	4018916.61	5.17570E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7880E-04	0.00E+00
85	ALL	301788.64	4018952.83	3.87270E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0861E-04	0.00E+00
86	ALL	301786.40	4018876.46	4.35500E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3459E-04	0.00E+00
87	ALL	301888.60	4018949.89	2.94580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5868E-04	0.00E+00
88	ALL	301886.35	4018873.52	3.26450E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7585E-04	0.00E+00
89	ALL	301425.74	4018872.07	3.48220E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8758E-03	0.00E+00
90	ALL	301473.33	4018837.19	2.12330E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1438E-03	0.00E+00
91	ALL	301525.80	4018836.76	1.49500E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0531E-04	0.00E+00
92	ALL	301571.81	4018817.81	1.15050E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1976E-04	0.00E+00
93	ALL	301584.04	4018871.58	1.04210E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.6137E-04	0.00E+00
94	ALL	301632.57	4018790.04	8.64680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6578E-04	0.00E+00
95	ALL	301643.99	4018840.23	7.91230E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2622E-04	0.00E+00
96	ALL	301693.60	4018763.40	6.81400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6705E-04	0.00E+00
97	ALL	301705.49	4018815.68	6.23900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3607E-04	0.00E+00
98	ALL	301717.38	4018867.96	5.61810E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0263E-04	0.00E+00
99	ALL	301754.60	4018736.65	5.56310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9967E-04	0.00E+00
100	ALL	301766.83	4018790.42	5.10270E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7487E-04	0.00E+00
101	ALL	301846.07	4018696.38	4.31030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3218E-04	0.00E+00
102	ALL	301856.14	4018740.67	4.05420E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1839E-04	0.00E+00
103	ALL	301866.21	4018784.95	3.78810E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0406E-04	0.00E+00
104	ALL	301876.28	4018829.23	3.52330E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8979E-04	0.00E+00
105	ALL	301371.16	4018849.58	5.12770E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7621E-03	0.00E+00
106	ALL	301370.38	4018829.15	4.89800E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6384E-03	0.00E+00
107	ALL	301423.52	4018727.42	2.72040E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4654E-03	0.00E+00
108	ALL	301435.33	4018743.37	2.48830E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3404E-03	0.00E+00
109	ALL	301488.39	4018782.62	1.82050E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.8065E-04	0.00E+00
110	ALL	301363.53	4018739.87	5.34800E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8808E-03	0.00E+00
111	ALL	301387.32	4018683.95	3.91880E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1110E-03	0.00E+00
112	ALL	301435.18	4018694.58	2.48210E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3370E-03	0.00E+00
113	ALL	301499.38	4018723.49	1.65720E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.9268E-04	0.00E+00
114	ALL	301532.05	4018760.05	1.41350E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.6141E-04	0.00E+00
115	ALL	301368.51	4018614.32	5.07530E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7339E-03	0.00E+00
116	ALL	301417.50	4018627.96	2.88930E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5564E-03	0.00E+00
117	ALL	301473.51	4018627.40	1.89570E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0212E-03	0.00E+00
118	ALL	301532.30	4018665.10	1.37660E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4152E-04	0.00E+00
119	ALL	301563.42	4018699.92	1.19600E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4425E-04	0.00E+00

120	ALL	301594.54	4018734.74	1.04150E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.6103E-04	0.00E+00
121	ALL	301373.18	4018550.80	4.63600E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4973E-03	0.00E+00
122	ALL	301417.50	4018560.64	2.83840E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5290E-03	0.00E+00
123	ALL	301461.81	4018570.48	2.01750E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0868E-03	0.00E+00
124	ALL	301513.12	4018582.83	1.48920E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0220E-04	0.00E+00
125	ALL	301565.58	4018607.10	1.16300E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2650E-04	0.00E+00
126	ALL	301595.83	4018640.95	1.02900E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5430E-04	0.00E+00
127	ALL	301626.08	4018674.80	9.12560E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9157E-04	0.00E+00
128	ALL	301656.33	4018708.65	8.06720E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.3456E-04	0.00E+00
129	ALL	301358.34	4018487.42	5.28580E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8473E-03	0.00E+00
130	ALL	301412.46	4018489.71	2.73250E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4719E-03	0.00E+00
131	ALL	301464.50	4018506.07	1.88600E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0160E-03	0.00E+00
132	ALL	301512.36	4018516.71	1.44160E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.7657E-04	0.00E+00
133	ALL	301560.22	4018527.34	1.15360E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2138E-04	0.00E+00
134	ALL	301615.80	4018555.72	9.30800E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0139E-04	0.00E+00
135	ALL	301633.16	4018587.49	8.79870E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.7396E-04	0.00E+00
136	ALL	301665.83	4018624.05	7.84920E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2281E-04	0.00E+00
137	ALL	301698.50	4018660.61	6.97160E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7554E-04	0.00E+00
138	ALL	301731.18	4018697.17	6.15670E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3164E-04	0.00E+00
139	ALL	301650.42	4018463.95	7.84660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.2267E-04	0.00E+00
140	ALL	301681.83	4018499.10	7.22600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8924E-04	0.00E+00
141	ALL	301713.25	4018534.25	6.62430E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5683E-04	0.00E+00
142	ALL	301744.66	4018569.41	6.04530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.2564E-04	0.00E+00
143	ALL	301776.08	4018604.56	5.48950E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9570E-04	0.00E+00
144	ALL	301807.49	4018639.71	4.95680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6701E-04	0.00E+00
145	ALL	301467.66	4018465.95	1.74330E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3908E-04	0.00E+00
146	ALL	301515.04	4018464.61	1.34560E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.2483E-04	0.00E+00
147	ALL	301613.97	4018508.44	9.17130E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9403E-04	0.00E+00
148	ALL	301611.09	4018478.77	9.09420E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8988E-04	0.00E+00
149	ALL	301665.33	4018551.00	7.77540E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1884E-04	0.00E+00
150	ALL	301754.73	4018455.95	5.72880E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0859E-04	0.00E+00
151	ALL	301832.00	4018882.42	3.73390E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0114E-04	0.00E+00
152	ALL	301832.00	4018598.35	4.68880E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5257E-04	0.00E+00
153	ALL	301832.00	4018551.00	4.72930E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5475E-04	0.00E+00
154	ALL	301832.00	4018503.66	4.73270E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5494E-04	0.00E+00
155	ALL	301819.37	4018444.04	4.83330E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6036E-04	0.00E+00
156	ALL	301371.05	4018791.22	4.73370E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5499E-03	0.00E+00
157	ALL	301376.12	4018868.74	5.56650E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9985E-03	0.00E+00
158	ALL	301401.20	4018953.77	6.22550E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3535E-03	0.00E+00
159	ALL	301895.31	4018472.79	4.06000E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1870E-04	0.00E+00
160	ALL	301945.31	4018473.00	3.63740E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9594E-04	0.00E+00
161	ALL	301917.40	4018541.89	3.83630E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0665E-04	0.00E+00
162	ALL	302004.41	4018434.90	3.23320E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7416E-04	0.00E+00
163	ALL	302011.05	4018475.57	3.18050E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7132E-04	0.00E+00
164	ALL	301981.28	4018549.06	3.32480E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7910E-04	0.00E+00
165	ALL	301915.38	4018638.86	3.72260E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0052E-04	0.00E+00
166	ALL	302046.18	4018437.25	2.98950E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6104E-04	0.00E+00
167	ALL	302077.09	4018477.37	2.81030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5138E-04	0.00E+00
168	ALL	302046.08	4018553.92	2.91350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5694E-04	0.00E+00
169	ALL	302015.07	4018630.47	2.99490E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6132E-04	0.00E+00
170	ALL	301961.93	4018685.75	3.24650E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7488E-04	0.00E+00
171	ALL	301811.39	4018753.75	4.56660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4599E-04	0.00E+00
172	ALL	302114.23	4018438.90	2.65360E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4294E-04	0.00E+00
173	ALL	302123.96	4018486.34	2.58530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3926E-04	0.00E+00
174	ALL	302111.42	4018557.48	2.58190E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3908E-04	0.00E+00
175	ALL	302079.52	4018636.21	2.63530E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4196E-04	0.00E+00
176	ALL	302008.91	4018732.44	2.83700E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5282E-04	0.00E+00
177	ALL	301931.49	4018767.41	3.26640E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7595E-04	0.00E+00
178	ALL	301815.36	4018819.87	4.22400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2753E-04	0.00E+00
179	ALL	302241.82	4018482.84	2.15410E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1603E-04	0.00E+00
180	ALL	302224.38	4018525.90	2.17950E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1740E-04	0.00E+00
181	ALL	302206.93	4018568.96	2.20070E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1854E-04	0.00E+00
182	ALL	302189.49	4018612.02	2.21680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1942E-04	0.00E+00
183	ALL	302172.05	4018655.08	2.22740E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1998E-04	0.00E+00
184	ALL	302154.60	4018698.14	2.23190E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2023E-04	0.00E+00
185	ALL	302137.16	4018741.20	2.22990E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2012E-04	0.00E+00
186	ALL	302077.37	4018803.38	2.34920E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2655E-04	0.00E+00
187	ALL	302035.03	4018822.51	2.49420E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3436E-04	0.00E+00
188	ALL	301992.69	4018841.63	2.65950E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4326E-04	0.00E+00
189	ALL	301950.35	4018860.76	2.85020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5353E-04	0.00E+00
190	ALL	302259.27	4018439.78	2.12500E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1447E-04	0.00E+00
191	ALL	302259.46	4018392.56	2.14400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1549E-04	0.00E+00
192	ALL	302259.65	4018345.34	2.15610E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1614E-04	0.00E+00
193	ALL	302259.85	4018298.13	2.16110E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1641E-04	0.00E+00
194	ALL	302260.04	4018250.91	2.15890E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1629E-04	0.00E+00
195	ALL	302260.23	4018203.69	2.14940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1578E-04	0.00E+00
196	ALL	302260.43	4018156.48	2.13280E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1489E-04	0.00E+00
197	ALL	301792.67	4017770.88	2.04360E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1009E-04	0.00E+00
198	ALL	301875.32	4017803.58	2.19720E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1836E-04	0.00E+00
199	ALL	302057.74	4017909.98	2.31020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2445E-04	0.00E+00
200	ALL	302091.97	4017992.01	2.39950E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2925E-04	0.00E+00
201	ALL	301703.45	4017755.62	1.86680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0056E-04	0.00E+00
202	ALL	301655.55	4017756.71	1.77880E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.5818E-05	0.00E+00
203	ALL	301607.66	4017757.80	1.67080E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0000E-05	0.00E+00
204	ALL	301559.76	4017758.89	1.54550E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.3252E-05	0.00E+00
205	ALL	301511.87	4017759.98	1.40730E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.5805E-05	0.00E+00
206	ALL	301463.98	4017761.07	1.26150E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.7952E-05	0.00E+00
207	ALL	301416.08	4017762.15	1.11400E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0009E-05	0.00E+00
208	ALL	301368.19	4017763.24	9.70760E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2292E-05	0.00E+00
209	ALL	301320.30	4017764.33	8.36460E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5058E-05	0.00E+00
210	ALL	301272.40	4017765.42	7.14670E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8497E-05	0.00E+00
211	ALL	301224.51	4017766.51	6.07220E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.2709E-05	0.00E+00
212	ALL	301176.61	4017767.60	5.14410E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.7710E-05	0.00E+00
213	ALL	301128.72	4017768.69	4.35440E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3456E-05	0.00E+00
214	ALL	301080.83	4017769.78	3.68770E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9865E-05	0.00E+00
215	ALL	301032.93	4017770.86	3.12730E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6846E-05	0.00E+00
216	ALL	300985.04	4017771.95	2.65780E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4317E-05	0.00E+00
217	ALL	301789.25	4017670.45	1.66940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.9927E-05	0.00E+00
218	ALL	301869.60	4017702.24	1.84580E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.9425E-05	0.00E+00
219	ALL	301949.96	4017734.03	1.95910E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0553E-04	0.00E+00
220	ALL	302030.32	4017765.81	2.00770E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0815E-04	0.00E+00
221	ALL	302127.31	4017837.47	2.05460E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1068E-04	0.00E+00
222	ALL	302160.59	4017917.22	2.13300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1490E-04	0.00E+00
223	ALL	302193.87	4017996.98	2.17040E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1691E-04	0.00E+00
224	ALL	302227.15	4018076.73	2.16900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1684E-04	0.00E+00
225	ALL	301701.17	4017655.65	1.48550E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.0019E-05	0.00E+00
226	ALL	301653.28	4017656.74	1.39600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.5199E-05	0.00E+00
227	ALL	301605.39	4017657.83	1.29540E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.9782E-05	0.00E+00
228	ALL	301557.49	4017658.91	1.18660E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3919E-05	0.00E+00
229	ALL	301509.60	4017660.00	1.07320E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7809E-05	0.00E+00
230	ALL	301461.70	4017661.09	9.58940E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1655E-05	0.00E+00
231	ALL	301413.81	4017662.18	8.47630E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.5659E-05	0.00E+00
232	ALL	301365.92	4017663.27	7.42480E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9995E-05	0.00E+00
233	ALL	301318.02	4017664.36	6.45850E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.4790E-05	0.00E+00
234	ALL	301270.13	4017665.45	5.59210E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0123E-05	0.00E+00
235	ALL	301222.24	4017666.54	4.83060E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6021E-05	0.00E+00
236	ALL	301174.34	4017667.62	4.16930E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.2459E-05	0.00E+00
237	ALL	301126.45	4017668.71	3.60030E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9394E-05	0.00E+00
238	ALL	301078.55	4017669.80	3.11180E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6763E-05	0.00E+00
239	ALL	301030.66	4017670.89	2.69210E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4502E-05	0.00E+00
240	ALL	300982.77	4017671.98	2.33220E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2563E-05	0.00E+00
241	ALL	300920.65	4018052.82	3.13790E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6903E-05	0.00E+00
242	ALL	300753.09	4018350.56	3.10860E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6745E-05	0.00E+00
243	ALL	300799.54	4018791.53	1.15830E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2392E-05	0.00E+00
244	ALL	300884.48	4018018.30	2.53600E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3661E-05	0.00E+00
245	ALL	300838.59	4017971.24	2.00430E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0796E-05	0.00E+00
246	ALL	300954.82	4017992.75	3.30290E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7792E-05	0.00E+00
247	ALL	300791.92	4017924.53	1.63750E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.8210E-06	0.00E+00
248	ALL	300869.77	4017890.16	2.04410E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1011E-05	0.00E+00
249	ALL	300610.03	4018140.62	1.40660E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.5770E-06	0.00E+00
250	ALL	300744.80	4017878.01	1.37440E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4036E-06	0.00E+00
251	ALL	300824.88	4017842.66	1.68260E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0638E-06	0.00E+00
252	ALL	300904.96	4017807.31	2.11230E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1378E-05	0.00E+00
253	ALL	300595.41	4018229.87	1.61900E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.7214E-06	0.00E+00
254	ALL	300596.57	4018278.31	1.79390E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.6631E-06	0.00E+00
255	ALL	300597.73	4018326.74	1.99390E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0741E-05	0.00E+00
256	ALL	300598.89	4018375.17	2.21540E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1934E-05	0.00E+00
257	ALL	300600.05	4018423.60	2.45460E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3222E-05	0.00E+00

258	ALL	300601.21	4018472.04	2.71120E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4604E-05	0.00E+00
259	ALL	300602.37	4018520.47	2.98680E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6089E-05	0.00E+00
260	ALL	300603.54	4018568.90	3.28120E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7675E-05	0.00E+00
261	ALL	300604.70	4018617.34	3.59430E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9361E-05	0.00E+00
262	ALL	300605.86	4018665.77	3.92670E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1152E-05	0.00E+00
263	ALL	300607.02	4018714.20	4.27560E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3032E-05	0.00E+00
264	ALL	300608.18	4018762.63	4.63300E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4957E-05	0.00E+00
265	ALL	300609.34	4018811.07	4.98790E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.6868E-05	0.00E+00
266	ALL	300610.50	4018859.50	5.32660E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8693E-05	0.00E+00
267	ALL	300511.54	4018139.19	1.20990E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.5173E-06	0.00E+00
268	ALL	300528.81	4018094.54	1.15350E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.2135E-06	0.00E+00
269	ALL	300546.08	4018049.89	1.10940E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9762E-06	0.00E+00
270	ALL	300563.35	4018005.24	1.07610E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7965E-06	0.00E+00
271	ALL	300580.61	4017960.59	1.05200E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.6667E-06	0.00E+00
272	ALL	300597.88	4017915.95	1.03550E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5780E-06	0.00E+00
273	ALL	300615.15	4017871.30	1.02640E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5288E-06	0.00E+00
274	ALL	300676.21	4017807.31	1.10510E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.9528E-06	0.00E+00
275	ALL	300720.00	4017787.98	1.20720E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.5030E-06	0.00E+00
276	ALL	300763.80	4017768.65	1.33270E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.1790E-06	0.00E+00
277	ALL	300807.59	4017749.31	1.48380E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.9928E-06	0.00E+00
278	ALL	300851.39	4017729.98	1.66080E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.9460E-06	0.00E+00
279	ALL	300895.18	4017710.65	1.86220E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0031E-05	0.00E+00
280	ALL	300938.97	4017691.31	2.08660E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1240E-05	0.00E+00
281	ALL	300494.27	4018183.84	1.27860E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.8875E-06	0.00E+00
282	ALL	300495.44	4018232.27	1.40010E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.5419E-06	0.00E+00
283	ALL	300496.60	4018280.70	1.53740E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.2816E-06	0.00E+00
284	ALL	300497.76	4018329.14	1.68770E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.0912E-06	0.00E+00
285	ALL	300498.92	4018377.57	1.84700E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.9493E-06	0.00E+00
286	ALL	300500.08	4018426.00	2.01390E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0848E-05	0.00E+00
287	ALL	300501.24	4018474.43	2.18800E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1786E-05	0.00E+00
288	ALL	300502.40	4018522.87	2.36960E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2765E-05	0.00E+00
289	ALL	300503.57	4018571.30	2.55900E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3785E-05	0.00E+00
290	ALL	300504.73	4018619.73	2.75600E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4846E-05	0.00E+00
291	ALL	300505.89	4018668.17	2.96250E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5958E-05	0.00E+00
292	ALL	300507.05	4018716.60	3.18190E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.7140E-05	0.00E+00
293	ALL	300508.21	4018765.03	3.41370E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8389E-05	0.00E+00
294	ALL	300509.37	4018813.46	3.65320E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9679E-05	0.00E+00
295	ALL	300510.53	4018861.90	3.89200E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.0965E-05	0.00E+00
296	ALL	301035.86	4018923.38	6.20090E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3403E-04	0.00E+00
297	ALL	301084.62	4018923.38	8.21830E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4269E-04	0.00E+00
298	ALL	301133.39	4018923.38	1.02270E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5090E-04	0.00E+00
299	ALL	301182.15	4018923.38	1.38660E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4693E-04	0.00E+00
300	ALL	301109.08	4018920.70	9.46440E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0982E-04	0.00E+00
301	ALL	301059.16	4018949.91	5.75340E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0992E-04	0.00E+00
302	ALL	301107.92	4018949.91	7.25500E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.9081E-04	0.00E+00
303	ALL	301156.69	4018949.91	9.41780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0731E-04	0.00E+00
304	ALL	301184.98	4018942.67	1.27240E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.8538E-04	0.00E+00
305	ALL	301059.16	4018999.91	4.35910E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3481E-04	0.00E+00
306	ALL	301107.92	4018999.91	5.46860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9458E-04	0.00E+00
307	ALL	301156.69	4018999.91	7.49020E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.0348E-04	0.00E+00
308	ALL	301183.72	4019003.06	1.01200E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.4514E-04	0.00E+00
309	ALL	301059.16	4019049.91	3.63590E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9586E-04	0.00E+00
310	ALL	301091.99	4019032.39	4.46380E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.4045E-04	0.00E+00
311	ALL	301153.73	4019029.20	6.68450E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6007E-04	0.00E+00
312	ALL	301192.85	4019028.49	1.12600E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.0653E-04	0.00E+00
313	ALL	301059.16	4019116.58	3.08840E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6636E-04	0.00E+00
314	ALL	301107.92	4019116.58	3.95210E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.1289E-04	0.00E+00
315	ALL	301149.40	4019084.04	5.69930E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0701E-04	0.00E+00
316	ALL	301191.57	4019074.93	1.02310E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.5111E-04	0.00E+00
317	ALL	301059.16	4019183.24	2.76310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4884E-04	0.00E+00
318	ALL	301107.92	4019183.24	3.54460E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.9093E-04	0.00E+00
319	ALL	301156.69	4019183.24	5.20790E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8054E-04	0.00E+00
320	ALL	301183.59	4019223.63	6.78450E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.6546E-04	0.00E+00
321	ALL	300713.75	4019096.61	8.77620E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.7275E-05	0.00E+00
322	ALL	300679.34	4019017.57	7.72800E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1628E-05	0.00E+00
323	ALL	300644.92	4018938.53	6.51970E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5120E-05	0.00E+00
324	ALL	300966.73	4019332.13	1.57940E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.5078E-05	0.00E+00
325	ALL	300748.42	4019243.23	9.23270E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9734E-05	0.00E+00
326	ALL	300704.76	4019225.46	8.20770E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.4213E-05	0.00E+00
327	ALL	300642.28	4019164.45	6.93670E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.7366E-05	0.00E+00
328	ALL	300623.46	4019121.23	6.55350E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.5302E-05	0.00E+00
329	ALL	300604.64	4019078.01	6.13530E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.3049E-05	0.00E+00
330	ALL	300585.82	4019034.79	5.68820E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0641E-05	0.00E+00
331	ALL	300567.00	4018991.56	5.22550E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.8148E-05	0.00E+00
332	ALL	300548.18	4018948.34	4.76350E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5660E-05	0.00E+00
333	ALL	300529.35	4018905.12	4.31560E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3247E-05	0.00E+00
334	ALL	301004.70	4019373.50	1.62320E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.7435E-05	0.00E+00
335	ALL	301053.46	4019373.50	1.87310E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0090E-04	0.00E+00
336	ALL	301102.23	4019373.50	2.19120E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1803E-04	0.00E+00
337	ALL	301150.99	4019373.50	2.58010E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3898E-04	0.00E+00
338	ALL	301199.76	4019373.50	2.97430E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.6022E-04	0.00E+00
339	ALL	301157.66	4018869.28	2.53360E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.3648E-03	0.00E+00
340	ALL	301103.26	4018875.74	1.87300E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0090E-03	0.00E+00
341	ALL	301048.85	4018875.89	1.35050E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.2748E-04	0.00E+00
342	ALL	301052.40	4018920.46	7.09320E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.8209E-04	0.00E+00
343	ALL	300710.20	4019155.19	8.55120E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6063E-05	0.00E+00
344	ALL	301207.43	4019320.02	4.39290E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3663E-04	0.00E+00
345	ALL	301279.55	4019317.96	5.68030E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	3.0598E-04	0.00E+00
346	ALL	301126.59	4019318.73	2.90260E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5636E-04	0.00E+00
347	ALL	301227.84	4019364.09	3.36350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.8118E-04	0.00E+00
348	ALL	301322.74	4019343.32	4.33740E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.3365E-04	0.00E+00
349	ALL	301079.17	4019325.41	2.31320E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2461E-04	0.00E+00
350	ALL	301215.98	4019396.39	2.70700E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4582E-04	0.00E+00
351	ALL	301288.10	4019394.33	2.93620E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.5817E-04	0.00E+00
352	ALL	301188.62	4019435.29	2.16220E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1647E-04	0.00E+00
353	ALL	301131.03	4019413.13	2.09810E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1302E-04	0.00E+00
354	ALL	301030.72	4019329.74	1.92680E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.0379E-04	0.00E+00
355	ALL	301253.47	4019445.34	2.20100E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.1856E-04	0.00E+00
356	ALL	301325.59	4019443.28	2.26140E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2182E-04	0.00E+00
357	ALL	301187.32	4019500.70	1.69600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1359E-05	0.00E+00
358	ALL	301123.34	4019476.08	1.69120E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1102E-05	0.00E+00
359	ALL	301059.35	4019451.45	1.58590E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.5427E-05	0.00E+00
360	ALL	301013.65	4019407.73	1.55620E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	8.3826E-05	0.00E+00
361	ALL	301255.37	4019511.98	1.69600E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.1360E-05	0.00E+00
362	ALL	301191.22	4019568.11	1.39010E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4878E-05	0.00E+00
363	ALL	301131.24	4019545.02	1.41130E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.6021E-05	0.00E+00
364	ALL	301071.26	4019521.94	1.37860E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4264E-05	0.00E+00
365	ALL	301011.27	4019498.86	1.29780E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.9910E-05	0.00E+00
366	ALL	301257.28	4019578.62	1.38390E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.4546E-05	0.00E+00
367	ALL	301191.13	4019633.98	1.17900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3507E-05	0.00E+00
368	ALL	301127.14	4019609.35	1.20210E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4755E-05	0.00E+00
369	ALL	301063.16	4019584.73	1.18900E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.4049E-05	0.00E+00
370	ALL	300999.18	4019560.11	1.13540E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.1163E-05	0.00E+00
371	ALL	301259.18	4019645.26	1.17110E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3083E-05	0.00E+00
372	ALL	301331.30	4019643.20	1.18300E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	6.3726E-05	0.00E+00
373	ALL	301193.26	4019733.66	9.59680E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1695E-05	0.00E+00
374	ALL	301127.82	4019708.47	9.79290E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2751E-05	0.00E+00
375	ALL	301062.38	4019683.29	9.81240E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2857E-05	0.00E+00
376	ALL	300996.94	4019658.11	9.58080E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1609E-05	0.00E+00
377	ALL	300931.50	4019632.93	9.12040E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.9129E-05	0.00E+00
378	ALL	300852.04	4019575.62	8.65810E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.6639E-05	0.00E+00
379	ALL	300823.98	4019511.36	8.84960E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.7670E-05	0.00E+00
380	ALL	300795.93	4019447.10	8.91880E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.8043E-05	0.00E+00
381	ALL	300767.87	4019382.85	8.84290E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.7634E-05	0.00E+00
382	ALL	300697.54	4019334.04	7.67580E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	4.1347E-05	0.00E+00
383	ALL	301262.04	4019745.22	9.53560E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1366E-05	0.00E+00
384	ALL	301334.16	4019743.16	9.61250E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.1780E-05	0.00E+00
385	ALL	301028.80	4018880.00	9.83350E-07	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.2970E-04	0.00E+00
386	ALL	301085.56	4018876.00	1.72790E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	9.3075E-04	0.00E+00
387	ALL	301130.33	4018869.01	2.38230E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.2833E-03	0.00E+00
388	ALL	301179.09	4018869.01	2.71950E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	1.4649E-03	0.00E+00
389	ALL	301360.80	4018470.65	4.76120E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.5647E-03	0.00E+00
390	ALL	301360.02	4018521.48	5.49730E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	2.9612E-03	0.00E+00
391	ALL	301512.90	4018486.99	1.39760E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	7.5287E-04	0.00E+00
392	ALL	301570.27	4018482.66	1.06970E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.7619E-04	0.00E+00
393	ALL	301562.69	4018463.89	1.08450E-06	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.8417E-04	0.00E+00
394	ALL	301681.29	4017451.29	9.44770E-08	2.75YrCancerHighEnd_InhSoilDermMMilkCrops	5.0892E-05	0.00E+00

HARP2 - HRACalc (dated 22118) 6/22/2023 3:07:58 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: HighEnd

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 2.75

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0.75
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True

Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)CancerRisk.csv
Cancer risk total by receptor saved to: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)CancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)NCChronicRisk.csv
Chronic risk total by receptor saved to: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)NCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)NCAcuteRisk.csv
Acute risk total by receptor saved to: F:\Move\0014.001\V2\HARP\03 - EM Mit - L3\hra\EM Mit Construction (L3)NCAcuteRiskSumByRec.csv
HRA ran successfully

Health Risk Screening

Operational Screening Calculations and Prioritization

Diesel PM Screening — Prioritization Calculator

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in grey areas.
Author (Prioritization Calculator)	Matthew Cegielski *Last Update* October 13, 2016
Date Updated with Project Emissions	June 22, 2023
Facility:	**Eagle Meadows Residential Project (Operational Diesel PM Screening Analysis)**
ID#:	**—**
Project #:	**Truck Run and Idle Emissions**
Unit and Process#	**Mobile Source Diesel (Trucks Visiting the Residential Project)**

Operating Hours hr/yr	6,624.97	**(operating hours assumed based on idle hours)**		
Receptor Proximity and Proximity Factors	**Cancer Score**	**Chronic Score**	**Acute Score**	**Max Score**
0< R<100 1.000	3.62E+00	7.10E-03	0.00E+00	3.62E+00
100≤R<250 0.250	9.06E-01	1.78E-03	0.00E+00	9.06E-01
250≤R<500 0.040	1.45E-01	2.84E-04	0.00E+00	1.45E-01
500≤R<1000 0.011	3.98E-02	7.81E-05	0.00E+00	3.98E-02
1000≤R<1500 0.003	1.09E-02	2.13E-05	0.00E+00	1.09E-02
1500≤R<2000 0.002	7.24E-03	1.42E-05	0.00E+00	7.24E-03
2000<R 0.001	3.62E-03	7.10E-06	0.00E+00	3.62E-03

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

Mobile Source Diesel (Trucks Visiting the Residential Project)

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	1.57E+00	1.34E-03	2.37E-04	3.62E+00	7.10E-03	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**3.62E+00**	**7.10E-03**	**0.00E+00**

Eagle Meadows Residential Project—Health Risk Screening Analysis for Project Operations

Diesel Truck Trips

	Trucks Onsite Daily	Average Daily Truck Trips
Heavy Truck Trips	**36.30**	**72.60**

Truck Assumptions

Trucks Onsite per Day	36.30
Trucks Onsite per Year	13,249.9
Idling Events per Truck per day	2
Idling Time per Event (minutes)	15
Idling Minutes/Year	397,498
Idling Hours/Year	6,625

	Truck Entering	Trucks Exiting	Total
Average Travel Distance Onsite (ft)	660	660	1,320

(0.25 mile on-site and 0.25 mile off-site assumed for this localized assessment - residential project)

	Miles/Trip	Truck Trips/Year	Miles/Year
Offsite Miles Estimate	0.25	26,499.9	6,625.0

	Distance Onsite (ft) in and out	Distance to Receptor Meters	Direction to Receptor	Idling Emissions (lbs/year)	Running Emissions (lbs/yr)	Total Truck Emissions (lbs/year)	Grand Total (lbs/yr)	Average Lbs/Day	Max Lbs/Day*	Max lbs/Hr
Emissions	1,320	<100 M	All	0.39	1.18	**1.5681**	1.57	0.00430	0.01289	0.00107

*Max daily assumed to be 3 times the daily average. Max hr based on 12 hrs/day

Running Emission Calculations	**EMFAC2021 Rates**
Idling Emission Rate for Diesel g/day	0.48759
g/lb conversion factor	0.00220
HDT Onsite Running Emissions 5 mph g/mile	0.11988
HDT Running Emissions Onroad 5-25 mph	0.04112

EMFAC2021 PM10 running emissions Aggregated Fleet Age in 2024

EMFAC2021 Average Running Emissions

	PM10_RUNEX 5-25 MPH	PM10 RUNEX 5 MPH
Weighted Averages (Based on Project Fleet)	**0.04112**	**0.11988**

	Distance (Feet)	Distance (Miles)	Miles/Year/ Truck	Trucks/Day	Emission (g/mi)	Emissions g/year	Emission lbs/year	Emissions lbs/hour
Onsite Running Emissions	1,320.00	0.25	91.3	36.3	0.11988	397.11	0.88	0.0001999

	Distance (Feet)	Miles/ Round Trip	Miles/Year/ Truck	Trucks/Day	Emissions Rate (g/mi)	Emissions g/year	Emission lbs/year	Emissions lbs/hour
Offsite Running Emissions	1,320.00	0.25	91.25	36.3	0.04112	136.19	0.30	6.855E-05
						Total Running	**1.17573**	**0.00027**

Total Emissions	**Lbs/Year**	**Max Lbs/Hours**
Onsite Running Emissions	0.8755	0.0001999
Offsite Running Emissions	0.3003	0.0000686
Idling Emissions	0.3924	0.0010740
Total	**1.5680907**	**0.0013425**

Health Risk Prioritization Results (Receptor 0-100 M)

	Cancer Score	Chronic Score	Acute Score
Prioritization Score Truck Run and Idle	**3.62229**	**0.00710**	**0.00000**

Operational Fuel Calculation—Project-generated Operational Trips

Daily Truck Trips

Eagle Meadows Residential Project - Buildout Year Operations

	Weekday	Saturday	Sunday	Total Average Daily Trips
Residential Trips per Day	2,327	2,327	2,327	**2,327**

By Vehicle Type (Average Fleet Mix for the 2024 Operational Year by Land Use)

	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Residential	0.527700	0.209000	0.167500	0.055600	0.000900	0.000900	0.008000	0.021400	0.000000	0.004300	0.002500	0.000200	0.002000
Daily Trips													
Residential	1,227.9579	486.3430	389.7725	129.3812	2.0943	2.0943	18.6160	49.7978	0.0000	10.0061	5.8175	0.4654	4.6540
Project Total	**1,227.9579**	**486.3430**	**389.7725**	**129.3812**	**2.0943**	**2.0943**	**18.6160**	**49.7978**	**0.0000**	**10.0061**	**5.8175**	**0.4654**	**4.6540**

Heavy Trucks Only	Trips/Day	Truck Fleet	Truck Fleet
LHD1	2.094	0.028846	2.884615
LHD2	2.094	0.028846	2.884615
MHD	18.616	0.256410	25.641026
HHD	49.798	0.685897	68.589744
Heavy Trucks Total	*72.602*	1.000000	100.000000

On-site Truck Running and Idling Emissions for the Health Risk Screening Analysis—Eagle Meadows Residential Project

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: County
Region: Tulare
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed, kWh/mile for Energy Consumption, gallon/mile for Fuel Consumption. PHEV calculated based on total VMT.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX
Tulare	2024	HHDT	Aggregate	5	Diesel	468.4285514	21.17597463	0.13586553	0.142008766	3496.905457	0.029539877	0.550938879	0.635985455	0.724021028	1.380148017	0.033113604
Tulare	2024	HHDT	Aggregate	10	Diesel	5372.627085	9.839894229	0.026463682	0.027660253	3094.63276	0.006460053	0.487560652	0.139083171	0.158335603	0.757091629	0.029304322
Tulare	2024	HHDT	Aggregate	15	Diesel	11784.34764	5.974288551	0.011994524	0.012536863	2477.165163	0.002341856	0.39027838	0.050419523	0.057398789	0.405233079	0.023457273
Tulare	2024	HHDT	Aggregate	20	Diesel	23079.04758	4.025631949	0.007690304	0.008038025	2113.893539	0.00137324	0.333044788	0.029565488	0.033658057	0.287954704	0.020017308
Tulare	2024	HHDT	Aggregate	25	Diesel	13956.89518	3.617973968	0.008484829	0.008868475	1919.127622	0.001072103	0.302359338	0.023082091	0.026277204	0.219746656	0.018172991
						Total	44.63376333	0.190498869	0.199112382	13101.72454	0.04078713	2.064182037	0.878135729	0.999690682	3.050174086	0.124065497
Tulare	2024	LHDT1	Aggregate	5	Diesel	5022.777203	2.96296712	0.12024578	0.125682761	1210.968974	0.024931056	0.190788655	0.536750963	0.611055286	1.739976313	0.011474546
Tulare	2024	LHDT1	Aggregate	10	Diesel	16703.02347	2.757634841	0.097919288	0.102346764	1047.701932	0.020267618	0.165065866	0.436349882	0.49675533	1.38163301	0.009927508
Tulare	2024	LHDT1	Aggregate	15	Diesel	36173.96378	2.584276847	0.08030452	0.083935534	872.5912269	0.016689399	0.137477103	0.359312943	0.409053897	1.106713079	0.008268245
Tulare	2024	LHDT1	Aggregate	20	Diesel	39658.34844	2.43547052	0.066068665	0.069055997	753.9126512	0.013845043	0.118779245	0.298075615	0.33933927	0.889090784	0.007143706
Tulare	2024	LHDT1	Aggregate	25	Diesel	42445.01301	2.323073091	0.054460277	0.056922729	655.3377044	0.01153645	0.103248722	0.248372972	0.282756115	0.714233	0.006209658
						Total	13.06342242	0.41899853	0.437943785	4540.512489	0.087269566	0.715359592	1.878862374	2.138959898	5.831646186	0.043023663
Tulare	2024	LHDT2	Aggregate	5	Diesel	1756.511464	2.646751961	0.104340118	0.109057915	1442.816856	0.021570989	0.227316383	0.464410686	0.52870069	1.501488037	0.013671423
Tulare	2024	LHDT2	Aggregate	10	Diesel	5841.201193	2.42415259	0.085704722	0.089579909	1258.319819	0.017797171	0.1982488	0.383162619	0.436205167	1.203555204	0.01192322
Tulare	2024	LHDT2	Aggregate	15	Diesel	12650.36841	2.233734655	0.070778448	0.073978735	1064.201296	0.014841402	0.167665348	0.319526641	0.363759837	0.969501013	0.010083848
Tulare	2024	LHDT2	Aggregate	20	Diesel	13868.88983	2.069044193	0.058567663	0.061215832	920.3463345	0.012446869	0.14500094	0.267973771	0.305070322	0.780504347	0.008720749
Tulare	2024	LHDT2	Aggregate	25	Diesel	14843.4121	1.940159569	0.048512149	0.050705654	799.8306102	0.010468783	0.126013638	0.225386738	0.256587817	0.62609547	0.007578802
						Total	11.31384297	0.3679031	0.384538045	5485.514915	0.077125214	0.864245109	1.660460456	1.890323834	5.081144071	0.051978042
Tulare	2024	MHDT	Aggregate	5	Diesel	394.7048632	9.306292537	0.058611292	0.061261434	2374.719806	0.015375772	0.374138073	0.331036144	0.376859451	0.580617579	0.022487177
Tulare	2024	MHDT	Aggregate	10	Diesel	4527.712292	3.781262882	0.04633684	0.048431986	2000.64768	0.009324524	0.315202857	0.200754437	0.228543645	0.456511155	0.018944937
Tulare	2024	MHDT	Aggregate	15	Diesel	7887.855438	2.369144866	0.030021827	0.031379281	1573.0734	0.004703618	0.247838355	0.101267596	0.11528545	0.295096533	0.014896064
Tulare	2024	MHDT	Aggregate	20	Diesel	10385.323	1.796341551	0.01914673	0.02001246	1338.697471	0.00228569	0.210912332	0.049210287	0.056022166	0.211793953	0.012676665
Tulare	2024	MHDT	Aggregate	25	Diesel	14295.81924	1.503647128	0.014832723	0.015503393	1205.196736	0.001634053	0.189879237	0.035180708	0.040050558	0.16940122	0.011412492
						Total	18.75668897	0.168949412	0.176588555	8492.335094	0.033323656	1.337970852	0.717449173	0.81676127	1.71342044	0.080417335

Running Emissions 5-25 MPH Averaged

	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX
HHDT	**8.9268**	**0.0381**	**0.0398**	**2620.3449**	**0.0082**	**0.4128**	**0.1756**	**0.1999**	**0.6100**	**0.0248**
LHDT1	**2.6127**	**0.0838**	**0.0876**	**908.1025**	**0.0175**	**0.1431**	**0.3758**	**0.4278**	**1.1663**	**0.0086**
LHDT2	**2.2628**	**0.0736**	**0.0769**	**1097.1030**	**0.0154**	**0.1728**	**0.3321**	**0.3781**	**1.0162**	**0.0104**
MHDT	**3.7513**	**0.0338**	**0.0353**	**1698.4670**	**0.0067**	**0.2676**	**0.1435**	**0.1634**	**0.3427**	**0.0161**

HHDT		**LHDT1**		**LHDT2**		**MHDT**	
Localized Miles per Trip	0.50	Miles per Trip	0.50	Miles per Trip	0.50	Miles per Trip	0.50
Daily Trucks	24.90	Daily Trucks	1.05	Daily Trucks	1.05	Daily Trucks	9.31
Daily Trips	49.80	Daily Trips	2.09	Daily Trips	2.09	Daily Trips	18.62

Onsite Truck Max Daily Emissions	**ROG**	**NO_X**	**CO**	**SO2**	**PM10**	**PM2.5**
HHDT (g/day)	4.3729	222.2663	15.1892	0.6178	0.9915	0.9486
LHDT1 (g/day)	0.3935	2.7359	1.2213	0.0090	0.0917	0.0878
LHDT2 (g/day)	0.3478	2.3695	1.0641	0.0109	0.0805	0.0770
MHDT (g/day)	1.3356	34.9175	3.1897	0.1497	0.3287	0.3145
Total Trucks (g/day)	6.4498	262.2891	20.6644	0.7874	1.4925	1.4280
Running Emissions lbs/day	0.0142	0.5782	0.0456	0.0017	0.0033	0.0031
Idling Emissions Lbs/Day	0.361	4.544	873.309	0.008	0.003	0.003
Total Emissions/Day	**0.375**	**5.122**	**873.354**	**0.0100**	**0.006**	**0.006**

g/lb conversion factor		0.00220

Idling Minutes/Day Per Truck	15
Max Trucks per Day	36.30
Number Idling Trucks per Day	36.30
Max Trucks per Day—HHDT	24.90
Max Trucks per Day—LHDT1	1.05
Max Trucks per Day—LHDT2	1.05
Max Trucks per Day—MHDT	9.31

Idling Emissions	**Calendar Year**	**Season**	**Region**	**Vehicle Category**	**Fuel**	**Pollutant**	**g/vehicle/day**	**g/day**	**Max lbs/day**
IDLEX	2024	Annual	Tulare	HHDT	Diesel	ROG	6.4603	160.8541	0.354623
IDLEX	2024	Annual	Tulare	LHDT1	Diesel	ROG	0.1098	0.1149	0.000253
IDLEX	2024	Annual	Tulare	LHDT2	Diesel	ROG	0.1098	0.1149	0.000253
IDLEX	2024	Annual	Tulare	MHDT	Diesel	ROG	0.2711	2.5236	0.005563
IDLEX	2024	Annual	Tulare	HHDT	Diesel	NOx	77.6812	1,934.1776	4.264132
IDLEX	2024	Annual	Tulare	LHDT1	Diesel	NOx	2.2809	2.3884	0.005266
IDLEX	2024	Annual	Tulare	LHDT2	Diesel	NOx	2.2341	2.3395	0.005158
IDLEX	2024	Annual	Tulare	MHDT	Diesel	NOx	13.1138	122.0629	0.269103
IDLEX	2024	Annual	Tulare	HHDT	Diesel	CO	15060.8078	374,997.5467	826.728216
IDLEX	2024	Annual	Tulare	LHDT1	Diesel	CO	136.4864	142.9217	0.315089
IDLEX	2024	Annual	Tulare	LHDT2	Diesel	CO	218.0335	228.3138	0.503346
IDLEX	2024	Annual	Tulare	MHDT	Diesel	CO	2230.0415	20,757.2260	45.761858
IDLEX	2024	Annual	Tulare	HHDT	Diesel	SO2	0.1426	3.5510	0.007829
IDLEX	2024	Annual	Tulare	LHDT1	Diesel	SO2	0.0013	0.0014	0.000003
IDLEX	2024	Annual	Tulare	LHDT2	Diesel	SO2	0.0021	0.0022	0.000005
IDLEX	2024	Annual	Tulare	MHDT	Diesel	SO2	0.0211	0.1966	0.000433
IDLEX	2024	Annual	Tulare	HHDT	Diesel	PM10	0.0395	0.9842	0.002170
IDLEX	2024	Annual	Tulare	LHDT1	Diesel	PM10	0.0276	0.0289	0.000064
IDLEX	2024	Annual	Tulare	LHDT2	Diesel	PM10	0.0276	0.0289	0.000064
IDLEX	2024	Annual	Tulare	MHDT	Diesel	PM10	0.0390	0.3628	0.000800
IDLEX	2024	Annual	Tulare	HHDT	Diesel	PM2.5	0.0378	0.9417	0.002076
IDLEX	2024	Annual	Tulare	LHDT1	Diesel	PM2.5	0.0264	0.0277	0.000061
IDLEX	2024	Annual	Tulare	LHDT2	Diesel	PM2.5	0.0264	0.0277	0.000061
IDLEX	2024	Annual	Tulare	MHDT	Diesel	PM2.5	0.0373	0.3471	0.000765

For Weighted Average for Project (5-25 MPH)

	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX
Weighted Average Using Project Truck Fleet Percentages										
HHDT	8.926752666	0.038099774	0.039822476	2620.344908	0.008157426	0.412836407	0.175627146	0.199938136	0.610034817	0.024813099
LHDT1	2.612684484	0.083799706	0.087588757	908.1024978	0.017453913	0.143071918	0.375772475	0.42779198	1.166329237	0.008604733
LHDT2	2.262768594	0.07358062	0.076907609	1097.102983	0.015425043	0.172849022	0.332092091	0.378064767	1.016228814	0.010395608
MHDT	3.751337793	0.033789882	0.035317711	1698.467019	0.006664731	0.26759417	0.143489835	0.163352254	0.342684088	0.016083467
HHDT	222.2663219	0.948642456	0.991535859	65243.70584	0.203110935	10.27917242	4.372922738	4.978239665	15.18919591	0.617818879
LHDT1	2.735872557	0.087750862	0.091718567	950.9195306	0.018276865	0.149817759	0.393490147	0.447962371	1.221321661	0.009010446
LHDT2	2.369458133	0.077049946	0.080533803	1148.831389	0.016152334	0.180998853	0.347750233	0.395890521	1.064144003	0.010885761
MHDT	34.91745218	0.314516226	0.328737254	15809.33101	0.062035318	2.490766539	1.33560338	1.52048278	3.189703491	0.149704911
Total	262.2891048	1.427959491	1.492525482	83152.78777	0.299575452	13.10075558	6.449766498	7.342575337	20.66436506	0.787419997
Weighted Average	7.225356319	0.039336427	0.041115045	2290.634683	0.008252494	0.360890427	0.177673644	0.202268116	0.569247437	0.021691294

Max Trucks per Day—HHDT	24.90
Max Trucks per Day—LHDT1	1.05
Max Trucks per Day—LHDT2	1.05
Max Trucks per Day—MHDT	9.31
Total	36.30

For Weighted Average for Project (5 MPH)

	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX
Weighted Average Using Project Truck Fleet Percentages										
HHDT	21.17597463	0.13586553	0.142008766	3496.905457	0.029539877	0.550938879	0.635985455	0.724021028	1.380148017	0.033113604
LHDT1	2.96296712	0.12024578	0.125682761	1210.968974	0.024931056	0.190788655	0.536750963	0.611055286	1.739976313	0.011474546
LHDT2	2.646751961	0.104340118	0.109057915	1442.816856	0.021570989	0.227316383	0.464410686	0.52870069	1.501488037	0.013671423
MHDT	9.306292537	0.058611292	0.061261434	2374.719806	0.015375772	0.374138073	0.331036144	0.376859451	0.580617579	0.022487177
HHDT	527.2584748	3.382902234	3.535862061	87069.09928	0.735510448	13.71777205	15.83533824	18.02732718	34.36416747	0.824492304
LHDT1	3.102671019	0.125915369	0.131608703	1268.066161	0.026106556	0.19978434	0.562058771	0.639866542	1.822016197	0.012015571
LHDT2	2.771546316	0.109259755	0.114199996	1510.84567	0.022588061	0.238034351	0.48630765	0.553628928	1.572283198	0.014316031
MHDT	86.62297094	0.545553904	0.570221431	22103.89195	0.143117681	3.482477179	3.081284431	3.507807774	5.404388423	0.209310639
Total	619.755663	4.163631261	4.351892191	111951.9031	0.927322745	17.63806792	19.9649891	22.72863043	43.16285528	1.060134545
Weighted Average	17.07259438	0.114696794	0.119882874	3083.972515	0.025545237	0.485881126	0.549981518	0.626112372	1.189020068	0.029203843

Max Trucks per Day—HHDT	24.90
Max Trucks per Day—LHDT1	1.05
Max Trucks per Day—LHDT2	1.05
Max Trucks per Day—MHDT	9.31
Total	36.30

For Weighted Average for Project (Idle)

	PM10_IDLEX (g/d)
Weighted Average Using Project Truck Fleet Percentages	
HHDT	0.623444171
LHDT1	0.018314927
LHDT2	0.018320405
MHDT	0.22978082
HHDT	15.52307406
LHDT1	0.019178476
LHDT2	0.019184212
MHDT	2.138799873
Total	17.70023662
Weighted Average	0.487593705

ATTACHMENT C

Energy Consumption Calculations

Eagle Meadows Residential Project—Energy Consumption Summary

Summary of Energy Use During Construction		(Annually)
Construction vehicle fuel	35,142	gallons (gasoline, diesel)
Construction equipment fuel	44,588	gallons (diesel)
Construction office trailer electricity	38,145	kilowatt hours
Summary of Energy Use During Proposed Operations		(Annually)
Operational vehicle fuel consumption	402,912	gallons (gasoline, diesel)
Operational natural gas consumption	8,835,662	kilo-British Thermal Units
Operational electricity consumption	2,150,524	kilowatt hours

Construction Vehicle Fuel Calculations (Page 1 of 2)

California Air Resource Board (CARB). 2022. EMFAC2021 Web Database. Website: https://arb.ca.gov/emfac/emissions-inventory. Accessed June 2023.

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Tulare
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 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

VMT = Vehicle Miles Traveled
FE = Fuel Economy

Given									*Calculations*	
Region	Calendar Year	Vehicle Class	Model Year	Speed		Population	VMT (mi/day)	Fuel Consumption (1000 gallons/day)	FE (mi/gallon)	VMT*FE
Tulare	2023	HHDT	Aggregate	Aggregate	Gasoline	1.549706545	46.29335	0.014304312	3.23632114	149.820138
Tulare	2023	HHDT	Aggregate	Aggregate	Diesel	5221.841851	738312.9	125.5857963	5.8789524	4340506.5
Tulare	2023	LDA	Aggregate	Aggregate	Gasoline	158118.5856	6491689	219.6650576	29.5526718	191846765
Tulare	2023	LDA	Aggregate	Aggregate	Diesel	384.1498923	12142.55	0.280343597	43.3131127	525931.801
Tulare	2023	LDT1	Aggregate	Aggregate	Gasoline	15857.34961	513272.5	21.34216622	24.0496889	12344042.9
Tulare	2023	LDT1	Aggregate	Aggregate	Diesel	10.65169612	178.9854	0.007008468	25.5384492	4571.00969
Tulare	2023	LDT2	Aggregate	Aggregate	Gasoline	67885.93744	2693221	113.8810344	23.6494272	63693139.5
Tulare	2023	LDT2	Aggregate	Aggregate	Diesel	166.1984147	7236.236	0.219675726	32.9405336	238365.463
Tulare	2023	LHDT1	Aggregate	Aggregate	Gasoline	7343.520045	256425.3	28.05468024	9.14019686	2343777.72
Tulare	2023	LHDT1	Aggregate	Aggregate	Diesel	8303.000876	296659.9	18.79451052	15.7843924	4682596.73
Tulare	2023	LHDT2	Aggregate	Aggregate	Gasoline	1118.532738	38674.93	4.763202236	8.11952387	314022.052
Tulare	2023	LHDT2	Aggregate	Aggregate	Diesel	2789.634453	102156.2	7.87710403	12.9687539	1324838.93
Tulare	2023	MDV	Aggregate	Aggregate	Gasoline	78873.28042	2872063	151.1282564	19.0041417	54581088.5
Tulare	2023	MDV	Aggregate	Aggregate	Diesel	1210.67366	48889.9	2.023324036	24.1631567	1181334.21
Tulare	2023	MHDT	Aggregate	Aggregate	Gasoline	405.111362	18171.8	3.924545838	4.6302926	84140.7304
Tulare	2023	MHDT	Aggregate	Aggregate	Diesel	3939.626747	186485.7	21.5511825	8.65315289	1613689.08

Worker
Weighted Average Fuel Economy 25.6684157

Vendor
Weighted Average Fuel Economy 8.98248183

Haul
Weighted Average Fuel Economy 5.87878671

Construction Vehicle Fuel Calculations (Page 2 of 2)

Construction Schedule
Source: CalEEMod Output
Eagle Meadows Residential Project

CalEEMod Run	Phase Name	Start Date	End Date	Num Days Week	Num Days
Site Work	Site Preparation	10/2/2023	11/10/2023	5	30
Site Work	Grading	11/11/2023	2/23/2024	5	75
Site Work	Paving	2/24/2024	5/10/2024	5	55
Home Construction	Building Construction	11/21/2023	6/30/2026	5	681
Home Construction	Paving	5/11/2024	7/26/2024	5	55
Home Construction	Architectural Coating	4/15/2026	6/30/2026	5	55

Construction Trips and VMT

	Trips per Day			Construction Trip Length in Miles				Trips per Phase			VMT per Phase			Fuel Consumption (gallons)		
Phase Name	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Number of Days per Phase	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trips	Vendor Trips	Hauling Trips	Worker Trips	Vendor Trips	Hauling Trips
Site Preparation	17.50	2.00	0.00	7.7	6.8	20	30	525	60	0	4,043	408	0	157.49	45.42	0.00
Grading	20.00	2.00	8.33	7.7	6.8	20	75	1,500	150	625	11,550	1,020	12,500	449.97	113.55	2,126.29
Paving (Site Work)	15.00	2.00	0.00	7.7	6.8	20	55	825	110	0	6,353	748	0	247.48	83.27	0.00
Building Construction	87.12	25.87	0.00	7.7	6.8	20	681	59,329	17,617	0	456,831	119,798	0	17,797.40	13,336.83	0.00
Paving (Homes)	15.00	4.00	0.00	7.7	6.8	20	55	825	220	0	6,353	1,496	0	247.48	166.55	0.00
Architectural Coating	17.42	2.00	0.00	7.7	6.8	20	55	958	110	0	7,379	748	0	287.48	83.27	0.00

Total Project Construction VMT (miles)
629,226

Total Project Fuel Consumption (gallons)
35,142

Construction Equipment Fuel Calculation (Page 1 of 2)

Source: CalEEMod Output
Eagle Meadows Residential Project
Construction Schedule

Construction Area	Phase Type	Start Date	End Date	Num Days Week	Num Days
Site Work	Site Preparation	10/2/2023	11/10/2023	5	30
Site Work	Grading	11/11/2023	2/23/2024	5	75
Site Work	Paving	2/24/2024	5/10/2024	5	55
Home Construction	Building Construction	11/21/2023	6/30/2026	5	681
Home Construction	Paving	5/11/2024	7/26/2024	5	55
Home Construction	Architectural Coating	4/15/2026	6/30/2026	5	55

Construction Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of Days	HP Hours	Fuel (gallons/HP-hour)	Diesel Fuel Usage
Site Work									
Site Preparation	Rubber Tired Dozers	3	8	367	0.40	30	105,696.00	0.02051	2,168.17
Site Preparation	Tractors/Loaders/Backhoes	4	8	84	0.37	30	29,836.80	0.01903	567.69
Grading	Excavators	2	8	36	0.38	75	16,416.00	0.01976	324.34
Grading	Graders	1	8	148	0.41	75	36,408.00	0.02121	772.39
Grading	Rubber Tired Dozers	1	8	367	0.40	75	88,080.00	0.02051	1,806.81
Grading	Scrapers	2	8	423	0.48	75	243,648.00	0.02489	6,063.61
Grading	Tractors/Loaders/Backhoes	2	8	84	0.37	75	37,296.00	0.01903	709.62
Paving	Pavers	2	8	81	0.42	55	29,937.60	0.02153	644.47
Paving	Paving Equipment	2	8	89	0.36	55	28,195.20	0.01833	516.89
Paving	Rollers	2	8	36	0.38	55	12,038.40	0.01940	233.60
Home Construction									
Building Construction	Cranes	1	7.61	367	0.29	681	551,563.90	0.01488	8,209.95
Building Construction	Forklifts	3	8.69	82	0.20	681	291,160.19	0.02080	6,057.51
Building Construction	Generator Sets	1	8.69	14	0.74	681	61,309.34	0.04236	2,596.92
Building Construction	Tractors/Loaders/Backhoes	3	7.61	84	0.37	681	483,207.91	0.01903	9,193.80
Building Construction	Welders	1	8.69	46	0.45	681	122,500.32	0.02585	3,166.13
Paving	Pavers	2	8	81	0.42	55	29,937.60	0.02153	644.47
Paving	Paving Equipment	2	8	89	0.36	55	28,195.20	0.01833	516.89
Paving	Rollers	2	8	36	0.38	55	12,038.40	0.01940	233.60
Architectural Coating	Air Compressors	1	6	37	0.48	55	5,860.80	0.02755	161.49
			Total Construction Equipment Fuel Consumption (gallons)						**44,588.32**

Notes:
Equipment assumptions are provided in the CalEEMod output files.
Source of usage estimates: California Air Resource Board (CARB). 2022. OFFROAD2017 (v1.0.1) Emissions Inventory
Website: https://www.arb.ca.gov/orion/. Accessed May 1, 2023.

Construction Equipment Fuel Calculation (Page 2 of 2)

OFFROAD2017 (v1.0.1) Emissions Inventory
Region Type: County
Region: Tulare
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2017 Equipment Types
Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	Vehicle Class	Model Year	HP_Bin	Fuel	Fuel (gallons/year)	Horsepower Hours (HP-hours/year)	Fuel (gallons/HP-hour)
Tulare	Construction and Mining - Cranes	Aggregated	300	Diesel	52657.02	3537623.55	0.014884857
Tulare	Construction and Mining - Excavators	Aggregated	175	Diesel	156561.57	7924249.90	0.019757273
Tulare	Construction and Mining - Graders	Aggregated	175	Diesel	95622.49	4507357.53	0.021214755
Tulare	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregated	25	Diesel	518.30	16275.35	0.031845705
Tulare	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregated	50	Diesel	266.45	6383.85	0.041738136
Tulare	Construction and Mining - Pavers	Aggregated	175	Diesel	20697.10	961439.23	0.021527205
Tulare	Construction and Mining - Paving Equipment	Aggregated	175	Diesel	8797.73	479896.07	0.018332574
Tulare	Construction and Mining - Rollers	Aggregated	100	Diesel	49945.72	2573962.80	0.019404212
Tulare	Construction and Mining - Rough Terrain Forklifts	Aggregated	100	Diesel	128035.04	6154134.12	0.020804721
Tulare	Construction and Mining - Rubber Tired Dozers	Aggregated	300	Diesel	6934.53	338050.60	0.020513278
Tulare	Construction and Mining - Scrapers	Aggregated	300	Diesel	57538.00	2311993.76	0.024886746
Tulare	Construction and Mining - Tractors/Loaders/Backhoes	Aggregated	300	Diesel	84418.90	4436891.50	0.019026586
Tulare	Light Commercial - Misc - Air Compressors	Aggregated	50	Diesel	8584.80	311560.35	0.027554212
Tulare	Light Commercial - Misc - Generator Sets	Aggregated	50	Diesel	23662.95	558647.10	0.042357599
Tulare	Light Commercial - Misc - Welders	Aggregated	50	Diesel	39441.90	1526043.10	0.025845862

Construction Office Electricity Calculation

Energy Appendix: CalEEMod Typical Construction Trailer
Typical Construction Trailer - Tulare County, Annual

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	13,895	453	0.0330	0.0040	26,460

kWh/yr = kilowatt hours per year

Energy by Land Use - Electricity

Annual	13,895	kWh/yr
Total Over Construction	**38,145**	**kWh**

Total Construction Schedule	
Start	10/2/2023
End	6/30/2026
Total Calendar Days	1002
Years	2.75

Eagle Meadows Residential Project Operational Fuel Calculation—Project-generated Operational Trips

California Air Resource Board (CARB). EMFAC2021. Website: https://arb.ca.gov/emfac/emissions-inventory/. Accessed June 2023.

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Tulare
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 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

VMT = Vehicle Miles Traveled
FE = Fuel Economy

				Given						*Calculations*
Region	Calendar Year	Vehicle Class	Model Year	Speed	Fuel	Population	VMT	Fuel Consumption	FE	VMT*FE
Tulare	2024	LDA	Aggregate	Aggregate	Gasoline	158223.9536	6564398.587	217.9503163	30.1187844	197711705.8
Tulare	2024	LDA	Aggregate	Aggregate	Diesel	359.7791844	11427.49529	0.260720464	43.83045018	500872.263
									Total VMT	**6575826.082**
									Weighted Average Fuel Economy	**30.14261259**
Tulare	2024	LDT1	Aggregate	Aggregate	Gasoline	15208.02808	501766.3752	20.47746002	24.50335025	12294957.24
Tulare	2024	LDT1	Aggregate	Aggregate	Diesel	9.512365454	157.9270553	0.006179901	25.55495069	4035.818112
Tulare	2024	LDT2	Aggregate	Aggregate	Gasoline	69118.42037	2784413.872	114.7335565	24.26852227	67573610.07
Tulare	2024	LDT2	Aggregate	Aggregate	Diesel	177.9591413	7851.285313	0.232582017	33.75706086	265036.3162
Tulare	2024	MDV	Aggregate	Aggregate	Gasoline	76757.45305	2813740.835	145.4498692	19.34509017	54432070.16
Tulare	2024	MDV	Aggregate	Aggregate	Diesel	1201.269385	47857.95304	1.963622376	24.37227932	1166407.399
									Total VMT	**6155788.247**
									Weighted Average Fuel Economy	**22.0501602**
Tulare	2024	LHDT1	Aggregate	Aggregate	Gasoline	7112.717281	252436.4523	27.13505655	9.302963929	2348407.21
Tulare	2024	LHDT1	Aggregate	Aggregate	Diesel	8035.272749	285635.962	18.07147636	15.80590076	4514733.669
Tulare	2024	LHDT2	Aggregate	Aggregate	Gasoline	1081.046628	37535.93128	4.566392691	8.220040154	308546.8623
Tulare	2024	LHDT2	Aggregate	Aggregate	Diesel	2738.705526	99889.5275	7.66820855	13.02644899	1301205.835
Tulare	2024	MHDT	Aggregate	Aggregate	Gasoline	386.2093164	18095.21028	3.850685638	4.699217744	85033.33323
Tulare	2024	MHDT	Aggregate	Aggregate	Diesel	4025.767481	189979.3326	21.84238522	8.69773748	1652390.362
									Total VMT	**883572.416**
									Weighted Average Fuel Economy	**11.55572207**
Tulare	2024	HHDT	Aggregate	Aggregate	Gasoline	0.77933665	37.07212461	0.010342608	3.584407622	132.881606
Tulare	2024	HHDT	Aggregate	Aggregate	Diesel	5376.747763	746360.1636	125.2227059	5.960262225	4448502.289
									Total VMT	**746397.2357**
									Weighted Average Fuel Economy	**5.960144221**
Tulare	2024	OBUS	Aggregate	Aggregate	Gasoline	134.1612066	5486.442751	1.15917748	4.733048085	25967.59736
Tulare	2024	OBUS	Aggregate	Aggregate	Diesel	100.3266669	7162.520336	1.021405443	7.012416457	50226.57548
Tulare	2024	SBUS	Aggregate	Aggregate	Gasoline	136.7095355	7273.094092	0.75738058	9.602958249	69843.21891
Tulare	2024	SBUS	Aggregate	Aggregate	Diesel	492.9532926	10878.8317	1.316028746	8.266408871	89928.87085
Tulare	2024	UBUS	Aggregate	Aggregate	Gasoline	59.93560536	4217.171783	0.849811282	4.962480346	20927.63209
Tulare	2024	UBUS	Aggregate	Aggregate	Diesel	14.35384626	1344.175169	0.100836322	13.33026779	17918.21497
									Total VMT	**36362.23583**
									Weighted Average Fuel Economy	**7.557624095**
Tulare	2024	MCY	Aggregate	Aggregate	Gasoline	8231.591618	45554.38643	1.090806636	41.76210973	1902447.285
									Total VMT	**45554.38643**
									Weighted Average Fuel Economy	**41.76210973**

Operational Fuel Calculation—Project-generated Operational Trips
Total Operational VMT
Eagle Meadows Residential Project

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	2,327	2,327	2,327	849,270	25,997	25,997	25,997	9,488,887
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	Annual VMT (miles)
Total VMT for Residential Uses	**9,488,887**

By Vehicle Type (Average Fleet Mix for the 2024 Operational Year for Residential Uses)

	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Residential	52.770000	20.900000	16.750000	5.560000	0.090000	0.090000	0.800000	2.140000	0.000000	0.430000	0.250000	0.020000	0.200000

	Fraction of 1	Percent of Vehicle Trips	Annual VMT	Daily VMT	Average Fuel Economy (miles/gallon)	Total Daily Fuel Consumption (gallons)	Total Annual Fuel Consumption (gallons)
Passenger Cars (LDA)	0.5277	52.77	5,007,286	13,719	30.14	455.1	166,120
Light Trucks and Medium Vehicles (LDT1, LDT2, and MDV)	0.4321	43.21	4,100,148	11,233	22.05	509.4	185,946
LHDT1, LHDT2, and MHDT	0.0098	0.98	92,991	255	11.56	22.0	8,047
HHDT	0.0214	2.14	203,062	556	5.96	93.3	34,070
MCY	0.0025	0.25	23,722	65	41.76	1.6	568
Buses/Other	0.0065	0.65	61,678	169	7.56	22.4	8,161
Total	—	100.0	9,488,887	25,997		1,103.9	402,912

Project Operations Natural Gas Use

Source: CalEEMod Output
Eagle Meadows Residential Project - Buildout Year Operations

kBTU/yr = kilo-British Thermal Units/year

CalEEMod Land Use	Natural Gas Use (kBTU/yr)	
Single Family Housing	8,835,662	
Total	**8,835,662**	**kBTU/yr**

Project Operations Electricity Use

Source: CalEEMod Output

Eagle Meadows Residential Project - Buildout Year Operations

kWh/yr = kilowatt hours per year

CalEEMod Land Use	Electricity Use (kWh/yr)	
Single Family Housing	2,150,524	
Total	**2,150,524**	**kWh/yr**

*The estimates above account for total consumption and not demand after incorporation of renewable energy.

Construction Trailer Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Construction Trailer
Operational Year	2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	24.4
Location	36.300103, -119.218111
County	Tulare
City	Farmersville
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2757
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	0.72	1000sqft	0.02	720	0.00	—	—	—

2. Emissions Summary

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.04	0.06	0.45	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	91.9	91.9	< 0.005	< 0.005	0.41	93.7
Area	0.01	0.02	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.13	0.13	< 0.005	< 0.005	—	0.13
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.25	0.63	0.87	0.03	< 0.005	—	1.68
Waste	—	—	—	—	—	—	—	—	—	—	—	0.36	0.00	0.36	0.04	0.00	—	1.26
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.05	0.06	0.06	0.49	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.61	118	119	0.07	0.01	0.41	123
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.06	0.36	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	84.0	84.0	< 0.005	< 0.005	0.01	85.5
Area	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.25	0.63	0.87	0.03	< 0.005	—	1.68
Waste	—	—	—	—	—	—	—	—	—	—	—	0.36	0.00	0.36	0.04	0.00	—	1.26
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.04	0.05	0.07	0.36	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.61	110	111	0.07	0.01	0.01	114
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.05	0.28	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	65.3	65.3	< 0.005	< 0.005	0.13	66.5
Area	< 0.005	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.06

Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.25	0.63	0.87	0.03	< 0.005	—	1.68
Waste	—	—	—	—	—	—	—	—	—	—	—	0.36	0.00	0.36	0.04	0.00	—	1.26
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.03	0.05	0.05	0.30	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	0.61	91.7	92.3	0.07	< 0.005	0.13	95.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.01	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	11.0
Area	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.01	0.01	< 0.005	< 0.005	—	0.01
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.26	4.26	< 0.005	< 0.005	—	4.28
Water	—	—	—	—	—	—	—	—	—	—	—	0.04	0.10	0.14	< 0.005	< 0.005	—	0.28
Waste	—	—	—	—	—	—	—	—	—	—	—	0.06	0.00	0.06	0.01	0.00	—	0.21
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.01	0.01	0.01	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.10	15.2	15.3	0.01	< 0.005	0.02	15.8

4. Operations Emissions Details

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	17.3	17.3	< 0.005	< 0.005	—	17.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	17.3	17.3	< 0.005	< 0.005	—	17.3

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	17.3	17.3	< 0.005	< 0.005	—	17.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	17.3	17.3	< 0.005	< 0.005	—	17.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2.86	2.86	< 0.005	< 0.005	—	2.87
Total	—	—	—	—	—	—	—	—	—	—	—	—	2.86	2.86	< 0.005	< 0.005	—	2.87

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.48	8.48	< 0.005	< 0.005	—	8.50
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.48	8.48	< 0.005	< 0.005	—	8.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.48	8.48	< 0.005	< 0.005	—	8.50
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.48	8.48	< 0.005	< 0.005	—	8.50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.40	1.40	< 0.005	< 0.005	—	1.41
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.40	1.40	< 0.005	< 0.005	—	1.41

5. Activity Data

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	13,895	453	0.0330	0.0040	26,460

8. User Changes to Default Data

Appendix B

Biological Resource Evaluation

BIOLOGICAL RESOURCE EVALUATION

May 2023

FARMERSVILLE RESIDENTIAL DEVELOPMENT PROJECT

TULARE COUNTY, CALIFORNIA

PREPARED FOR:

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Executive Summary

The project applicant proposes to construct 242 single-family residences in Farmersville, Tulare County, California. The proposed residential development project (Project) will involve construction on an approximately 48.82-acre parcel that currently supports fallowed agricultural land and orchards.

To evaluate whether the Project may affect biological resources under California Environmental Quality Act (CEQA) purview, we (1) obtained lists of special-status species from the United States Fish and Wildlife Service, the California Department of Fish and Wildlife, and the California Native Plant Society; (2) reviewed other relevant background information such as aerial images and topographic maps; and (3) conducted a field reconnaissance survey at the Project site.

This biological resource evaluation summarizes (1) existing biological conditions on the Project site, (2) the potential for special-status species and regulated habitats to occur on or near the Project site, (3) the potential impacts of the proposed Project on biological resources and regulated habitats, and (4) measures to reduce those potential impacts to less-than-significant levels under CEQA.

We concluded the Project could affect four special-status wildlife species: the state listed as threatened Swainson's hawk (*Buteo swainsoni*), the state species of special concern burrowing owl (*Athene cunicularia*), the state species of special concern pallid bat (*Antrozous pallidus*), and the state species of special concern western mastiff bat (*Eumops perotis californicus*). Nesting migratory birds could also be impacted. Impacts to all species can be reduced to less-than-significant levels with mitigation.

Abbreviations

Abbreviation	Definition
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
FE	Federally listed as Endangered
FESA	Federal Endangered Species Act
FT	Federally listed as Threatened
MBTA	Migratory Bird Treaty Act
NRCS	Natural Resources Conservation Science
SE	State listed as Endangered
SSSC	State Species of Special Concern
ST	State listed as Threatened
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 Introduction

1.1 Background

The project applicant proposes to construct a residential development project (the Project) on an approximately 48.82-acre parcel in Farmersville, Tulare County, California. The property currently supports fallowed agricultural land and orchards.

The purpose of this biological resource evaluation is to assess whether the Project will affect protected biological resources pursuant to California Environmental Quality Act (CEQA) guidelines. Such resources include species of plants or animals listed or proposed for listing under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA) as well as those covered under the Migratory Bird Treaty Act (MBTA), the California Native Plant Protection Act, and various other sections of California Fish and Game Code (CFGC). This biological resource evaluation also addresses Project-related impacts to regulated habitats, which are those under the jurisdiction of the United States Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), or California Department of Fish and Wildlife (CDFW).

1.2 Project Description

The Project will involve constructing 242 single-family residences.

1.3 Project Location

The approximately 48-82-acre Project site is in the City of Farmersville, Tulare County, California (Figure 1). The Project site is south of West Visalia Road, east of South Virginia Avenue, and west of South Farmersville Road (Figure 2).

Figure 1. Project site vicinity map.

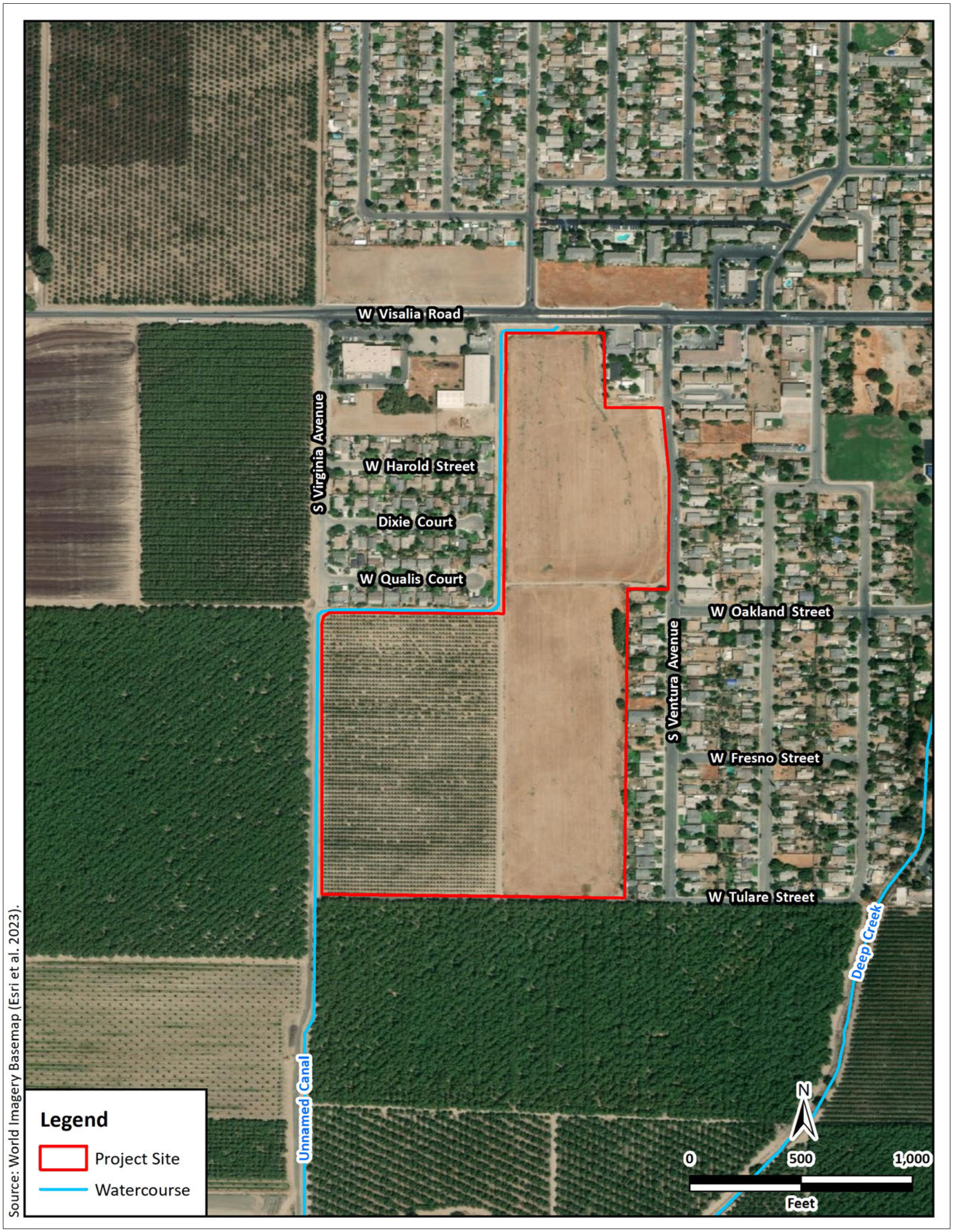

Figure 2. Project site map.

1.4 Purpose and Need of Proposed Project

The purpose of the Project is to develop single-family residential units. The Project is needed to meet growing needs for housing in Farmersville and Tulare County.

1.5 Regulatory Framework

The relevant state and federal regulatory requirements and policies that guide the impact analysis of the Project are summarized below.

1.5.1 State Requirements

California Department of Fish and Wildlife Jurisdiction. The CDFW has regulatory jurisdiction over lakes and streams in California. Activities that divert or obstruct the natural flow of a stream; substantially change its bed, channel, or bank; or use any materials (including vegetation) from the streambed, may require that the project applicant enter into a Lake and Streambed Alteration Agreement with the CDFW in accordance with California Fish and Game Code (CFGC) Section 1602.

California Endangered Species Act. The California Endangered Species Act (CESA) of 1970 (Fish and Game Code § 2050 et seq., and California Code of Regulations (CCR) Title 14, Subsection 670.2, 670.51) prohibits the take of species listed under CESA (14 CCR Subsection 670.2, 670.5). Take is defined as hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill. Under CESA, state agencies are required to consult with the CDFW when preparing CEQA documents. Consultation ensures that proposed projects or actions do not have a negative effect on state listed species. During consultation, CDFW determines whether take would occur and identifies "reasonable and prudent alternatives" for the project and conservation of special-status species. CDFW can authorize take of state listed species under Sections 2080.1 and 2081(b) of the CFGC in those cases where it is demonstrated that the impacts are minimized and mitigated. Take authorized under section 2081(b) must be minimized and fully mitigated. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Under CESA, CDFW is responsible for maintaining a list of threatened and endangered species designated under state law (Fish and Game Code § 2070). CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to the requirements of CESA, a state or local agency reviewing a proposed project within its jurisdiction must determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation. Impacts to species of concern or fully protected species would be considered significant under certain circumstances.

California Environmental Quality Act. The California Environmental Quality Act (CEQA) of 1970 (Subsections 21000–21178) requires that CDFW be consulted during the CEQA review process regarding impacts of proposed projects on special-status species. Special-status species are defined under CEQA Guidelines subsection 15380(b) and (d) as those listed under FESA and CESA and species that are not currently protected by statute or regulation but would be considered rare, threatened, or endangered under these criteria or by the scientific community. Therefore, species considered rare or endangered are addressed in this biological resource evaluation regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity (CNPS 2023). Plants with Rare Plant Ranks 1A, 1B, 2A, or 2B are considered special-status species under CEQA.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the CFGC dealing with rare and endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the United States Fish and Wildlife Service (USFW) or CDFW (i.e., candidate species) would occur. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agency has an opportunity to designate the species as protected, if warranted.

California Native Plant Protection Act. The California Native Plant Protection Act of 1977 (CFGC §§ 1900–1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require the project proponent to notify CDFW at least 10 days in advance of any change in land use, which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting birds. CFGC Sections 3503, 3503.5, and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs. CFGC Section 3511 lists birds that are "Fully Protected" as those that may not be taken or possessed except under specific permit.

***Porter-Cologne Water Quality Control Act*.** The Porter-Cologne Water Quality Control Act (California Water Code § 13000 et. sec.) was established in 1969 and entrusts the SWRCB and nine Regional Water Quality Control Boards (collectively Water Boards) with the responsibility to preserve and enhance all beneficial uses of California's diverse waters. The Act grants the Water Boards authority to establish water quality objectives and regulate point- and nonpoint-source pollution discharge to the state's surface and ground waters. Under the auspices of the United States Environmental Protection Agency, the Water Boards are responsible for certifying, under Section 401 of the federal Clean Water Act, that activities affecting waters of the United States comply California water quality standards. The Porter-Cologne Water Quality Control Act addresses all "waters of the State," which are more broadly defined than waters of the Unites States. Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state. They include artificial as well as natural water bodies and federally jurisdictional and federally non-jurisdictional waters. The Water Boards may issue a

Waste Discharge Requirement permit for projects that will affect only federally non-jurisdictional waters of the State.

1.5.2 Federal Requirements

Federal Endangered Species Act. The USFWS and the National Oceanographic and Atmospheric Association and National Marine Fisheries Service enforce the provisions stipulated in the FESA of 1973 (FESA, 16 United States Code [USC] § 1531 et seq.). Threatened and endangered species on the federal list (50 Code of Federal Regulations [CFR] 17.11 and 17.12) are protected from take unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct. Pursuant to the requirements of the FESA, an agency reviewing a proposed action within its jurisdiction must determine whether any federally listed species may be present in the proposed action area and determine whether the proposed action may affect such species. Under the FESA, habitat loss is considered an effect to a species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species that is listed or proposed for listing under the FESA (16 USC § 1536[3], [4]). Therefore, proposed action-related effects to these species or their habitats would be considered significant and would require mitigation.

Migratory Bird Treaty Act. The federal MBTA (16 USC § 703, Supp. I, 1989) prohibits killing, possessing, trading, or other forms of take of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. "Take" is defined as the pursuing, hunting, shooting, capturing, collecting, or killing of birds, their nests, eggs, or young (16 USC § 703 and § 715n). This act encompasses whole birds, parts of birds, and bird nests and eggs. The MBTA specifically protects migratory bird nests from possession, sale, purchase, barter transport, import, and export, and take. For nests, the definition of take per 50 CFR 10.12 is to collect. The MBTA does not include a definition of an "active nest." However, the "Migratory Bird Permit Memorandum" issued by the USFWS in 2003 and updated in 2018 clarifies the MBTA in that regard and states that the removal of nests, without eggs or birds, is legal under the MBTA, provided no possession (which is interpreted as holding the nest with the intent of retaining it) occurs during the destruction (USFWS 2018).

United States Army Corps of Engineers Jurisdiction. Areas meeting the regulatory definition of "waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as waters of the United States, tributaries of waters otherwise defined as waters of the United States, the territorial seas, and wetlands adjacent to waters of the United States (33 CFR part 328.3).Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual* and related Regional Supplement (USACE 1987 and 2008). Construction activities, including direct removal, filling, hydrologic disruption, or other means in jurisdictional waters are regulated by the USACE. The placement of dredged or fill material into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. The SWRCB is the state agency (together with the Regional Water Quality Control Boards) charged with implementing water quality certification in California.

2.0 Methods

2.1 Desktop Review

As a framework for the evaluation and reconnaissance survey, we obtained an official USFWS species list for the Project (USFWS 2023a, Appendix A). In addition, we searched the California Natural Diversity Database (CNDDB, CDFW 2023, Appendix B) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2023, Appendix C) for records of special-status plant and animal species from the vicinity of the Project site. Regional lists of special-status species were compiled using USFWS, CNDDB, and CNPS database searches confined to the Exeter 7.5-minute United States Geological Survey (USGS) topographic quadrangle, which encompasses the Project site, and the eight surrounding quadrangles (Woodlake, Lindsay, Rocky Hill, Cairns Corner, Visalia, Tulare, Monson, and Ivanhoe). A local list of special-status species was compiled using CNDDB records from within 5 miles of the Project site. Species that lack a CEQA-recognized special-status designation by state or federal regulatory agencies or public interest groups were omitted from the final list. Species for which the Project site does not provide habitat were eliminated from further consideration. We also reviewed aerial imagery from Google Earth (Google 2023) and other sources, USGS topographic maps, the Web Soil Survey (NRCS 2023), the National Wetlands Inventory (USFWS 2023b), and relevant literature.

2.2 Reconnaissance Survey

Colibri Associate Scientist Kristine Harman conducted a field reconnaissance survey of the Project site on 9 February 2022. The Project site and a 50-foot buffer surrounding the Project site (Figure 3) were walked and thoroughly inspected to evaluate and document the potential for the area to support state- or federally protected resources. All plants except those under cultivation or planted in residential areas and all vertebrate wildlife species observed within the survey area were identified and documented. The survey area was evaluated for the presence of regulated habitats, including lakes, streams, and other waters using methods described in the *Wetlands Delineation Manual* and regional supplement (USACE 1987, 2008) and as defined by the CDFW (https://www.wildlife.ca.gov/conservation/lsa) or under the Porter-Cologne Water quality Control Act. An additional buffer of 0.5 miles around the Project site was inspected for potential roosting sites for special-status raptors. The 0.5-mile buffer was surveyed by driving public roads and identifying the presence of large trees or other potentially suitable substrates for nesting raptors.

2.3 Significance Criteria

CEQA defines “significant effect on the environment” as “a substantial, or potentially substantial, adverse change in the environment” (California Public Resource Code § 21068). Under CEQA

Guidelines Section 15065, a Project's effects on biological resources are deemed significant where the Project would do the following:

a) Substantially reduce the habitat of a fish or wildlife species,
b) Cause a fish or wildlife population to drop below self-sustaining levels,
c) Threaten to eliminate a plant or animal community, or
d) Substantially reduce the number or restrict the range of a rare or endangered plant or animal.

In addition to the Section 15065 criteria, Appendix G within the CEQA Guidelines includes six additional impacts to consider when analyzing the effects of a project. Under Appendix G, a project's effects on biological resources are deemed significant where the project would do any of the following:

e) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;

f) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;

g) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

h) Interfere substantially 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;

i) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

j) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These criteria were used to determine whether the potential effects of the Project on biological resources qualify as significant.

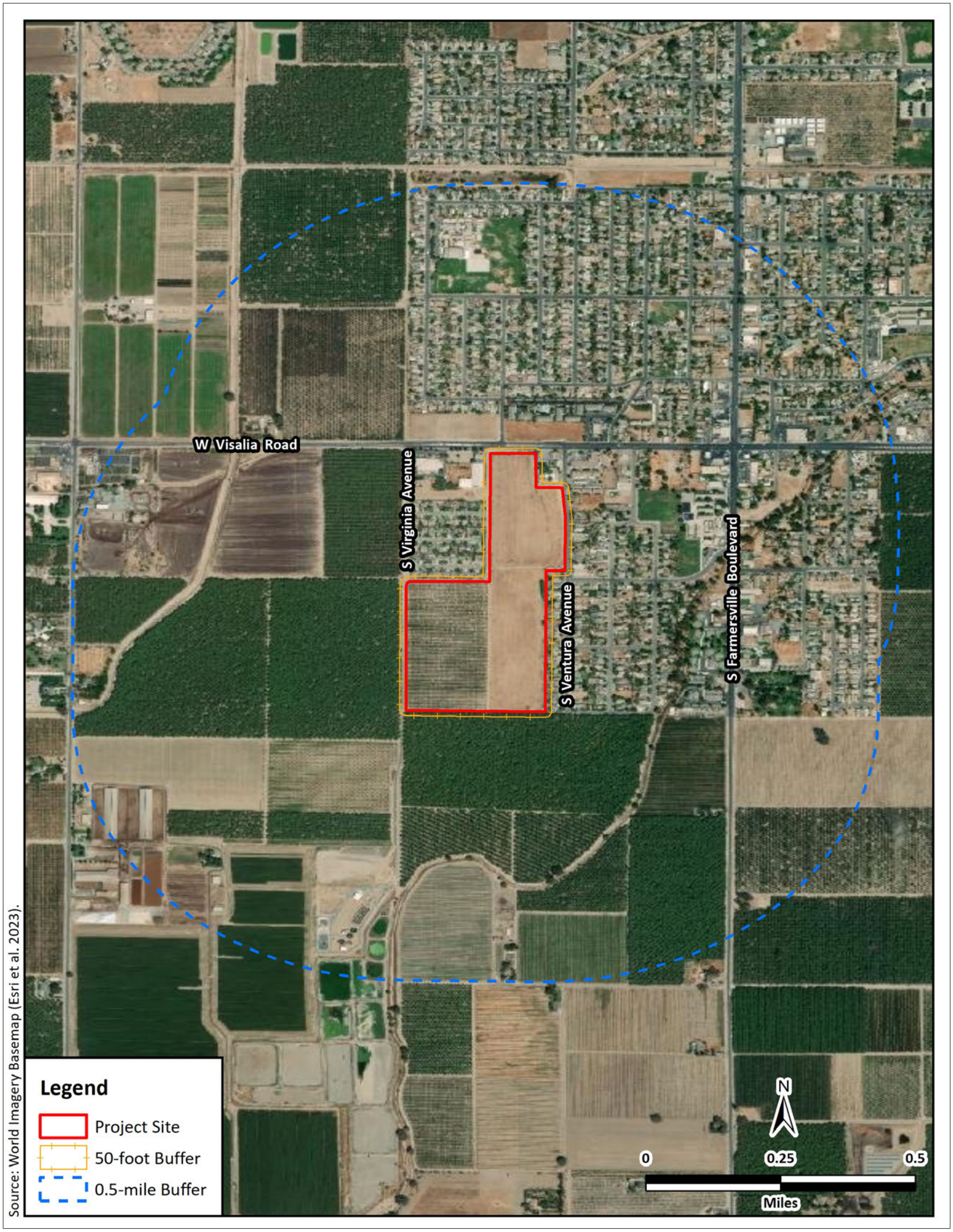

Figure 3. Reconnaissance survey area map.

3.0 Results

3.1 Desktop Review

The USFWS species list for the Project included eight species listed as threatened, endangered, or candidate under the FESA (USFWS 2023a, Table 1, Appendix A). Of those eight species, none are expected to occur on or near the Project site due to either (1) the lack of habitat, (2) the Project site being outside the current range of the species, or (3) the presence of development that would otherwise preclude occurrence (Table 1). As identified in the species list, the Project site does not occur in USFWS-designated or proposed critical habitat for any species (USFWS 2023a, Appendix A).

Searching the CNDDB for records of special-status species from the Exeter 7.5-minute USGS topographic quad and the eight surrounding quads produced 203 records of 48 species (Table 1, Appendix B). Of those 48 species, eight are not given further consideration because they are not recognized as special-status species by state or federal regulatory agencies or public interest groups or are considered extirpated in California (Appendix B). Of the remaining 40 species, 11 are known from within 5 miles of the Project site (Table 1, Figure 4). Of those species, only the pallid bat (*Antrozous pallidus* – SSSC) could occur on or near the Project site (Table 1). In addition, Swainson's hawk (*Buteo swainsoni* – ST), burrowing owl (*Athene cunicularia* – SSSC), and mastiff bat (*Eumops perotis californicus* – SSSC) were identified in the nine-quad search and could occur on or near the Project site (Table 1).

Searching the CNPS inventory of rare and endangered plants of California yielded 21 species (CNPS 2023, Appendix C) which have a CRPR of 1 or 2 (Table 1).). None of those species are expected to occur on or near the Project site due to lack of habitat (Table 1).

The Project site is underlain by Tagus loam and Nord fine sandy loam with 0 to 2% slopes (NCRS 2023). The Project site is at an elevation of 348–355 feet above mean sea level (Google 2023).

Table 1. Special-status species, their listing status, habitats, and potential to occur on or near the Project site.

Species	Status[1]	Habitat	Potential to Occur[2]
Federally and State-Listed Endangered or Threatened Species			
California jewelflower (*Caulanthus californicus*)	FE, SE, 1B.1	Chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland at 150–3300 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
Greene's tuctoria (*Tuctoria greenei*)	FE, 1B.1	Vernal pools in open grasslands below 3445 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Hoover's spurge (*Euphorbia hooveri*)	FT, 1B.2	Vernal pools and depressions below 750 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Kaweah brodiaea (*Brodiaea insignis*)	SE, 1B.2	Valley and foothill grassland, meadows, and cismontane woodlands with granitic or clay soils.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	FT, SE, 1B.1	Grassland and bare dark clay at 300–2700 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover and lacked clay soils.
San Joaquin valley orcutt grass (*Orcuttia inaequalis*)	FT, SE, 1B.1	Vernal pools at or below 2700 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Striped adobe-lily (*Fritillaria striata*)	ST, 1B.1	Adobe clay soils at or below 3280 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover and lacked clay soils.
Crotch bumble bee[3] (*Bombus crotchii*)	SC	Nests or overwinters in open grassland and scrub habitats with *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum* as food plants.	**None.** Habitat lacking; the Project site lacked *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, or *Eriogonum*.

Monarch California overwintering population (*Danaus plexippus*)	FC	Groves of trees within 1.5 miles of the ocean that produce suitable micro-climates for overwintering such as high humidity, dappled sunlight, access to water and nectar, and protection from wind.	**None.** Habitat lacking; the Project site is not within 1.5 miles of the ocean.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	Elderberry (*Sambucus* sp.) plants with stems > 1-inch diameter at ground level.	**None.** Habitat lacking; the Project site lacked elderberry plants and is outside the current known range of this species.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Vernal pools and ponds.	**None.** Habitat lacking; the Project site lacked vernal pools or ponds.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Vernal pools, clay flats, alkaline pools, and ephemeral stock tanks.	**None.** Habitat lacking; the Project site is outside the current known range of this species.
Blunt-nosed leopard lizard (*Gambelia sila*)	FE, SE	Upland scrub and sparsely vegetated grassland with small mammal burrows below 2400 feet elevation.	**None.** Habitat lacking; the Project site is outside the current known range of this species.
California tiger salamander (*Ambystoma californiense*)	FT, ST	Vernal pools or seasonal ponds for breeding; small mammal burrows for upland refugia in natural grassland or oak woodland.	**None.** Habitat lacking; the Project site consisted of agricultural land cover and is outside the current known local range of this species.
Foothill yellow-legged frog (*Rana boylii*)	SE, SSSC	Perennial streams and rivers with rocky substrates, and with open, sunny banks may be in forests, chaparral, or woodlands.	**None.** Habitat lacking; The Project site lacked perennial streams and is outside the current known local range of this species.

California condor (*Gymnogyps californianus*)	FE, SE	Mountain and foothill rangeland with cliffs for nesting and grassland and open woodland for foraging.	**None.** Habitat lacking; the Project site is about 6 miles west of potential foothill habitat.
Swainson's hawk (*Buteo swainsoni*)	ST	Large trees for nesting with adjacent grasslands, alfalfa fields, or grain fields.	**Low.** The Project site lacked nesting habitat, but provided potential foraging habitat; potential nest trees were within 0.5 miles of the Project site.
Tricolored blackbird (*Agelaius tricolor*)	ST	Large freshwater marshes with dense stands of cattails or bulrushes or areas with thorny or prickly vegetation for nesting.	**None.** Habitat lacking; the Project site lacked dense stands of cattails or bulrushes, and the site lacked prickly or thorny vegetation.
Western yellow-billed cuckoo[3] (*Coccyzus americanus occidnetalis*)	FT, SE	Open woodlands with dense, low vegetation along waterways, orchards, and dense leafy groves and thickets.	**None.** Habitat lacking; the Project site lacked waterways with associated riparian vegetation. The occurrence from within 5 miles is from 1919 and presumed extirpated.
Buena Vista Lake ornate shrew (*Sorex ornatus relictus*)	FE, SSSC	Grassland or desert scrub near water sources with deep leaf litter, cattails, or fallen logs.	**None.** Habitat lacking; the Project site lacked grassland or desert scrub near water sources with deep leaf litter, cattails, or fallen logs.
San Joaquin kit fox[3] (*Vulpes macrotis mutica*)	FE, ST	Grassland and fallowed agricultural lands adjacent to natural grasslands or upland scrub.	**None.** Habitat lacking; a portion of the Project site consisted of fallowed agricultural land cover but lacked adjacent natural grassland or

			upland scrub; all occurrence records from within 5 miles are from 1975.
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	FE, SE	Grassland and upland scrub with sparse to moderate shrub cover and saline soils; also fallowed agricultural fields adjacent to natural grasslands or upland scrub.	**None.** Habitat lacking; the Project site lacked adjacent natural grassland or upland scrub and is outside the current known local range of this species.
State Species of Special Concern			
Northern leopard frog (*Lithobates pipiens*)	SSSC	Wet meadows, canals, bogs, marshes, and reservoirs in grassland, forest, and woodland.	**None.** Habitat lacking; the Project site is outside the current known local range of this species.
Northern California legless lizard[3] (*Anniella pulchra*)	SSSC	Moist warm loose soil with plant cover in beach dunes, chaparral, pine-oak woodlands, sandy areas, and stream terraces.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
Northwestern pond turtle[3] (*Actinemys marmorata*)	SSSC	Ponds, rivers, marshes, streams, and irrigation ditches, usually with aquatic vegetation and woody debris for basking and adjacent natural upland areas for egg laying.	**None.** Habitat lacking; the canal adjacent to the Project site was dry and lacked aquatic vegetation and woody debris.
Western spadefoot (*Spea hammondii*)	SSSC	Rain pools for breeding and small mammal burrows or other suitable refugia for nonbreeding upland cover.	**None.** Habitat lacking; vernal pools or other ephemeral pools were absent from the Project site.

Burrowing owl (*Athene cunicularia*)	SSSC	Grassland and upland scrub with friable soil; some agricultural or other developed and disturbed areas with ground squirrel burrows.	**Low.** Ground squirrel burrows were present along the banks of an unnamed canal adjacent to the Project site.
American badger[3] (*Taxidea taxus*)	SSSC	Open areas including meadows, grasslands, and chaparral with less than 50% plant cover.	**None.** Habitat lacking; the Project site consisted of heavily managed agricultural fields and lacked adjacent natural grassland or meadow habitats; the most recent occurrence from within 5 miles was from 1994.
Pallid bat[3] (*Antrozous pallidus*)	SSSC	Arid or semi-arid locations in rocky areas and sparsely vegetated grassland near water. Rock crevices, caves, mine shafts, bridges, building, and tree hollows for roosting.	**Low.** Residential buildings within the survey area could provide roosting habitat.
Western mastiff bat (*Eumops perotis californicus*)	SSSC	Roosts in crevices in face cliffs, high buildings, trees, and tunnels in open semi-arid habitats.	**Low.** Residential buildings within the survey area could provide roosting habitat.
California Rare Plants			
Alkali-sink goldfields[3] (*Lasthenia chrysantha*)	1B.1	Vernal pools and wet saline flats below 320 feet elevation.	**None.** Habitat lacking; the Project site is above the known elevational range of this species.

Brittlescale[3] (*Atriplex depressa*)	1B.2	Alkaline or clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools below 1000 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover. The occurrence record from within 5 miles was from 1881.
Calico monkeyflower (*Diplacus pictus*)	1B.2	Bare, sunny, shrubby areas around granite outcrops in the southern Sierra Nevada mountains at 442–4100 feet elevation.	**None.** Habitat lacking; the Project site is below the known elevational range of this species.
California alkali grass (*Puccinellia simplex*)	1B.2	Scrub, meadows, seeps, grassland, vernal pools, saline flats, and mineral springs below 3000 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover and lacked vernal pools.
California satintail[3] (*Imperata brevifolia*)	2B.1	Moist to wet sites in arid desert canyons, or rocky slopes, near seeps, springs, and streams below 1700 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	1B.1	Saltmarsh, playas, and vernal pools below 4000 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Earlimart orache (*Atriplex cordulata* var. *erecticaulis*)	1B.2	Saline or alkaline soils in Central Valley and foothill grassland below 230 feet elevation.	**None.** Habitat lacking; the Project site is above the known elevational range of this species.
Lesser saltscale (*Atriplex minuscula*)	1B.1	Sandy alkaline soils in chenopod scrub, playa, and grassland in the San Joaquin Valley below 328 feet elevation.	**None.** Habitat lacking; the Project site is above the known elevational range of this species.

Recurved larkspur (*Delphinium recurvatum*)	1B.2	Poorly drained, fine, alkaline soils in chenopod scrub, cismontane woodland, and valley and foothill grassland at 10–2800 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover.
Sanford's arrowhead (*Sagittaria sanfordii*)	1B.2	Ponds, sloughs, and ditches at sea level to 650 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural land cover; the canal adjacent to the Project site was dry and based on historical aerial imagery (Google 2023) is typically dry.
Spiny-sepaled button-celery[3] (*Eryngium spinosepalum*)	1B.2	Vernal pools and swales in valley and foothill grassland at 330–4200 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools and swales.
Subtle orache (*Atriplex subtilis*)	1B.2	Saline depressions below 230 feet elevation.	**None.** Habitat lacking; the Project site is above the known elevational range of this species.
Vernal pool smallscale (*Atriplex persistens*)	1B.2	Alkaline vernal pools in the Central Valley below 377 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Winter's sunflower (*Helianthus winteri*)	1B.2	Steep, south-facing grassy slopes, rock outcrops, and road cuts at 590–1509 feet elevation.	**None.** Habitat lacking; the Project site is below the known elevational range of this species.

CDFW (2023), CNPS (2023), USFWS (2023).

Status[1]	**Potential to Occur[2]**	
FE = Federally listed Endangered	None:	Species or sign not observed; conditions unsuitable for occurrence.
FT = Federally listed Threatened	Low:	Neither species nor sign observed; conditions marginal for occurrence.
FP = State Fully Protected	Moderate:	Neither species nor sign observed; conditions suitable for occurrence.
FC = Federal Candidate for listing under the FESA	High:	Neither species nor sign observed; conditions highly suitable for occurrence.
SE = State listed Endangered	Present:	Species or sign observed; conditions suitable for occurrence.
SC = State Candidate for listing under the CESA		
ST = State listed Threatened		
SSSC = State Species of Special Concern		

CNPS California Rare Plant Rank[1]:	**Threat Ranks[1]:**
1B – plants rare, threatened, or endangered in California and elsewhere.	0.1 – seriously threatened in California (> 80% of occurrences).
2B – plants rare, threatened, or endangered in California but more common elsewhere.	0.2 – moderately threatened in California (20-80% of occurrences).
3 – plants about which more information is needed.	0.3 – not very threatened in California (<20% of occurrences).
4 – plants have limited distribution in California.	

[3]Record from within 5 miles of the Project site.

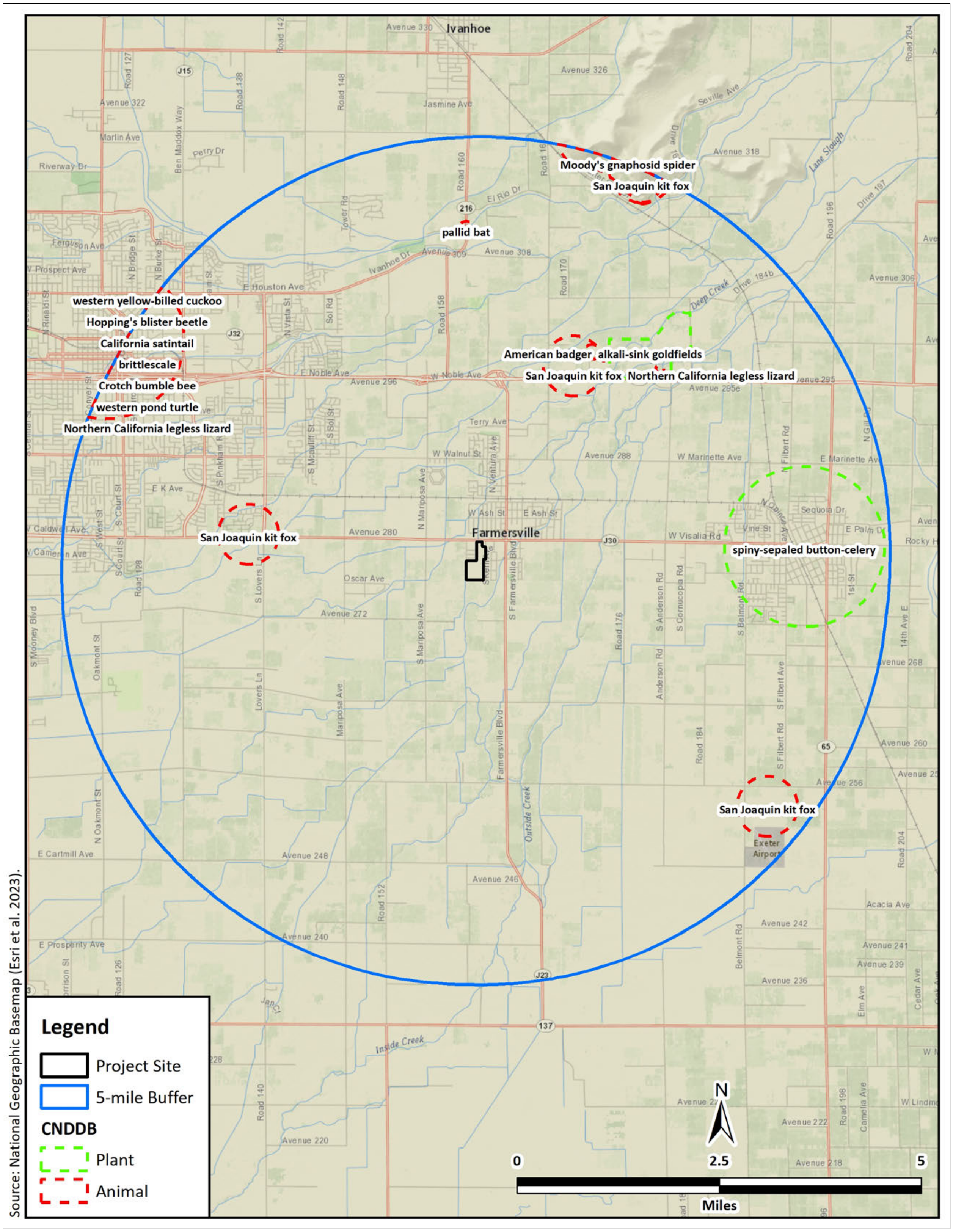

Figure 4. CNDDB occurrence map.

3.2 Reconnaissance Survey

3.2.1 Land Use and Habitats

The northern portion of the Project site supported fallowed agricultural fields consisting of annual grasses and forbs bordered by dense residential development to the east and northwest and orchards to the south and west (Figure 5). An unnamed canal bordered the western edge of the Project site (Figure 6). The southern portion of the Project site supported orchards and fallowed agricultural fields (Figures 7 and 8). Ground squirrel burrows were present along the banks of an unnamed canal west of the Project site (Figure 9). The unnamed canal was dry at the time of the survey.

Figure 5. Photograph of the Project site, looking northwest, showing fallowed agricultural fields bordered by dense residential development.

Figure 6. Photograph of the Project site, looking north, showing an unnamed canal that borders the western edge of the Project site.

Figure 7. Photograph of the Project site, looking southwest, showing an orchard.

Figure 8. Photograph of the Project site, looking north, showing a fallowed agricultural field.

Figure 9. Photograph of the Project site, looking west, showing a ground squirrel burrow on the bank of an unnamed canal.

3.2.2 Plant and Animal Species Observed

A total of 19 plant species (three native and 16 nonnative), 15 bird species, and two mammal species were observed during the survey (Table 2).

Table 2. Plant and animal species observed during the reconnaissance survey.

Common Name	Scientific Name	Status
Plants		
Family Asteraceae		
Prickly lettuce	*Lactuca serriola*	Nonnative
Milk thistle	*Silybum marianum*	Nonnative
Family Boraginaceae		
Common fiddleneck	*Amsinckia intermedia*	Native
Family Brassicaceae		
Black mustard	*Brassica nigra*	Nonnative
Charlock	*Sinapis arvensis*	Nonnative
Field mustard	*Brassica rapa*	Nonnative
Wild radish	*Raphanus sativus*	Nonnative
Family Chenopodiaceae		
Russian thistle	*Salsola tragus*	Nonnative
White goosefoot	*Chenopodium album*	Nonnative
Family Geraniaceae		
Redstem stork's bill	*Erodium cicutarium*	Nonnative
Family Malvaceae		
Cheeseweed	*Malva parviflora*	Nonnative
Family Poaceae		
Bahia grass	*Paspalum notatum*	Nonnative
Johnsongrass	*Sorghum halepense*	Nonnative
Ripgut brome	*Bromus diandrus*	Nonnative
Salt grass	*Distichlis spicata*	Native
Wild oat	*Avena fatua*	Nonnative
Family Polygonaceae		
Curly dock	*Rumex crispus*	Nonnative
Family Plantaginaceae		
English plantain	*Plantago lanceolata*	Nonnative
Family Solanaceae		

Jimsonweed	*Datura wrightii*	Native
Birds		
Family Accipitridae		
Red-shouldered hawk	*Buteo lineatus*	MBTA, CFGC
Family Aegithalidae		
Bushtit	*Psaltriparus minimus*	MBTA, CFGC
Family Anatidae		
Canada goose	*Branta canadensis*	MBTA, CFGC
Family Cathartidae		
Turkey vulture	*Cathartes aura*	MBTA, CFGC
Family Columbidae		
Eurasian collared-dove	*Streptopelia decaocto*	--
Mourning dove	*Zenaida macroura*	MBTA, CFGC
Family Corvidae		
American crow	*Corvus brachyrhynchos*	MBTA, CFGC
Family Fringillidae		
House finch	*Haemorhous mexicanus*	MBTA, CFGC
Family Mimidae		
Northern mockingbird	*Mimus polyglottos*	MBTA, CFGC
Family Passerellidae		
Song sparrow	*Melospiza melodia*	MBTA, CFGC
Vesper sparrow	*Pooecetes gramineus*	MBTA, CFGC
White-crowned sparrow	*Zonotrichia leucophrys*	MBTA, CFGC
Family Picidae		
Acorn woodpecker	*Melanerpes formicivorus*	MBTA, CFGC
Family Trochilidae		
Anna's hummingbird	*Calypte anna*	MBTA, CFGC
Family Tyrannidae		
Black phoebe	*Sayornis nigricans*	MBTA, CFGC
Mammals		
Family Didelphidae		
Opossum	*Didelphis virginiana*	Native
Family Sciuridae		
California ground squirrel	*Otospermophilus beecheyi*	Native

MBTA = Protected under the Migratory Bird Treaty Act (16 USC § 703 et seq.); CFGC = Protected under the California Fish and Game Code (FGC §§ 3503 and 3513).

3.2.3 Nesting Birds

Migratory birds could nest on or near the Project site. Bird species that may nest on or near the property include, but are not limited to, the house finch (*Haemorhous mexicanus*) and northern mockingbird (*Mimus polyglottos*).

3.2.4 Regulated Habitats

An unnamed canal, which is distributary of the Kaweah River, is within 50 feet of the Project site. As a stream and potential surface water in California, it is likely under the regulatory jurisdiction of the CDFW and SWRCB. The canal is a potential tributary of Deep Creek, which is a tributary to the Tule River. Consequently, it may be under the regulatory jurisdiction of the USACE No impacts to the unnamed canal are anticipated. If impacts to the canal are unavoidable, further delineation of their boundaries and consultation with the CDFW, SWRCB, and/or the USACE may be required.

3.3 Special-Status Species

3.3.1 Swainson's hawk (*Buteo swainsoni*, ST)

Swainson's hawk is a state listed as threatened raptor in the family Accipitridae. It is a migratory breeding resident of Central California. It uses open areas including grassland, sparse shrubland, pasture, open woodland, and annual agricultural fields such as grain and alfalfa to forage on small mammals, birds, and reptiles. After breeding, it eats mainly insects, especially grasshoppers (Bechard et al. 2020). Swainson's hawks build small to medium-sized nests in medium to large trees near foraging habitat. The nesting season begins in March or April in Central California when this species returns to its breeding grounds from wintering areas in Mexico and Central and South America. Nest building commences within one to two weeks of arrival to the breeding area and lasts about one week (Bechard et al. 2020). One to four eggs are laid and incubated for about 35 days. Young typically fledge in about 38–46 days and tend to leave the nest territory within 10 days of fledging (Bechard et al. 2020). Swainson's hawks depart for the non-breeding grounds between August and September.

There are several recent CNDDB records of Swainson's hawks from within 10 miles of the Project site (CDFW 2023). The fallow fields of the Project site provide potential foraging habitat for Swainson's hawk, and several potential nest trees were observed within 0.5 miles of the Project site. However, the mostly dense urban and orchard surroundings minimize the potential use of the Project site for foraging by Swainson's hawk. Therefore, the potential for this species to occur on or near the Project site is low.

3.3.2 Burrowing owl (*Athene cunicularia*, SSSC)

Burrowing owl is a member of the family Strigidae recognized as a species of special concern by the CDFW (CDFW 2023. Burrowing owl depends on burrow systems excavated by other species such as California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*) (Poulin et al. 2020). Burrowing owl uses burrows for protection from predators, weather, as roosting sites, and dwellings to raise young (Poulin et al. 2020). It commonly perches outside burrows on mounds of soil or nearby fence posts. Prey types include insects, especially grasshoppers and crickets, small mammals, frogs, toads, and lizards (Poulin et al. 2020). The nesting season begins in March, and incubation lasts 28–30 days. The female incubates the eggs while the male forages and delivers food items to the burrow-nest; young then fledge between 44 and 53 days after hatching (Poulin et al. 2020). Adults can live up to 8 years in the wild.

Although there are no CNDDB occurrence records from within 5 miles of the Project site (CDFW 2023), the banks of the unnamed canal adjacent to the Project site contained ground squirrel burrows that could support this species (Figure 9). The fallowed fields on the Project site could also provide foraging habitat. However, the habitat is routinely disturbed, and the number of burrows was low. Therefore, the potential for this species to occur on the Project site is low.

3.3.3 Pallid bat (*Antrozous pallidus*, SSSC)

Pallid bat is a member of the family Vespertilionidae and is recognized as a species of special concern by the CDFW (CDFW 2023). It is widespread in the western United States from southern British Columbia, Canada to northern Baja California, Mexico (Hermanson and O'Shea 1983). In California, pallid bat is locally common year-round at low elevations, where it occupies dry, open areas in grassland, shrubland, woodland, and forest (Zeiner et al. 1988–1990). Pallid bat is nocturnal and roosts during the day in caves, crevices in rocky outcrops, mines, and occasionally tree hollows and buildings; night roosts tend to be in more open areas including porches (Zeiner et al. 1988–1990). It forages almost exclusively on the ground, where it preys on insects, arachnids, beetles, moths, and scorpions; few prey items are taken aerially (Zeiner et al. 1988–1990). Pallid bat hibernates during winter, usually near a day roost that it occupies in summer (Hermanson and O'Shea 1983).

The survey area supported potential day roost habitat in the form of adjacent residential buildings, and open areas on the Project site may provide foraging habitat. However, there are no CNDDB records from within 5 miles of the Project site (CDFW 2023). Therefore, the species has a low potential to occur on the Project site.

3.3.4 Western mastiff bat (*Eumops perotis californicus*, SSSC)

The western mastiff bat is most common in the southern half of California, but its range extends almost to the Oregon border (Cockrum 1960). This species forages in large, open areas in habitats such as desert washes, floodplains, conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and agricultural lands (Cockrum 1960; Ross 1961). Roosts include the undersides of large slabs or boulders, cliff faces, and cracks in buildings (Howell 1920; Dalquest 1946; Barbour and Davis 1969). This species prefers a roost high above the ground that allows a vertical drop of at least 10 feet to initiate flight (Howell 1920).

The Project site is not within 5 miles of any CNDDB occurrences for western mastiff bat (CDFW 2023). However, roosting habitat in the form of adjacent residential buildings were present within the survey area, and the fallowed fields on the Project site may provide foraging habitat. Therefore, this species could occur on or near the Project site.

4.0 Environmental Impacts

4.1 Significance Determinations

This Project, which will result in temporary and permanent impacts to agricultural land cover, will not: (1) substantially reduce the habitat of a fish or wildlife species (criterion a) as no such habitat is present on the Project site; (2) cause a fish or wildlife population to drop below self-sustaining levels (criterion b) as no such potentially vulnerable population is known from the area; (3) threaten to eliminate a plant or animal community (criterion c) as no such potentially vulnerable communities are known from the area; (4) substantially reduce the number or restrict the range of a rare or endangered plant or animal (criterion d) as no such potentially vulnerable species are known from the area; (5) have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS (criterion f) as no riparian habitat or other sensitive natural community was present in the survey area; (6) have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (criterion g) as no impacts to wetlands will occur; (7) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (criterion i) as no trees or biologically sensitive areas will be impacted; or (8) conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan (criterion j) as no such plan has been adopted. Thus, these significance criteria are not analyzed further.

The remaining statutorily defined criteria provided the framework for Criterion BIO1 and Criterion BIO2 below. These criteria are used to assess the impacts to biological resources stemming from the Project and provide the basis for determinations of significance:

- Criterion BIO1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (significance criterion e).

- Criterion BIO2: Interfere substantially 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 (significance criterion h).

4.1.1 Direct and Indirect Impacts

4.1.1.1 Potential Impact: Have a substantial Effect on any Special-Status Species (Criterion BIO1)

The Project could adversely affect four special-status animal species that could occur on or near the Project site. Construction activities such as excavating, trenching, or using other heavy equipment that disturbs or harms a special-status species could constitute a significant impact. We recommend that Mitigation Measures BIO1, BIO2, BIO3, and BIO4 (below) be included in the conditions of approval to reduce the potential impacts to a less-than-significant level.

Mitigation Measure BIO1. Protect nesting Swainson's hawks.

1. To the extent practicable, construction shall be scheduled to avoid the Swainson's hawk nesting season, which extends from March through August.
2. If it is not possible to schedule construction between September and February, a qualified biologist shall conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee's *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (SWTAC 2000, Appendix D). These methods require six surveys, three in each of the two survey periods, prior to project initiation. Surveys shall be conducted within a minimum 0.5-mile radius around the Project site.
3. If an active Swainson's hawk nest is found within 0.5 miles of the Project site, and the qualified biologist determines that Project activities would disrupt the nesting birds, a construction-free buffer or limited operating period shall be implemented in consultation with the CDFW.

Mitigation Measure BIO2. Compensate for loss of Swainson's hawk foraging habitat.

1. Compensate for loss of Swainson's hawk foraging habitat (i.e., the fallow fields on the Project site) in accordance with the CDFW *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (CDFG 1994, Appendix E). The CDFW requires that projects adversely affecting Swainson's hawk foraging habitat provide Habitat Management (HM) lands to the department. Projects within 1 mile of an active nest shall provide one acre of HM lands for each acre of development authorized (1:1 ratio). Projects within 5 miles of an active nest but greater than 1 mile from the nest shall provide 0.75 acres of HM lands for each acre of urban development authorized (0.75:1 ratio). And projects within 10 miles of an active nest but greater than 5 miles from an active nest shall provide 0.5 acres of HM lands for each acre of urban development authorized (0.5:1 ratio). No compensation is required if an active nest is not found within 10 miles of the Project site. The nearest nest is

determined using methods identified in Mitigation Measure BIO1 during the nesting season before or during construction.

Mitigation Measure BIO3. Protect burrowing owls.

1. Conduct focused burrowing owl surveys to assess the presence/absence of burrowing owl in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1997). These involve conducting four pre-construction survey visits.
2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, guano, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or passive relocation shall be implemented in consultation with the CDFW.

Mitigation Measure BIO4. Protect roosting pallid bats and western mastiff bats.

1. A pre-construction clearance survey shall be conducted by a qualified biologist to ensure that no roosting pallid bats or western mastiff bats will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential roosting habitat in and immediately adjacent to the impact areas. If an active roost is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the roost. If work cannot proceed without disturbing the roosting bats, work may need to be halted or redirected to other areas until the roost is no longer in use.

4.1.1.2 Potential Impact: Interfere Substantially with Native Wildlife Movements, Corridors, or Nursery Sites (Criterion BIO2)

The Project could impede the use of nursery sites for native birds protected under the MBTA and CFGC. Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant impact. We recommend that Mitigation Measure BIO5 (below) be included in the conditions of approval to reduce the potential effect to a less-than-significant level.

Mitigation Measure BIO5. Protect nesting birds.

1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August.
2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

4.1.2 Cumulative Effects

The Project will involve developing a 48.82-acre parcel that currently supports fallowed agricultural fields and orchards into a 242-unit single-family residential development. The Project site could provide foraging habitat and is within 0.5 miles of nesting habitat for Swainson's hawk. The Project site also provides habitat for burrowing owl, pallid bat, and western mastiff bat. Nesting habitat for migratory birds is present on the Project site. However, implementing Mitigation Measures BIO1 through BIO5 would reduce any contribution to cumulative impacts on biological resources to a less-than-significant level.

4.1.3 Unavoidable Significant Adverse Effects

No unavoidable significant adverse effects on biological resources would occur from implementing the Project.

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Appendix A. USFWS list of threatened and endangered species.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: April 27, 2023
Project Code: 2023-0075123
Project Name: Farmersville Residential Development Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

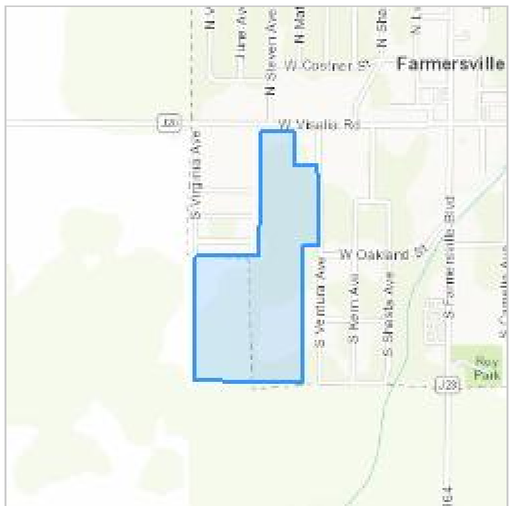
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2023-0075123
Project Name: Farmersville Residential Development Project
Project Type: Residential Construction
Project Description: The proposed project will involve constructing a single-family residential development on 44.82 acres south of W Visalia Rd and west of S Farmersville Blvd in Farmersville, Tulare County, California.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.29413035,-119.21408512423136,14z



Counties: Tulare County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Buena Vista Lake Ornate Shrew *Sorex ornatus relictus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1610	Endangered
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered
Tipton Kangaroo Rat *Dipodomys nitratoides nitratoides* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7247	Endangered

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered

REPTILES

NAME	STATUS
Blunt-nosed Leopard Lizard *Gambelia silus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered

AMPHIBIANS

NAME	STATUS
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Colibri Ecological Services
Name: Ryan Slezak
Address: 9493 N Ft Washington Rd
City: Fresno
State: CA
Zip: 93730
Email rslezak@colibri-ecology.com
Phone: 5592426178

Appendix B. CNDDB occurrence records.

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Woodlake (3611941) OR Lindsay (3611921) OR Rocky Hill (3611931) OR Cairns Corner (3611922) OR Visalia (3611933) OR Tulare (3611923) OR Exeter (3611932) OR Monson (3611943) OR Ivanhoe (3611942))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks: A	B	C	D	X	U	Population Status: Historic > 20 yr	Recent <= 20 yr	Presence: Extant	Poss. Extirp.	Extirp.
Agelaius tricolor tricolored blackbird	G1G2 S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	505 540	955 S:2	0	0	0	0	0	2	1	1	2	0	0
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	G2G3T3 S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	314 743	1271 S:13	0	7	2	0	0	4	5	8	13	0	0
Andrena macswaini An andrenid bee	G2 S2	None None		270 270	7 S:1	0	0	0	0	0	1	1	0	1	0	0
Anniella pulchra Northern California legless lizard	G3 S2S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	325 1,023	383 S:3	1	0	0	0	0	2	1	2	3	0	0
Antrozous pallidus pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	368 368	420 S:1	1	0	0	0	0	0	0	1	1	0	0
Ardea herodias great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	500 500	156 S:1	0	0	0	0	0	1	1	0	1	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	300 343	2011 S:6	4	2	0	0	0	0	1	5	6	0	0
Atriplex cordulata var. erecticaulis Earlimart orache	G3T1 S1	None None	Rare Plant Rank - 1B.2	308 335	23 S:2	1	1	0	0	0	0	0	2	2	0	0
Atriplex depressa brittlescale	G2 S2	None None	Rare Plant Rank - 1B.2		60 S:2	0	0	0	0	0	2	2	0	2	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Atriplex minuscula lesser saltscale	G2 S2	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	300 335	52 S:2	0	2	0	0	0	0	0	2	2	0	0
Atriplex persistens vernal pool smallscale	G2 S2	None None	Rare Plant Rank - 1B.2	345 355	41 S:2	2	0	0	0	0	0	0	2	2	0	0
Atriplex subtilis subtle orache	G1 S1	None None	Rare Plant Rank - 1B.2	305 305	24 S:1	1	0	0	0	0	0	1	0	1	0	0
Bombus crotchii Crotch bumble bee	G2 S2	None Candidate Endangered	IUCN_EN-Endangered	350 600	437 S:4	0	0	0	0	0	4	4	0	4	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	305 650	796 S:19	2	3	1	0	0	13	9	10	19	0	0
Brodiaea insignis Kaweah brodiaea	G1 S1	None Endangered	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	560 560	27 S:1	1	0	0	0	0	0	1	0	1	0	0
Buteo swainsoni Swainson's hawk	G5 S4	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	270 331	2561 S:7	0	3	2	0	0	2	3	4	7	0	0
Caulanthus californicus California jewelflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	285 285	67 S:1	0	0	0	0	1	0	1	0	0	0	1
Chrysis tularensis Tulare cuckoo wasp	G1G2 S2	None None		450 450	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Coccyzus americanus occidentalis western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive	330 330	165 S:1	0	0	0	0	1	0	1	0	0	0	1

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Delphinium recurvatum recurved larkspur	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	305 440	119 S:6	0	1	0	0	1	4	3	3	5	0	1
Desmocerus californicus dimorphus valley elderberry longhorn beetle	G3T2T3 S3	Threatened None		405 405	271 S:1	0	0	1	0	0	0	1	0	1	0	0
Diplacus pictus calico monkeyflower	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	600 600	73 S:2	0	0	0	0	0	2	2	0	2	0	0
Dipodomys nitratoides nitratoides Tipton kangaroo rat	G3T1T2 S1S2	Endangered Endangered	IUCN_VU-Vulnerable	320 320	81 S:1	0	0	0	0	0	1	1	0	1	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	325 325	1424 S:1	0	0	0	0	0	1	1	0	1	0	0
Eryngium spinosepalum spiny-sepaled button-celery	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	320 800	108 S:16	3	8	1	0	1	3	9	7	15	1	0
Eumops perotis californicus western mastiff bat	G4G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern	300 720	296 S:4	0	1	0	0	0	3	4	0	4	0	0
Euphorbia hooveri Hoover's spurge	G1 S1	Threatened None	Rare Plant Rank - 1B.2	315 345	29 S:5	0	0	3	1	1	0	1	4	4	0	1
Fritillaria striata striped adobe-lily	G1 S1	None Threatened	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_USDA-US Dept of Agriculture USFS_S-Sensitive		23 S:1	0	0	0	0	1	0	1	0	0	0	1

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Great Valley Valley Oak Riparian Forest Great Valley Valley Oak Riparian Forest	G1 S1.1	None None		320 320	33 S:1	0	1	0	0	0	0	1	0	1	0	0
Helianthus winteri Winter's sunflower	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	460 950	55 S:8	1	3	4	0	0	0	0	8	8	0	0
Imperata brevifolia California satintail	G3 S3	None None	Rare Plant Rank - 2B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	300 300	32 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasthenia chrysantha alkali-sink goldfields	G2 S2	None None	Rare Plant Rank - 1B.1	305 380	55 S:4	0	0	0	0	1	3	4	0	3	1	0
Lasthenia glabrata ssp. coulteri Coulter's goldfields	G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	350 350	111 S:1	0	0	0	0	0	1	0	1	1	0	0
Lepidurus packardi vernal pool tadpole shrimp	G4 S3	Endangered None	IUCN_EN-Endangered	330 345	330 S:3	0	1	1	0	0	1	2	1	3	0	0
Linderiella occidentalis California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	513 516	508 S:2	0	0	0	0	0	2	0	2	2	0	0
Lithobates pipiens northern leopard frog	G5 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	330 345	19 S:2	0	0	0	0	0	2	2	0	2	0	0
Lytta hoppingi Hopping's blister beetle	G1G2 S2	None None		325 325	5 S:1	0	0	0	0	0	1	1	0	1	0	0

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Lytta molesta molestan blister beetle	G2 S2	None None		480 480	17 S:1	0	0	0	0	0	1	1	0	1	0	0
Northern Claypan Vernal Pool Northern Claypan Vernal Pool	G1 S1.1	None None		435 475	21 S:2	0	0	0	0	0	2	2	0	2	0	0
Northern Hardpan Vernal Pool Northern Hardpan Vernal Pool	G3 S3.1	None None		315 345	126 S:3	0	0	0	0	0	3	3	0	3	0	0
Orcuttia inaequalis San Joaquin Valley Orcutt grass	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1	315 515	47 S:2	0	0	1	0	1	0	1	1	1	0	1
Pseudobahia peirsonii San Joaquin adobe sunburst	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	600 900	51 S:4	0	0	0	0	2	2	4	0	2	0	2
Puccinellia simplex California alkali grass	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	305 320	80 S:2	0	0	0	0	0	2	2	0	2	0	0
Rana boylii pop. 5 foothill yellow-legged frog - south Sierra DPS	G3T2 S2	Proposed Endangered Endangered	BLM_S-Sensitive USFS_S-Sensitive	520 520	271 S:1	0	0	0	0	1	0	1	0	0	0	1
Rhaphiomidas trochilus San Joaquin Valley giant flower-loving fly	G1 S1	None None		380 380	6 S:1	0	0	0	0	1	0	1	0	0	0	1
Sagittaria sanfordii Sanford's arrowhead	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	330 400	143 S:2	0	0	1	0	0	1	0	2	2	0	0
Spea hammondii western spadefoot	G2G3 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	0 743	1427 S:36	0	28	2	0	0	6	4	32	36	0	0
Sycamore Alluvial Woodland Sycamore Alluvial Woodland	G1 S1.1	None None		580 580	17 S:1	0	0	0	0	0	1	1	0	1	0	0
Talanites moodyae Moody's gnaphosid spider	G2G3 S2S3	None None		400 1,200	6 S:4	0	0	0	0	0	4	4	0	4	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	370 370	594 S:1	0	0	1	0	0	0	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Tuctoria greenei Greene's tuctoria	G1 S1	Endangered Rare	Rare Plant Rank - 1B.1	450 450	50 S:1	0	0	0	0	1	0	1	0	0	0	1
Valley Sacaton Grassland Valley Sacaton Grassland	G1 S1.1	None None		370 370	9 S:1	0	0	0	0	0	1	1	0	1	0	0
Vulpes macrotis mutica San Joaquin kit fox	G4T2 S2	Endangered Threatened		275 720	1020 S:19	0	0	1	0	0	18	19	0	19	0	0

Appendix C. CNPS plant list.

CNPS Rare Plant Inventory

CALIFORNIA NATIVE PLANT SOCIETY

Search Results

27 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3611941:3611921:3611931:3611922:3611933:3611923:3611932:3611943:3611942**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED
Atriplex cordulata var. *erecticaulis*	Earlimart orache	Chenopodiaceae	annual herb	Aug-Sep(Nov)	None	None	G3T1	S1	1B.2	Yes	2001-01-01
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	Yes	1994-01-01
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01
Atriplex persistens	vernal pool smallscale	Chenopodiaceae	annual herb	Jun-Oct	None	None	G2	S2	1B.2	Yes	2001-01-01
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	(Apr)Jun-Sep(Oct)	None	None	G1	S1	1B.2	Yes	1994-01-01
Brodiaea insignis	Kaweah brodiaea	Themidaceae	perennial bulbiferous herb	Apr-Jun	None	CE	G1	S1	1B.2	Yes	1974-01-01
Caulanthus californicus	California jewelflower	Brassicaceae	annual herb	Feb-May	FE	CE	G1	S1	1B.1	Yes	1984-01-01
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2		1994-01-01
Delphinium hansenii ssp. *ewanianum*	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	None	None	G4T3	S3	4.2	Yes	1994-01-01
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2?	1B.2	Yes	1988-01-01
Diplacus pictus	calico monkeyflower	Phrymaceae	annual herb	Mar-May	None	None	G2	S2	1B.2	Yes	1974-01-01
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	1980-01-01
Erythranthe sierrae	Sierra Nevada monkeyflower	Phrymaceae	annual herb	Mar-Jul	None	None	G2	S2	4.2	Yes	2013-10-02
Euphorbia hooveri	Hoover's spurge	Euphorbiaceae	annual herb	Jul-Sep(Oct)	FT	None	G1	S1	1B.2	Yes	1974-01-01
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	Yes	1980-01-01
Fritillaria striata	striped adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	CT	G1	S1	1B.1	Yes	1974-01-01
Goodmania luteola	golden goodmania	Polygonaceae	annual herb	Apr-Aug	None	None	G3	S3	4.2		1994-01-01

Helianthus winteri	Winter's sunflower	Asteraceae	perennial shrub	Jan-Dec	None	None	G2?	S2?	1B.2	Yes	2014-10-15
Hordeum intercedens	vernal barley	Poaceae	annual herb	Mar-Jun	None	None	G3G4	S3S4	3.2		1994-01-01
Imperata brevifolia	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	None	None	G3	S3	2B.1		2006-12-26
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	Yes	2019-09-30
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1		1994-01-01
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	annual herb	Apr-Sep	FT	CE	G1	S1	1B.1	Yes	1974-01-01
Pseudobahia peirsonii	San Joaquin adobe sunburst	Asteraceae	annual herb	Feb-Apr	FT	CE	G1	S1	1B.1	Yes	1974-01-01
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G2	S2	1B.2		2015-10-15
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	FE	CR	G1	S1	1B.1	Yes	1974-01-01

Showing 1 to 27 of 27 entries

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 27 April 2023].

Appendix D. Recommended timing and methodology for Swainson's hawk nesting surveys in California's Central Valley.

RECOMMENDED TIMING AND METHODOLOGY FOR SWAINSON'S HAWK NESTING SURVEYS IN CALIFORNIA'S CENTRAL VALLEY

Swainson's Hawk Technical Advisory Committee

May 31, 2000

This set of survey recommendations was developed by the Swainson's Hawk Technical Advisory Committee (TAC) to maximize the potential for locating nesting Swainson's hawks, and thus reducing the potential for nest failures as a result of project activities/disturbances. The combination of appropriate surveys, risk analysis, and monitoring has been determined to be very effective in reducing the potential for project-induced nest failures. As with most species, when the surveyor is in the right place at the right time, Swainson's hawks may be easy to observe; but some nest sites may be very difficult to locate, and even the most experienced surveyors have missed nests, nesting pairs, mis-identified a hawk in a nest, or believed incorrectly that a nest had failed. There is no substitute for specific Swainson's hawk survey experience and acquiring the correct search image.

METHODOLOGY

Surveys should be conducted in a manner that maximizes the potential to observe the adult Swainson's hawks, as well as the nest/chicks second. To meet the California Department of Fish and Game's (CDFG) recommendations for mitigation and protection of Swainson's hawks, surveys should be conducted for a ½ mile radius around all project activities, and if active nesting is identified within the ½ mile radius, consultation is required. In general, the TAC recommends this approach as well.

Minimum Equipment

Minimum survey equipment includes a high-quality pair of binoculars and a high quality spotting scope. Surveying even the smallest project area will take hours, and poor optics often result in eye-strain and difficulty distinguishing details in vegetation and subject birds. Other equipment includes good maps, GPS units, flagging, and notebooks.

Walking vs Driving

Driving (car or boat) or "windshield surveys" are usually preferred to walking if an adequate roadway is available through or around the project site. While driving, the observer can typically approach much closer to a hawk without causing it to fly. Although it might appear that a flying bird is more visible, they often fly away from the observer using trees as screens; and it is difficult to determine from where a flying bird came. Walking surveys are useful in locating a nest after a nest territory is identified, or when driving is not an option.

Angle and Distance to the Tree

Surveying subject trees from multiple angles will greatly increase the observer's chance of detecting a nest or hawk, especially after trees are fully leafed and when surveying multiple trees in close proximity. When surveying from an access road, survey in both directions. Maintaining a distance of 50 meters to 200 meters from subject trees is optimal for observing perched and flying hawks without greatly reducing the chance of detecting a nest/young: Once a nesting territory is identified, a closer inspection may be required to locate the nest.

Speed
Travel at a speed that allows for a thorough inspection of a potential nest site. Survey speeds should not exceed 5 miles per hour to the greatest extent possible. If the surveyor must travel faster than 5 miles per hour, stop frequently to scan subject trees.

Visual and Aural Ques
Surveys will be focused on both observations and vocalizations. Observations of nests, perched adults, displaying adults, and chicks during the nesting season are all indicators of nesting Swainson's hawks. In addition, vocalizations are extremely helpful in locating nesting territories. Vocal communication between. hawks is frequent during territorial displays; during courtship and mating; through the nesting period as mates notify each other that food is available or that a threat exists; and as older chicks and fledglings beg for food.

Distractions
Minimize distractions while surveying. Although two pairs of eyes may be better than one pair at times, conversation may limit focus. Radios should be off, not only are they distracting, they may cover a hawk's call.

Notes and Species Observed
Take thorough field notes. Detailed notes and maps of the location of observed Swainson's hawk nests are essential for filling gaps in the Natural Diversity Data Base; please report all observed nest sites. Also document the occurrence of nesting great homed owls, red-tailed hawks, red-shouldered hawks and other potentially competitive species. These species will infrequently nest within 100 yards of each other, so the presence of one species will not necessarily exclude another.

TIMING

To meet **the minimum level** of protection for the species, surveys should be completed for **at least** the two survey periods immediately prior to a project's initiation. For example, if a project is scheduled to begin on June 20, you should complete 3 surveys in Period III and 3 surveys in Period V. However, it is always recommended that surveys be completed in Periods II, III and V. **Surveys should not be conducted in Period IV.**

The survey periods are defined by the timing of migration, courtship, and nesting in a "typical" year for the majority of Swainson's hawks from San Joaquin County to Northern Yolo County. Dates should be adjusted in consideration of early and late nesting seasons, and geographic differences (northern nesters tend to nest slightly later, etc). If you are not sure, contact a TAC member or CDFG biologist.

Survey dates **Justification and search image**	**Survey time**	**Number of Surveys**
I. *January-March 20 (recommended optional)*	*All day*	*1*

Prior to Swainson's hawks returning, it may be helpful to survey the project site to determine potential nest locations. Most nests are easily observed from relatively long distances, giving the surveyor the opportunity to identify potential nest sites, as well as becoming familiar with the project area. It also gives the surveyor the opportunity to locate and map competing species nest sites such as great homed owls from February on, and red-tailed hawks from March on. After March 1, surveyors are likely to observe Swainson's hawks staging in traditional nest territories.

II. *March 20 to April 5*	*Sunrise to 1000* *1600 to sunset*	*3*

Most Central Valley Swainson's hawks return by April 1, and immediately begin occupying their traditional nest territories. For those few that do not return by April 1, there are often hawks ("floaters") that act as place-holders in traditional nest sites; they are birds that do not have mates, but temporarily attach themselves to traditional territories and/or one of the site's "owners." Floaters are usually displaced by the territories' owner(s) if the owner returns.

Most trees are leafless and are relatively transparent; it is easy to observe old nests, staging birds, and competing species. The hawks are usually in their territories during the survey hours, but typically soaring and foraging in the mid-day hours. Swainson's hawks may often be observed involved in territorial and courtship displays, and circling the nest territory. Potential nest sites identified by the observation of staging Swainson's hawks will usually be active territories during that season, although the pair may not successfully nest/reproduce that year.

III. *April 5 to April 20*	*Sunrise to 1200* *1630 to Sunset*	***3***

Although trees are much less transparent at this time, 'activity at the nest site increases significantly. Both males and females are actively nest building, visiting their selected site frequently. Territorial and courtship displays are increased, as is copulation. The birds tend to vocalize often, and nest locations are most easily identified. This period may require a great deal of "sit and watch" surveying.

IV. *April 21 to June 10*	*Monitoring known nest sites only* ***Initiating Surveys is not recommended***	

Nests are extremely difficult to locate this time of year, and even the most experienced surveyor will miss them, especially if the previous surveys have not been done. During this phase of nesting, the female Swainson's hawk is in brood position, very low in the nest, laying eggs, incubating, or protecting the newly hatched and vulnerable chicks; her head may or may not be visible. Nests are often well-hidden, built into heavily vegetated sections of trees or in clumps of mistletoe, making them all but invisible. Trees are usually not viewable from all angles, which may make nest observation impossible.

Following the male to the nest may be the only method to locate it, and the male will spend hours away from the nest foraging, soaring, and will generally avoid drawing attention to the nest site. Even if the observer is fortunate enough to see a male returning with food for the female, if the female determines it is not safe she will not call the male in, and he will not approach the nest; this may happen if the observer, or others, are too close to the nest or if other threats, such as rival hawks, are apparent to the female or male.

V. ***June 10 to JuIy 30 (post-fledging)***	***Sunrise to 1200*** ***1600 to sunset***	***3***

Young are active and visible, and relatively safe without parental protection. Both adults make numerous trips to the nest and are often soaring above, or perched near or on the nest tree. The location and construction of the nest may still limit visibility of the nest, young, ‘and adults.

DETERMINING A PROJECT'S POTENTIAL
FOR IMPACTING SWAINSON'S HAWKS

LEVEL OF RISK	REPRODUCTIVE SUCCESS (Individuals)	LONGTERM SURVIVABILITY (Population)	NORMAL SITE CHARACTERISTICS (Daily Average)	NEST MONI-TORING
HIGH	Direct physical contact with the nest tree while the birds are on eggs or protecting young. (Helicopters in close proximity)	Loss of available foraging area. Loss of nest trees.	Little human-created noise, little human use: nest is well away from dwellings, equipment yards, human access areas, etc. *Do not include general cultivation practices in evaluation.*	MORE
	Loss of nest tree after nest building is begun prior to laying eggs.	Loss of potential nest trees.		
	Personnel within 50 yards of nest tree (out of vehicles) for extended periods while birds are on eggs or protecting young that are < 10 days old.	Cumulative: Multi-year, multi-site projects with substantial noise/personnel disturbance.		
	Initiating construction activities (machinery and personnel) within 200 yards of the nest after eggs are laid and before young are > 10 days old.	Cumulative: Single-season projects with substantial noise/personnel disturbance that is greater than or significantly different from the daily norm.		
	Heavy machinery only working within 50 yards of nest.			
	Initiating construction activities within 200 yards of nest before nest building begins or after young > 10 days old.		Substantial human-created noise and occurrence: nest is near roadways, well-used waterways, active airstrips, areas that have high human use. *Do not include general cultivation practices in evaluation.*	
LOW	All project activities (personnel and machinery) greater than 200 yards from nest.	Cumulative: Single-season projects with activities that "blend" well with site's "normal' activities.		LESS

Appendix E. Staff report regarding mitigation for impacts to Swainson’s hawk (*Buteo swainsoni*) in the Central Valley of California.

Nongame Bird and Mammal Section Report # 94.18

State of California

Memorandum

To : Div. Chiefs - IFD, BDD, NHD, WMD
Reg. Mgrs. - Regions 1, 2, 3, 4

Date : November 8, 1994

From : Department of Fish and Game

Subject : Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California

I am hereby transmitting the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California for your use in reviewing projects (California Environmental Quality Act [CEQA] and others) and in developing 2081 Management Authorizations and 2090 Biological Opinions which may affect Swainson's hawk habitat in the Central Valley. The staff report has been developed during the last 18 months by the Environmental Services Division (ESD) in cooperation with the Wildlife Management Division (WMD) and Regions 1, 2, and 4. It has been sent out for public review on several occasions and redrafted as appropriate.

Either the mitigation measures in the staff report may be used or project specific measures may be developed. Alternative project specific mitigation measures proposed by the Department Divisions/Regions or by project sponsors will also be considered. However, such mitigation measures must be submitted to ESD for review. The review process will focus on the consistency of the proposed measure with Department, Fish and Game Commission, and legislative policy and with laws regarding raptors and listed species. ESD will coordinate project specific mitigation measure review with WMD.

If you have any questions regarding the report, please contact Mr. Ron Rempel, Program Supervisor, Habitat Conservation Planning and Endangered Species Permitting, Environmental Services Division at (916) 654-9980.

COPY Original signed by
A. Petrovich, Jr.
For
Boyd Gibbons
Direction

Enclosure

cc: Mr. Ron Rempel
Department of Fish and Game
Sacramento

file; d, exfile, esd, chron
Vouchilas/seh/pdl SRPBUTEO.DS1

**Staff Report regarding Mitigation
for Impacts to Swainson's Hawks (*Buteo swainsoni*)
in the Central Valley of California**

INTRODUCTION

The Legislature and the Fish and Game Commission have developed the policies, standards and regulatory mandates which, if implemented, are intended to help stabilize and reverse dramatic population declines of threatened and endangered species. In order to determine how the Department of Fish and Game (Department) could judge the adequacy of mitigation measures designed to offset impacts to Swainson's hawks in the Central Valley, Staff (WMD, ESD and Regions) has prepared this report. To ensure compliance with legislative and Commission policy, mitigation requirements which are consistent with this report should be incorporated into: (1) Department comments to Lead Agencies and project sponsors pursuant to the California Environmental Quality Act (CEQA); (2) Fish and Game Code Section 2081 Management Authorizations (Management Authorizations); and (3) Fish and Game Code Section 2090 Consultations with State CEQA Lead Agencies.

The report is designed to provide the Department (including regional offices and divisions), CEQA Lead Agencies and project proponents the context in which the Environmental Services Division (ESD) will review proposed project specific mitigation measures. This report also includes "model" mitigation measures which have been judged to be consistent with policies, standards and legal mandates of the Legislature and Fish and Game Commission. Alternative mitigation measures, tailored to specific projects, may be developed if consistent with this report. Implementation of mitigation measures consistent with this report are intended to help achieve the conservation goals for the Swainson's hawk and should complement multi-species habitat conservation planning efforts currently underway.

The Department is preparing a recovery plan for the species and it is anticipated that this report will be revised to incorporate recovery plan goals. It is anticipated that the recovery plan will be completed by the end of 1995. The Swainson's hawk recovery plan will establish criteria for species recovery through preservation of existing habitat, population expansion into former habitat, recruitment of young into the population, and other specific recovery efforts.

During project review the Department should consider whether a proposed project will adversely affect suitable foraging habitat within a ten (10) mile radius of an active (used during one or more of the last 5 years) Swainson's hawk nest(s). Suitable Swainson's hawk foraging habitat will be those habitats and crops identified in Bechard (1983), Bloom (1980), and Estep (1989). The following vegetation types/agricultural crops are considered small mammal and insect foraging habitat for Swainson's hawks:

- alfalfa
- fallow fields
- beet, tomato, and other low-growing row or field crops
- dry-land and irrigated pasture

- rice land (when not flooded)
- cereal grain crops (including corn after harvest)

The ten mile radius standard is the flight distance between active (and successful) nest sites and suitable foraging habitats, as documented in telemetry studies (Estep 1989, Babcock 1993). Based on the ten mile radius, new development projects which adversely modify nesting and/or foraging habitat should mitigate the project's impacts to the species. The ten mile foraging radius recognizes a need to strike a balance between the biological needs of reproducing pairs (including eggs and nestlings) and the economic benefit of developments) consistent with Fish and Game Code Section 2053.

Since over 95% of Swainson's hawk nests occur on private land, the Department's mitigation program should include incentives that preserve agricultural lands used for the production of crops, which are compatible with Swainson's hawk foraging needs, while providing an opportunity for urban development and other changes in land use adjacent to existing urban areas.

LEGAL STATUS

Federal

The Swainson's hawk is a migratory bird species protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in Section 50 of the Code of Federal Regulations (C.F.R.) Part 10, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 C.F.R. 21).

State

The Swainson's hawk has been listed as a threatened species by the California Fish and Game Commission pursuant to the California Endangered Species Act (CESA), see Title 14, California Code of Regulations, Section 670.5(b)(5)(A).

LEGISLATIVE AND COMMISSION POLICIES, LEGAL MANDATES AND STANDARDS

The FGC policy for threatened species is, in part, to: "Protect and preserve all native species ... and their habitats...." This policy also directs the Department to work with all interested persons to protect and preserve sensitive resources and their habitats. Consistent with this policy and direction, the Department is enjoined to implement measures that assure protection for the Swainson's hawk.

The California State Legislature, when enacting the provisions of CESA, made the following findings and declarations in Fish and Game Code Section 2051:

a) "Certain species of fish, wildlife, and plants have been rendered extinct as a consequence of man's activities, untempered by adequate concern and conservation";

b) "Other species of fish, wildlife, and plants are in danger of, or threatened with, extinction because their habitats are threatened with destruction, adverse modification, or severe curtailment because of overexploitation, disease, predation, or other factors (emphasis added)";and

c) "These species of fish, wildlife, and plants are of ecological, educational, historical, recreational, esthetic, economic, and scientific value to the people of this state, and the conservation, protection, and enhancement of these species and their habitat is of statewide concern" (emphasis added).

The Legislature also proclaimed that it "is the policy of the state to conserve, protect, restore, and enhance any endangered or threatened species and its habitat and that it is the intent of the Legislature, consistent with conserving the species, to acquire lands for habitat for these species" (emphasis added).

Section 2053 of the Fish and Game Code states, in part, "it is the policy of the state that state agencies should not approve projects as proposed which would jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species and or its habitat which would prevent jeopardy" (emphasis added).

Section 2054 states "The Legislature further finds and declares that, in the event specific economic, social, and or other conditions make infeasible such alternatives, individual projects may be approved if appropriate mitigation and enhancement measures are provided" (emphasis added).

Loss or alteration of foraging habitat or nest site disturbance which results in:

(1) nest abandonment; (2) loss of young; (3) reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates), may ultimately result in the take (killing) of nestling or fledgling Swainson's hawks incidental to otherwise lawful activities. The taking of Swainson's hawks in this manner can be, a violation of Section 2080 of the Fish and Game Code. This interpretation of take has been judicially affirmed by the landmark appellate court decision pertaining to CESA (DFG v. ACID, 8 CA App.4, 41554). The essence of the decision emphasized that the intent and purpose of CESA applies to all activities that take or kill endangered or threatened species, even when the taking is incidental to otherwise legal activities. To avoid potential violations of Fish and Game Code Section 2080, the Department recommends and encourages project sponsors to obtain 2081 Management Authorizations for their projects.

Although this report has been prepared to assist the Department in working with the development community, the prohibition against take (Fish and Game Code Section 2080) applies to all persons, including those engaged in agricultural activities and routine maintenance of facilities. In addition, sections 3503, 3503.5, and 3800 of the Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

To avoid potential violation of Fish and Game Code Section 2080 (i.e. killing of a listed species), project-related disturbance at active Swainson's hawk nesting sites should be reduced or eliminated during critical phases of the nesting cycle (March 1 - September 15 annually). Delineation of specific activities which could cause nest abandonment (take) of Swainson's hawk during the nesting period should be done on a case-by-case basis.

CEQA requires a mandatory findings of significance if a project's impacts to threatened or endangered species are likely to occur (Sections 21001 (c), 21083, Guidelines Sections 15380, 15064, 15065). Impacts must be avoided or mitigated to less than significant levels unless the CEQA Lead Agency makes and supports findings of Overriding Consideration. The CEQA Lead Agency's Findings of Overriding Consideration does not eliminate the project sponsor's obligation to comply with Fish and Game Code Section 2080.

NATURAL HISTORY

The Swainson's hawk (Buteo swainsoni) is a large, broad winged buteo which frequents open country. They are about the same size as a red-tailed hawk (Buteo jatnaicensis), but trimmer, weighing approximately 800-1100 grams (1.75 - 2 lbs). They have about a 125 cm. (4+foot) wingspan. The basic body plumage may be highly variable and is characterized by several color morphs - light, dark, and rufous. In dark phase birds, the entire body of the bird may be sooty black. Adult birds generally have dark backs. The ventral or underneath sections may be light with a characteristic dark, wide "bib" from the lower throat down to the upper breast, light colored wing linings and pointed wing tips. The tail is gray ventrally with a subterminal dusky band, and narrow, less conspicuous barring proximally. The sexes are similar in appearance; females however, are slightly larger and heavier than males, as is the case in most sexually dimorphic raptors. There are no recognized subspecies (Palmer 1988).

The Swainson's hawk is a long distance migrator. The nesting grounds occur in northwestern Canada, the western U.S., and Mexico and most populations migrate to wintering grounds in the open pampas and agricultural areas of South America (Argentina, Uruguay, southern Brazil). The species is included among the group of birds known as "neotropical migrants". Some individuals or small groups (20-30 birds) may winter in the U.S., including California (Delta Islands). This round trip journey may exceed 14,000 miles. The birds return to the nesting grounds and establish nesting territories in early March.

Swainson's hawks are monogamous and remain so until the loss of a mate (Palmer 1988). Nest construction and courtship continues through April. The clutch (commonly 3-4 eggs) is generally laid in early April to early May, but may occur later. Incubation lasts 34-35 days, with both parents participating in the brooding of eggs and young. The young fledge (leave the nest) approximately 42-44 days after hatching and remain with their parents until they depart in the fall. Large groups (up to 100+ birds) may congregate in holding areas in the fall and may exhibit a delayed migration depending upon forage availability. The specific purpose of these congregation areas is as yet unknown, but is likely related to: increasing energy reserves for migration; the timing of migration; aggregation into larger migratory groups (including assisting the young in learning migration routes); and providing a pairing and courtship opportunity for unattached adults.

Foraging Requirements

Swainson's hawk nests in the Central Valley of California are generally found in scattered trees or along riparian systems adjacent to agricultural fields or pastures. These open fields and pastures are the primary foraging areas. Major prey items for Central Valley birds include: California voles (*Microtus californicus*), valley pocket gophers (*Thomomys bottae*), deer mice (*Peromyscus maniculatus*), California ground squirrels (*Spermophilus beecheyi*), mourning doves (*Zenaida macroura*), ring-necked pheasants (*Phasianus colchicus*), meadowlarks (*Sturnella neglecta*), other passerines, grasshoppers (*Conocephalinae sp*.), crickets (*Gryllidae sp*.), and beetles (Estep 1989). Swainson's hawks generally search for prey by soaring in open country and agricultural fields similar to northern hariers (*Circus cyaneus*) and ferruginous hawks (*Buteo regalis*). Often several hawks may be seen foraging together following tractors or other farm equipment capturing prey escaping from farming operations. During the breeding season, Swainson's hawks eat mainly vertebrates (small rodents and reptiles), whereas during migration vast numbers of insects are consumed (Palmer 1988).

Department funded research has documented the importance of suitable foraging habitats (e.g., annual grasslands, pasture lands, alfalfa and other hay crops, and combinations of hay, grain and row crops) within an energetically efficient flight distance from active Swainson's hawk nests (Estep pers. comm.). Recent telemetry studies to determine foraging requirements have shown that birds may use in excess of 15,000 acres of habitat or range up to 18.0 miles from the nest in search of prey (Estep 1989, Babcock 1993). The prey base (availability and abundance) for the species is highly variable from year to year, with major prey population (small mammals and insects) fluctuations occurring based on rainfall patterns, natural cycles and agricultural cropping and harvesting patterns. Based on these variables, significant acreages of potential foraging habitat (primarily agricultural lands) should be preserved per nesting pair (or aggregation of nesting pairs) to avoid jeopardizing existing populations. Preserved foraging areas should be adequate to allow additional Swainson's hawk nesting pairs to successfully breed and use the foraging habitat during good prey production years.

Suitable foraging habitat is necessary to provide an adequate energy source for breeding adults, including support of nestlings and fledglings. Adults must achieve an energy balance between the needs of themselves and the demands of nestlings and fledglings, or the health and survival of both may be jeopardized. If prey resources are not sufficient, or if adults must hunt long distances from the nest site, the energetics of the foraging effort may result in reduced nestling vigor with an increased likelihood of disease and/or starvation. In more extreme cases, the breeding pair, in an effort to assure their own existence, may even abandon the nest and young (Woodbridge 1985).

Prey abundance and availability is determined by land and farming patterns including crop types, agricultural practices and harvesting regimes. Estep (1989) found that 73.4% of observed prey captures were in fields being harvested, disced, mowed, or irrigated. Preferred foraging habitats for Swainson's hawks include:

- alfalfa;
- fallow fields;
- beet, tomato, and other low-growing row or field crops;
- dry-land and irrigated pasture;
- rice land (during the non-flooded period); and
- cereal grain crops (including corn after harvest).

Unsuitable foraging habitat types include crops where prey species (even if present) are not available due to vegetation characteristics (e.g. vineyards, mature orchards, and cotton fields, dense vegetation).

Nesting Requirements

Although the Swainson's hawk's current nesting habitat is fragmented and unevenly distributed, Swainson's hawks nest throughout most of the Central Valley floor. More than 85% of the known nests in the Central Valley are within riparian systems in Sacramento, Sutter, Yolo, and San Joaquin counties. Much of the potential nesting habitat remaining in this area is in riparian forests, although isolated and roadside trees are also used. Nest sites are generally adjacent to or within easy flying distance to alfalfa or hay fields or other habitats or agricultural crops which provide an abundant and available prey source. Department research has shown that valley oaks (Quercus lobata), Fremont's cottonwood (Populus fremontii), willows (Salix spp.), sycamores (Platanus spp.), and walnuts (juglans spp.) are the preferred nest trees for Swainson's hawks (Bloom 1980, Schlorff and Bloom 1983, Estep 1989).

Fall and Winter Migration Habitats

During their annual fall and winter migration periods, Swainson's hawks may congregate in large groups (up to 100+ birds). Some of these sites may be used during delayed migration periods lasting up to three months. Such sites have been identified in Yolo, Tulare, Kern and San Joaquin counties and protection is needed for these critical foraging areas which support birds during their long migration.

Historical and Current Population Status

The Swainson's hawk was historically regarded as one of the most common and numerous raptor species in the state, so much so that they were often not given special mention in field notes. The breeding population has declined by an estimated 91% in California since the turn of the century (Bloom 1980). The historical Swainson's hawk population estimates are based on current densities and extrapolated based on the historical amount of available habitat. The historical population estimate is 4,284-17,136 pairs (Bloom 1980). In 1979, approximately 375 (± 50) breeding pairs of Swainson's hawks were estimated in California, and 280 (75%) of those pairs were estimated to be in the Central Valley (Bloom 1980). In 1988, 241 active breeding pairs were found in the Central Valley, with an additional 78 active pairs known in northeastern California. The 1989 population estimate was 430 pairs for the Central Valley and 550 pairs statewide (Estep, 1989). This difference in population estimates is probably a result of increased survey effort rather than an actual population increase.

Reasons for decline

The dramatic Swainson's hawk population decline has been attributed to loss of native nesting and foraging habitat, and more recently to the loss of suitable nesting trees and the conversion of agricultural lands. Agricultural lands have been converted to urban land uses and incompatible crops. In addition, pesticides, shooting, disturbance at the nest site, and impacts on wintering areas may have contributed to their decline. Although losses on the wintering areas in South America may occur, they are not considered significant since breeding populations outside of California are stable. The loss of nesting habitat within riparian areas has been accelerated by flood control practices and bank stabilization programs. Smith (1977) estimated that in 1850 over 770,000 acres of riparian habitat were present in the Sacramento Valley. By the mid-1980s, Warner and Hendrix (1984) estimated that there was only 120,000 acres of riparian habitat remaining in the Central Valley (Sacramento and San Joaquin Valleys combined). Based on Warner and Hendrix's estimates approximately 93% of the San Joaquin Valley and 73% of the Sacramento Valley riparian habitat has been eliminated since 1850.

MANAGEMENT STRATEGIES

Management and mitigation strategies for the Central Valley population of the Swainson's hawk should ensure that:

- suitable nesting habitat continues to be available (this can be accomplished by protecting existing nesting habitat from destruction or disturbance and by increasing the number of suitable nest trees); and

- foraging habitat is available during the period of the year when Swainson's hawks are present in the Central Valley (this should be accomplished by maintaining or creating adequate and suitable foraging habitat in areas of existing and potential nest sites and along migratory routes within the state).

A key to the ultimate success in meeting the Legislature's goal of maintaining habitat sufficient to preserve this species is the implementation of these management strategies in cooperation with project sponsors and local, state and federal agencies.

DEPARTMENT'S ROLES AND RESPONSIBILITIES IN PROJECT CONSULTATION AND ADMINISTRATION OF CEQA AND THE FISH AND GAME CODE

The Department, through its administration of the Fish and Game Code and its trust responsibilities, should continue its efforts to minimize further habitat destruction and should seek mitigation to offset unavoidable losses by (1) including the mitigation measures in this document in CEQA comment letters and/or as management conditions in Department issued Management Authorizations or (2) by developing project specific mitigation measures (consistent with the Commission's and the Legislature's mandates) and including them in CEQA comment letters and/or as management conditions in Fish and Game Code Section 2081 Management Authorizations issued by the Department and/or in Fish and Game Code Section 2090 Biological Opinions.

The Department should submit comments to CEQA Lead Agencies on all projects which adversely affect Swainson's hawks. CEQA requires a mandatory findings of significance if a project's impacts to threatened or endangered species are likely to occur (Sections 21001 fc), 21083. Guidelines 15380, 15064, 15065). Impacts must be: (1) avoided; or (2) appropriate mitigation must be provided to reduce impacts to less than significant levels; or (3) the lead agency must make and support findings of overriding consideration. If the CEQA Lead Agency makes a Finding of Overriding Consideration, it does not eliminate the project sponsor's obligation to comply with the take prohibitions of Fish and Game Code Section 2080. Activities which result in (1) nest abandonment; (2) starvation of young; and/or (3) reduced health and vigor of eggs and nestlings may result in the take (killing) of Swainson's hawks incidental to otherwise lawful activities (urban development, recreational activities, agricultural practices, levee maintenance and similar activities. The taking of Swainson's hawk in this manner may be a violation of Section 2080 of the Fish and Game Code. To avoid potential violations of Fish and Game Code Section 2080, the Department should recommend and encourage project sponsors to obtain 2081 Management Authorizations.

In aggregate, the mitigation measures incorporated into CEQA comment letters and/or 2081 Management Authorizations for a project should be consistent with Section 2053 and 2054 of the Fish and Game Code. Section 2053 states, in part, "it is the policy of the state that state agencies should not approve projects as proposed which would jeopardize the continued existence of'any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species and or its habitat which would prevent jeopardy" - Section 2054 states: "The Legislature further finds and declares that, in the event specific economic, social, and or other conditions make infeasible such alternatives, individual projects may be approved if appropriate mitigation and enhancement measures are provided."

State lead agencies are required to consult with the Department pursuant to Fish and Game Code Section 2090 to ensure that any action authorized, funded, or carried out by that state agency will not jeopardize the continued existence of any threatened or endangered species. Comment letters to State Lead Agencies should also include a reminder that the State Lead Agency has the responsibility to consult with the Department pursuant to Fish and Game Code Section 2090 and obtain a written findings (Biological Opinion). Mitigation measures included in Biological Opinions issued to State Lead Agencies must be consistent with Fish and Game Code Sections 2051-2054 and 2091-2092.

NEST SITE AND HABITAT LOCATION INFORMATION SOURCES

The Department's Natural Diversity Data Base (NDDB) is a continually updated, computerized inventory of location information on the State's rarest plants, animals, and natural communities. Department personnel should encourage project proponents and CEQA Lead Agencies, either directly or through CEQA comment letters, to purchase NDDB products for information on the locations of Swainson's hawk nesting areas as well as other sensitive species. The Department's Nongame Bird and Mammal Program also maintains information on Swainson's hawk nesting areas and may be contacted for additional information on the species.

Project applicants and CEQA Lead Agencies may also need to conduct site specific surveys (conducted by qualified biologists at the appropriate time of the year using approved protocols) to determine the status (location of nest sites, foraging areas, etc.) of listed species as part of the CEQA and 2081 Management Authorization process. Since these studies may require multiple years to complete, the Department shall identify any needed studies at the earliest possible time in the project review process. To facilitate project review and reduce the potential for costly project delays, the Department should make it a standard practice to advise developers or others planning projects that may impact one or more Swainson's hawk nesting or foraging areas to initiate communication with the Department as early as possible .

MANAGEMENT CONDITIONS

Staff believes the following mitigation measures (nos. 1-4) are adequate to meet the Commission's and Legislature's policy regarding listed species and are considered as preapproved for incorporation into any Management Authorizations for the Swainson's hawk issued by the Department. The incorporation of measures 1-4 into a CEQA document should reduce a project's impact to a Swainson's hawk(s) to less than significant levels. Since these measures are Staff recommendations, a project sponsor or CEQA Lead agency may choose to negotiate project specific mitigation measures which differ. In such cases, the negotiated Management Conditions must be consistent with Commission and Legislative policy and be submitted to the ESD for review and approval prior to reaching agreement with the project sponsor or CEQA Lead Agency.

Staff recommended Management Conditions are:

1. No intensive new disturbances (e.g. heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other project related activities which may cause nest abandonment or forced fledging, should be initiated within 1/4 mile (buffer zone) of an active nest between March 1 - September 15 or until August 15 if a Management Authorization or Biological Opinion is obtained for the project. The buffer zone should be increased to ½ mile in nesting areas away from urban development (i.e. in areas where disturbance [e.g. heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities] is not a normal occurrence during the nesting season). Nest trees should not be removed unless there is no feasible way of avoiding it. If a nest tree must be removed, a Management Authorization (including conditions to off-set the loss of the nest tree) must be obtained with the tree removal period specified in the Management Authorization, generally between October 1- February 1. If construction or other project related activities which may cause nest abandonment or forced fledging are necessary within the buffer zone, monitoring of the nest site (funded by the project sponsor) by a qualified biologist (to determine if the nest is abandoned) should be required . If it is abandoned and if the nestlings are still alive, the project sponsor shall fund the recovery and hacking (controlled release of captive reared young) of the nestling(s). Routine disturbances such as agricultural activities, commuter traffic, and routine facility maintenance activities within 1/4 mile of an active nest should not be prohibited.

2. Hacking as a substitute for avoidance of impacts during the nesting period may be used in unusual circumstances after review and approval of a hacking plan by ESD and WMD. Proponents who propose using hacking will be required to fund the full costs of the effort, including any telemetry work specified by the

Department.

3. To mitigate for the loss of foraging habitat (as specified in this document), the Management Authorization holder/project sponsor shall provide Habitat Management (HM) lands to the Department based on the following ratios:

(a) Projects within I mile of an active nest tree shall provide:

- one acre of HM land (at least 10% of the HM land requirements shall be met by fee title acquisition or a conservation easement allowing for the active management of the habitat, with the remaining 90% of the HM lands protected by a conservation easement [acceptable to the Department] on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk) for each acre of development authorized (1:1 ratio); or

- One-half acre of HM land (all of the HM land requirements shall be met by fee title acquisition or a conservation easement [acceptable to the Department) which allows for the active management of the habitat for prey production on-the HM lands) for each acre of development authorized (0.5:1 ratio).

(b) Projects within 5 miles of an active nest tree but greater than 1 mile from the nest tree shall plovide 0.75 acres of HM land for each acre of urban development authorized (0-75:1 ratio). All HM lands protected under this requirement may be protected through fee title acquisition or conservation easement (acceptable to the Department) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk.

(c) Projects within 10 miles of an active nest tree but gleater than 5 miles from an active nest tree shall provide 0.5 acres of HM land for each acre of urban development authorized (0.5:1 ratio). All HM lands- protected under this requirement may be protected through fee title acquisition or a conservation easement (acceptable to the Department) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk.

4. Management Authorization holders/project sponsors shall provide for the long-term management of the HM lands by funding a management endowment (the interest on which shall be used for managing the HM lands) at the rate of $400 per HM land acre (adjusted annually for inflation and varying interest rates).

Some project sponsors may desire to provide funds to the Department for HM land protection. This option is acceptable to the extent the proposal is consistent with Department policy regarding acceptance of funds for land acquisition. All HM lands should be located in areas which are consistent with a multi-species habitat conservation focus. Management

Authorization holders/project sponsors who are willing to establish a significant mitigation bank (> 900 acres) should be given special consideration such as 1.1 acres of mitigation credit for each acre preserved.

PROJECT SPECIFIC MITIGATION MEASURES

Although this report includes recommended Management Measures, the Department should encourage project proponents to propose alternative mitigation strategies that provide equal or greater protection of the species and which also expedite project environmental review or issuance of a CESA Management Authorization. The Department and sponsor may choose to conduct cooperative, multi-year field studies to assess the site's habitat value and determine its use by nesting and foraging Swainson's hawk. Study plans should include clearly defined criteria for judging the project's impacts on Swainson's hawks and the methodologies (days of monitoring, foraging effort/efficiency, etc.) that will be used.

The study plans should be submitted to the Wildlife Management Division and ESD for review. Mitigation measures developed as a result of the study.must be reviewed by ESD (for consistency with the policies of the Legislature and Fish and Game Commission) and approved by the Director.

EXCEPTIONS

Cities, counties and project sponsors should be encouraged to focus development on open lands within already urbanized areas. Since small disjunct parcels of habitat seldom provide foraging habitat needed to sustain the reproductive effort of a Swainson's hawk pair, Staff does not recommend requiring mitigation pursuant to CEQA nor a Management Authorization by the Department for infill (within an already urbanized area) projects in areas which have less than 5 acres of foraging habitat and are surrounded by existing urban development, unless the project area is within 1/4 mile of an active nest tree.

REVIEW

Staff should revise this report at least annually to determine if the proposed mitigation strategies should be retained, modified or if additional mitigation strategies should be included as a result of new scientific information.

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Appendix C

Class III Inventory/Phase I Cultural Resources Survey

CLASS III INVENTORY/PHASE I SURVEY, EAGLE MEADOWS PROJECT, TULARE COUNTY, CALIFORNIA

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PN 36790.05

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MANAGEMENT SUMMARY

An intensive Class III inventory/Phase I cultural resources survey was conducted for the Eagle Meadows Project (Project), Farmersville, Tulare County, California. The proposed Project will result in residential development of approximately 48.82-acres (ac) in Farmersville, Tulare County, California. The Area of Potential Effects (APE) was defined as the work and construction areas for the proposed development. The horizontal APE totals approximately 48.82-ac, while the vertical APE, representing the maximum depth of excavation, is ten feet. ASM Affiliates, Inc., conducted this study, with David S. Whitley, Ph.D., RPA, serving as principal investigator. The study was undertaken to assist with compliance with the California Environmental Quality Act (CEQA), and Section 106 of the National Historic Preservation Act of 1966, (NHPA) as amended.

A records search of site files and maps was obtained from the Southern San Joaquin Valley Archaeological Information Center (IC), California State University, Bakersfield. This indicated that only a small portion of the APE had previously been surveyed and that no cultural resources are known to exist within it. Eight previous studies had been completed for locations within a half mile radius of the APE, and four previously recorded resources were known to exist within that same radius.

A Sacred Lands File Request (SLF) was also submitted to the Native American Heritage Commission (NAHC). The SLF indicated that no tribal cultural resources were known to exist within the APE. Outreach letters were sent to tribal organizations on the NAHC contact list requesting additional information about sites. The Santa Rosa Rancheria Tachi-Yokut responded and requested to be retained to perform a cultural presentation for all construction staff and to be informed of any and all discoveries made related to the Project. In addition, follow-up emails were also sent to the remaining tribal organizations as suggested by the NAHC. No additional responses have been received.

The Class III inventory/Phase I survey fieldwork was conducted on 8 April 2022 with crew walking the entire 48.82-ac APE. No cultural resources or built environment resources of any kind were identified within the APE and a Determination of No Effect and No Significant Impact for cultural resources is recommended for the Project.

1. INTRODUCTION AND REGULATORY CONTEXT

ASM Affiliates, Inc., was retained by Crawford & Bowen Planning, Inc. to conduct an intensive Class III inventory/Phase I cultural resources survey for the Eagle Meadows Project (Project). This Project is located in the community of Farmersville, Tulare County, California (Figure 1). The study was undertaken to assist with compliance with the California Environmental Quality Act (CEQA), and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The investigation was conducted, specifically, to ensure that significant impacts or adverse effects to historical resources or historic properties do not occur as a result of project construction.

This current study included:

- A background records search and literature review to determine if any known cultural resources were present in the project zone and/or whether the area had been previously and systematically studied by archaeologists;
- An on-foot, intensive inventory of the APE to identify and record previously undiscovered cultural resources and to examine known sites; and
- A preliminary assessment of any such resources found within the subject property.

David S. Whitley, Ph.D., RPA, served as principal investigator and the fieldwork was conducted by ASM Associate Archaeologist Robert Azpitarte, B.A., with assistance from Maria Silva, B.A., and Cameron Jackson B.A., ASM Assistant Archaeologists.

This document constitutes a report on the Class III inventory/Phase I survey. Subsequent chapters provide background to the investigation, including historic context studies; the findings of the archival records search; a summary of the field surveying techniques employed; and the results of the fieldwork. We conclude with management recommendations for the APE.

1.1 PROJECT LOCATION

The Project is located within the community of Farmersville, Tulare County, California. Specifically, the proposed Project is in Section 12, Township 19 South, Range 25 East, M.D.B.M, as seen within the Exeter USGS 7.5' Quadrangle. The Project area currently consists of undeveloped agricultural fields and active walnut orchards bounded by residential tract development on the north, northeast, and west, and additional agricultural fields along the south and southwest.

More generally, the Project area is located on the open flats on the eastern San Joaquin Valley approximately 5-miles (mi) west of the Sierra Nevada foothills. Elevation within the Project area, which is flat, varies between approximately 355-feet (ft) and 360-ft above mean sea level (amsl).

1.2 PROJECT DESCRIPTION AND APE

The purpose of the Project is for residential development of 48.82-ac within the community of Farmersville. Planned unit development will involve subdivisions between undeveloped areas of

Tulare Street and Visalia Avenue, and between Virginia Avenue and Ventura Avenue. A community park within the development, located southwest of the intersection of Visalia Road and Ventura Avenue, is also proposed.

The horizontal APE for the Project consists of all construction and work areas and totals approximately 48.82-ac. The vertical APE for the Project is ten feet, the maximum depth of excavation for footings, foundations and subsurface infrastructure.

1.3 REGULATORY CONTEXT

1.3.1 California Environmental Quality Act

CEQA is applicable to discretionary actions by state or local lead agencies. Under CEQA, lead agencies must analyze impacts to cultural resources. Significant impacts under CEQA occur when "historically significant" or "unique" cultural resources are adversely affected, which occurs when such resources could be altered or destroyed through project implementation. Historically significant cultural resources are defined by eligibility for or by listing in the California Register of Historical Resources (CRHR). In practice, the federal NRHP criteria (below) for significance applied under Section 106 are generally (although not entirely) consistent with CRHR criteria (see PRC § 5024.1, Title 14 CCR, Section 4852 and § 15064.5(a)(3)).

Significant cultural resources are those archaeological resources and historical properties that:

(A) Are associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Are associated with the lives of persons important in our past;

(C) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or

(D) Have yielded, or may be likely to yield, information important in prehistory or history.

Unique resources under CEQA, in slight contrast, are those that represent:

> An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2(g)).

Preservation in place is the preferred approach under CEQA to mitigating adverse impacts to significant or unique cultural resources.

1.3.2 National Historic Preservation Act Section 106

NHPA Section 106 is applicable to federal undertakings, including projects financed or permitted by federal agencies regardless of whether the activities occur on federally managed or privately-owned land. Its purpose is to determine whether adverse effects will occur to significant cultural resources, defined as "historical properties" that are listed in or determined eligible for listing in the National Register of Historic Places (NRHP). The criteria for NRHP eligibility are defined at 36 CFR § 60.4 as follows:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:
>
> (A) are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (B) are associated with the lives of persons significant in our past; or
>
> (C) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (D) have yielded or may be likely to yield, information important in prehistory or history.

There are, however, restrictions on the kinds of historical properties that can be NRHP listed. These have been identified by the Advisory Council on Historic Preservation (ACHP), as follows:

> Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:
>
> (a) A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
>
> (b) A building or structure removed from its original location, but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
>
> (c) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life.

(d) A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

(e) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

(f) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

(g) A property achieving significance within the past 50 years if it is of exceptional importance. (ACHP n.d.)

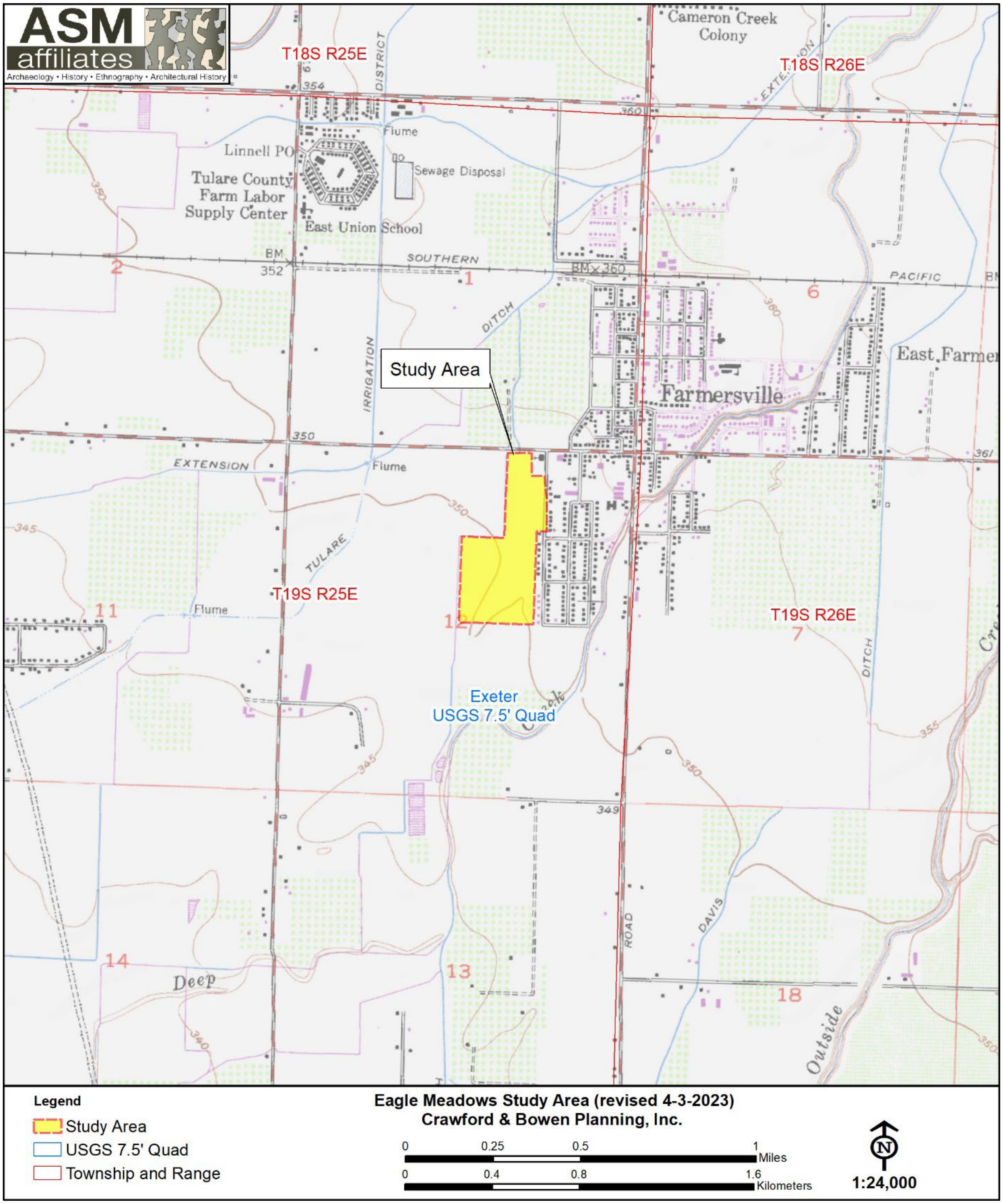

Figure 1. Location of the Eagle Meadows Project, Tulare County, California.

2. ENVIRONMENTAL AND CULTURAL BACKGROUND

2.1 ENVIRONMENTAL BACKGROUND AND GEOARCHAEOLOGICAL SENSITIVITY

As noted above, the Project is located at between 355-ft and 360-ft amsl on the open flats of the San Joaquin Valley. The Project area is located about 2.5-mi south of the Kaweah River on the Kaweah fan. Prior to the appearance of agriculture, starting in the nineteenth century, this location was within one of the densest oak forests in California (Preston 1981). Historically, and likely prehistorically, riparian environments would have been present along the drainages, waterways and marshes. The APE and immediate surroundings had been farmed and grazed for many years, and more recently have been developed for housing and commercial uses, and no native vegetation is present. Perennial bunchgrasses such as purple needlegrass and nodding needlegrass most likely would have been the dominant plant cover in the study area prior to cultivation.

According to the geoarchaeological model developed by Meyer et al. (2010), the APE has a very high potential for buried archaeological deposits. Given the history of previous farming with the Project APE, however, the likelihood of intact archaeological deposits is considered low.

2.2 ETHNOGRAPHIC BACKGROUND

Penutian-speaking Yokuts tribal groups occupied the southern San Joaquin Valley region and much of the nearby Sierra Nevada. Ethnographic information about the Yokuts was collected primarily by Powers (1971, 1976 [originally 1877]), Kroeber (1925), Gayton (1930, 1948), Driver (1937), Latta (1977) and Harrington (n.d.). For a variety of historical reasons, existing research information emphasizes the central Yokuts tribes who occupied both the valley and particularly the foothills of the Sierra. The northernmost tribes suffered from the influx of Euro-Americans during the Gold Rush and their populations were in substantial decline by the time ethnographic studies began in the early twentieth century. In contrast, the southernmost tribes were partially removed by the Spanish to missions and eventually absorbed into multi-tribal communities on the Sebastian Indian Reservation (on Tejon Ranch), and later the Tule River Reservation and Santa Rosa Rancheria to the north. The result is an unfortunate scarcity of ethnographic detail on southern Valley tribes, especially in relation to the rich information collected from the central foothills tribes where native speakers of the Yokuts dialects are still found. Regardless, the general details of indigenous life-ways were similar across the broad expanse of Yokuts territory, particularly in terms of environmentally influenced subsistence and adaptation and with regard to religion and belief, which were similar everywhere.

According to Kroeber (1925: Plate 47), the APE is located in Choinok Yokuts territory along Deep Creek. No historic villages are recorded for this immediate area by Kroeber (1925) or by Latta (1977), with the recorded villages located adjacent to major streams and rivers either upstream or downstream from the Project area. The Yokuts settlement pattern, nonetheless, was largely consistent, regardless of specific tribe involved. Winter villages were typically located along lakeshores and major stream courses (as these existed circa AD 1800), with dispersal phase family camps located at elevated spots on the valley floor and near gathering areas in the foothills.

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Most Yokuts groups, again regardless of specific tribal affiliation, were organized as a recognized and distinct tribelet; a circumstance that almost certainly pertained to the tribal groups noted above. Tribelets were land-owning groups organized around a central village and linked by shared territory and descent from a common ancestor. The population of most tribelets ranged from about 150 to 500 peoples (Kroeber 1925).

Each tribelet was headed by a chief who was assisted by a variety of assistants, the most important of whom was the *winatum*, a herald or messenger and assistant chief. A shaman also served as religious officer. While shamans did not have any direct political authority, as Gayton (1930) has illustrated, they maintained substantial influence within their tribelet.

Shamanism is a religious system common to most Native American tribes. It involves a direct and personal relationship between the individual and the supernatural world enacted by entering a trance or hallucinatory state (usually based on the ingestion of psychotropic plants, such as jimsonweed or more typically native tobacco). Shamans were considered individuals with an unusual degree of supernatural power, serving as healers or curers, diviners, and controllers of natural phenomena (such as rain or thunder). Shamans also produced the rock art of this region, depicting the visions they experienced in vision quests believed to represent their spirit helpers and events in the supernatural realm (Whitley 1992, 2000).

The centrality of shamanism to the religious and spiritual life of the Yokuts was demonstrated by the role of shamans in the yearly ceremonial round. The ritual round, performed the same each year, started in the spring with the jimsonweed ceremony, followed by rattlesnake dance and (where appropriate) first salmon ceremony. After returning from seed camps, fall rituals began in the late summer with the mourning ceremony, followed by first seed and acorn rites and then bear dance (Gayton 1930:379). In each case, shamans served as ceremonial officials responsible for specific dances involving a display of their supernatural powers (Kroeber 1925).

Subsistence practices varied from tribelet to tribelet based on the environment of residence. Throughout Native California, and Yokuts territory in general, the acorn was a primary dietary component, along with a variety of gathered seeds. Valley tribes augmented this resource with lacustrine and riverine foods, especially fish and wildfowl. As with many Native California tribes, the settlement and subsistence rounds included the winter aggregation into a few large villages, where stored resources (like acorns) served as staples, followed by dispersal into smaller camps, often occupied by extended families, where seasonally available resources would be gathered and consumed.

Although population estimates vary and population size was greatly affected by the introduction of Euro-American diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. Cook (1978) estimates that the Yokuts region contained 27 percent of the aboriginal population in the state at the time of contact; other estimates are even higher. Many Yokuts people continue to reside in the southern San Joaquin Valley today.

2.3 PRE-CONTACT ARCHAEOLOGICAL BACKGROUND

The southern San Joaquin Valley region has received minimal archaeological attention compared to other areas of the state. In part, this is because the majority of California archaeological work has concentrated in the Sacramento Delta, Santa Barbara Channel, and central Mojave Desert areas (see Moratto 1984). Although knowledge of the region's prehistory is limited, enough is known to determine that the archaeological record is broadly similar to south-central California as a whole (see Gifford and Schenk 1926; Hewes 1941; Wedel 1941; Fenenga 1952; Elsasser 1962; Fredrickson and Grossman 1977; Schiffman and Garfinkel 1981). Based on these sources, the general prehistory of the region can be outlined as follows.

Initial occupation of the region occurred at least as early as the *Paleoindian Period*, or prior to about 10,000 years before present (YBP). Evidence of early use of the region is indicated by characteristic fluted and stemmed points found around the margin of Tulare Lake, in the foothills of the Sierra, and in the Mojave Desert proper.

Both fluted and stemmed points are particularly common around lake margins, suggesting a terminal Pleistocene/early Holocene lakeshore adaptation similar to that found throughout the far west at the same time; little else is known about these earliest peoples. Over 250 fluted points have been recovered from the Witt Site (CA-KIN-32), located along the western shoreline of ancient Tulare Lake west of the study area, demonstrating the importance of this early occupation in the San Joaquin Valley specifically (see Fenenga 1993). Additional finds consist of a Clovis-like projectile point discovered in a flash-flood cut-bank near White Oak Lodge in 1953 on Tejon Ranch (Glennan 1987a, 1987b). More recently, a similar fluted point was found near Bakersfield (Zimmerman et al. 1989), and a number are known from the Edwards Air Force Base and Boron area of the western Mojave Desert. Although human occupation of the state is well-established during the Late Pleistocene, relatively little can be inferred about the nature and distribution of this occupation with a few exceptions. First, little evidence exists to support the idea that people at that time were big-game hunters, similar to those found on the Great Plains. Second, the western Mojave Desert evidence suggests small, very mobile populations that left a minimal archaeological signature. The evidence from the ancient Tulare Lake shore, in contrast, suggests much more substantial population and settlements which, instead of relying on big game hunting, were tied to the lacustrine lake edge. Variability in subsistence and settlement patterns is thus apparent in California, in contrast to the Great Plains.

Substantial evidence for human occupation across California, however, first occurs during the middle Holocene, roughly 7,500 to 4,000 YBP. This period is known as the *Early Horizon*, or alternatively as the Early Millingstone along the Santa Barbara Channel. In the south, populations concentrated along the coast with minimal visible use of inland areas. Adaptation emphasized hard seeds and nuts with tool-kits dominated by mullers and grindstones (manos and metates).

Additionally, little evidence for Early Horizon occupation exists in most inland portions of the state, partly due to a severe cold and dry paleoclimatic period occurring at this time, although a site deposit dating to this age has been identified along the ancient Buena Vista shoreline in Kern County to the south (Rosenthal et al. 2007). Regardless of specifics, Early Horizon population density was low with a subsistence adaptation more likely tied to plant food gathering than hunting.

Environmental conditions improved dramatically after about 4,000 YBP during the *Middle Horizon* (or Intermediate Period). This period is known climatically as the Holocene Maximum (circa 3,800 YBP) and was characterized by significantly warmer and wetter conditions than previously experienced. It was marked archaeologically by large population increase and radiation into new environments along coastal and interior south-central California and the Mojave Desert (Whitley 2000). In the Delta region to the north, this same period of favorable environmental conditions was characterized by the appearance of the Windmiller culture which exhibited a high degree of ritual elaboration (especially in burial practices) and perhaps even a rudimentary mound-building tradition (Meighan, personal communication, 1985). Along with ritual elaboration, Middle Horizon times experienced increasing subsistence specialization, perhaps correlating with the appearance of acorn processing technology. Penutian speaking peoples (including the Yokuts) are also posited to have entered the state roughly at the beginning of this period and, perhaps to have brought this technology with them (cf. Moratto 1984). Likewise, it appears the so-called "Shoshonean Wedge" in southern California, the Takic speaking groups that include the Gabrielino/Fernandeño, Tataviam and Kitanemuk, may have moved into the region at that time (Sutton 2009, rather than at about 1500 YBP as first suggested by Kroeber (1925).

Evidence for Middle Horizon occupation of interior south-central California is substantial. For example, in northern Los Angeles County along the upper Santa Clara River, to the south of the San Joaquin Valley, the Agua Dulce village complex indicates occupation extending back to the Intermediate Period, when the population of the village may have been 50 or more people (King et al n.d.). Similarly, inhabitation of the Hathaway Ranch region near Lake Piru, and the Newhall Ranch near Valencia, appears to date to the Intermediate Period (W & S Consultants 1994). To the west, little or no evidence exists for pre-Middle Horizon occupation in the upper Sisquoc and Cuyama River drainages; populations first appear there at roughly 3,500 YBP (Horne 1981). The Carrizo Plain, the valley immediately west of the San Joaquin, experienced a major population expansion during the Middle Horizon (W & S Consultants 2004; Whitley et al. 2007), and recently collected data indicates the Tehachapi Mountains region was first significantly occupied during the Middle Horizon (W & S Consultants 2006). A parallel can be drawn to the inland Ventura County region where a similar pattern has been identified (Whitley and Beaudry 1991), as well as the western Mojave Desert (Sutton 1988a, 1988b), the southern Sierra Nevada (W & S Consultants 1999), and the Coso Range region (Whitley et al. 1988). In all of these areas a major expansion in settlement, the establishment of large site complexes and an increase in the range of environments exploited appear to have occurred sometime roughly around 4,000 years ago. Although most efforts to explain this expansion have focused on local circumstances and events, it is increasingly apparent this was a major southern California-wide occurrence and any explanation must be sought at a larger level of analysis (Whitley 2000). Additionally, evidence from the Carrizo Plain suggests the origins of the tribelet level of political organization developed during this period (W & S Consultants 2004; Whitley et al. 2007). Whether this same demographic process holds for the southern San Joaquin Valley, including the study area, is yet to be determined.

The beginning of the *Late Horizon* is set variously at 1,500 and 800 YBP, with a growing archaeological consensus for the shorter chronology. Increasing evidence suggests the importance of the Middle-Late Horizons transition (AD 800 to 1200) in the understanding of south-central California prehistory. This corresponds to the so-called Medieval Climatic Anomaly, followed by the Little Ice Age, and this general period of climatic instability extended to about A.D. 1860. It included major droughts matched by intermittent "mega-floods," and resulted in demographic disturbances across much of the west (Jones et al. 1999). It is believed to have resulted in major population decline and abandonments across south-central California, involving as much as 90% of the interior populations in some regions, including the Carrizo Plain (Whitley et al. 2007). It is not clear whether site abandonment was accompanied by a true reduction in population or an agglomeration of the same numbers of peoples into fewer but larger villages in more favorable locations. Population along the Santa Barbara coast appears to have spiked at about the same time that it collapsed on the Carrizo Plain (ibid). Along Buena Vista Lake, in Kern County, population appears to have been increasingly concentrated towards the later end of the Medieval Climatic Anomaly (Culleton 2006), and population intensification also appears to have occurred in the well-watered Tehachapi Mountains during this same period (W & S Consultants 2006).

What is then clear is that Middle Period villages and settlements were widely dispersed across the south-central California landscape, including in the Sierras and the Mojave Desert. Many of these sites are found at locations that lack existing or known historical fresh water sources. Late Horizon sites, in contrast, are typically concentrated in areas where fresh water was available during the historical period, if not currently.

One extensively studied site that shows evidence of intensive occupation during the Middle-Late Horizons transition (~1,500 – 500 YBP) is the Redtfeldt Mound (CA-KIN-66/H), located northwest of the current study area, near the north shore of ancient Tulare Lake. There, Siefkin (1999) reported on human burials and a host of artifacts and ecofacts excavated from a modest-sized mound. He found that both Middle Horizon and Middle-Late Horizons transition occupations were more intensive than Late Horizon occupations, which were sporadic and less intensive (Siefkin 1999:110-111).

The Late Horizon can then be understood as a period of recovery from a major demographic collapse. One result is the development of regional archaeological cultures as the precursors to ethnographic Native California; suggesting that ethnographic life-ways recorded by anthropologists extend roughly 800 years into the past.

The position of southern San Joaquin Valley prehistory relative to patterns seen in surrounding areas is still somewhat unknown. The presence of large lake systems in the valley bottoms appears to have mediated some of the desiccation seen elsewhere. But, as the reconstruction of Soda Lake in the nearby Carrizo Plain demonstrates (see Whitley et al. 2007) environmental perturbations had serious impacts on lake systems too. Identifying certain of the prehistoric demographic trends for the southern San Joaquin Valley, and determining how these trends (if present) correlate with those seen elsewhere, is a current important research objective.

2.4 HISTORICAL BACKGROUND

Spanish explorers first visited the San Joaquin Valley in 1772, but its lengthy distance from the missions and presidios along the Pacific Coast delayed permanent settlement for many years, including during the Mexican period of control over the Californian region. In the 1840s, Mexican rancho owners along the Pacific Coast allowed their cattle to wander and graze in the San Joaquin Valley (JRP Historical Consulting 2009). The Mexican government granted the first ranchos in the southern part of the San Joaquin Valley in the early 1840s, but these did not result in permanent settlement. It was not until the annexation of California in 1848 that the exploitation of the southern San Joaquin Valley began (Pacific Legacy 2006).

The discovery of gold in northern California in 1848 resulted in a dramatic increase of population, consisting in good part of fortune seekers and gold miners, who began to scour other parts of the state. After 1851, when gold was discovered in the Sierra Nevada Mountains in eastern Kern County, the population of the area grew rapidly. Some new immigrants began ranching in the San Joaquin Valley to supply the miners and mining towns. Ranchers grazed cattle and sheep, and farmers dry-farmed or used limited irrigation to grow grain crops, leading to the creation of small agricultural communities throughout the valley (JRP Historical Consulting 2009).

After the American annexation of California, the southern San Joaquin Valley became significant as a center of food production for this new influx of people in California. The expansive unfenced and principally public foothill spaces were well suited for grazing both sheep and cattle (Boyd 1997). As the Sierra Nevada gold rush presented extensive financial opportunities, ranchers introduced new breeds of livestock, consisting of cattle, sheep and pig (Boyd 1997).

With the increase of ranching in the southern San Joaquin came the dramatic change in the landscape, as non-native grasses more beneficial for grazing and pasture replaced native flora (Preston 1981). After the passing of the Arkansas Act in 1850, efforts were made to reclaim small tracts of land in order to create more usable spaces for ranching. Eventually, as farming supplanted ranching as a more profitable enterprise, large tracts of land began to be reclaimed for agricultural use, aided in part by the extension of the railroad in the 1870s (Pacific Legacy 2006).

Following the passage of state-wide ‘No-Fence’ laws in 1874, ranching practices began to decline, while farming expanded in the San Joaquin Valley in both large land holdings and smaller, subdivided properties. As the farming population grew, so did the demand for irrigation. Settlers began reclamation of swampland in 1866. The 76 Land and Water Company was founded in 1882, named after State Senator and cattleman Thomas Fowler’s “76 Ranch,” which included significant holdings in the Project area. With the passage of the Wright Act in 1887, the legislature allowed the creation of bonded irrigation districts as public entities. The Alta Irrigation District (AID) was created in 1888 with bonds in the amount of $676,000.00. The district purchased the 76 Land and Water Company canal system for $410,000.00 (Grunsky 1898:24) and was one of the first irrigation districts formed in Tulare County (Preston 1981).

During the period of reclaiming unproductive land in the southern San Joaquin Valley, grants were given to individuals who had both the resources and the finances to undertake the operation alone. One small agricultural settlement, founded by Colonel Thomas Baker in 1861 after procuring one such grant, took advantage of reclaimed swampland along the Kern River. This settlement became the City of Bakersfield in 1869, and quickly became the center of activity in the southern San Joaquin Valley, and in the newly formed Kern County. Located on the main stage road through the San Joaquin Valley, the town became a primary market and transportation hub for stock and crops, as well as a popular stopping point for travelers on the Los Angeles and Stockton Road. The Southern Pacific Railroad reached the Bakersfield area in 1873, connecting it with important market towns elsewhere in the state, dramatically impacting both agriculture and oil production (Pacific Legacy 2006).

The San Joaquin Valley was dominated by agricultural pursuits until the oil boom of the early 1900s, which saw a shift in the region, as some reclaimed lands previously used for farming were leased to oil companies. Nonetheless, the shift of the San Joaquin Valley towards oil production did not halt the continued growth of agriculture (Pacific Legacy 2006). The Great Depression of the 1930s brought with it the arrival of great number of migrants from the drought-affected Dust Bowl region, looking for agricultural labor. These migrants established temporary camps in the valley, staying on long past the end of the drought and the Great Depression, eventually settling in towns such as Bakersfield where their descendants live today (Boyd 1997).

The community of Farmersville was first settled in the 1850s, when it was known as the community of Deep Creek. The community was named Farmersville in 1868 with the application for a post office. Farmersville was incorporated in 1960 and as of 2019 hosted a population of approximately 10,703.

2.5 RESEARCH DESIGN

2.5.1 Pre-Contact Archaeology

Previous research and the nature of the pre-contact archaeological record suggest two significant NRHP themes, both of which fall under the general Pre-Contact Archaeology area of significance. These are the Expansion of Pre-Contact Populations and Their Adaptation to New Environments; and Adaptation to Changing Environmental Conditions.

The Expansion of Pre-Contact Populations and Their Adaptation to New Environments theme primarily concerns the Middle Horizon/Holocene Maximum. Its period of significance runs from about 4,000 to 1,500 YBP. It involves a period during which the prehistoric population appears to have expanded into a variety of new regions, developing new adaptive strategies in the process.

The Adaptation to Changing Environmental Conditions theme is partly related to the Holocene Maximum, but especially to the Medieval Climatic Anomaly. The period of significance for this theme, accordingly, extends from about 4,000 to 800 YBP. This theme involves the apparent collapse of many inland populations, presumably with population movements to better environments such as the coast. It is not yet known whether the southern San Joaquin Valley, with its system of lakes, sloughs and swamps, experienced population decline or, more likely, population increase due to the relatively favorable conditions of this region during this period of environmental stress.

The range of site types that are present in this region include:

- Villages, primarily located on or near permanent water sources, occupied by large groups during the winter aggregation season;
- Seasonal camps, again typically located at water sources, occupied during other parts of the year tied to locally and seasonally available food sources;
- Special activity areas, especially plant processing locations containing bedrock mortars (BRMs), commonly (though not exclusively) near existing oak woodlands, and invariably at bedrock outcrops or exposed boulders;
- Stone quarries and tool workshops, occurring in two general contexts: at or below naturally occurring chert exposures on the eastern front of the Temblor Range; and at quartzite cobble exposures, often on hills or ridges;
- Ritual sites, most commonly pictographs (rock art) found at rockshelters or large exposed boulders, and cemeteries, both commonly associated with villages; and
- A variety of small lithic scatters (low density surface scatters of stone tools).

The first requisites in any research design are the definition of site age/chronology and site function. The ability to determine either of these basic kinds of information may vary between survey and test excavation projects, and due to the nature of the sites themselves. BRM sites without associated artifacts, for example, may not be datable beyond the assumption that they post-date the Early Horizon and are thus less than roughly 4,000 years old.

A second fundamental issue involves the place of site in the settlement system, especially with respect to water sources. Because the locations of the water sources have sometimes changed over time, villages and camps are not exclusively associated with existing (or known historical) water sources (W&S Consultants 2006). The size and locations of the region's lakes, sloughs and delta channels, to cite the most obvious example, changed significantly during the last 12,000 years due to major paleoclimatic shifts. This altered the area's hydrology and thus prehistoric settlement patterns. The western shoreline of Tulare Lake was relatively stable, because it abutted the Kettleman Hills. But the northern, southern and eastern shorelines comprised the near-flat valley floor. Relatively minor fluctuations up or down in the lake level resulted in very significant changes in the areal expression of the lake on these three sides, and therefore the locations of villages and camps. Although perhaps not as systematic, similar changes occurred with respect to stream channels and sloughs, and potential site locations associated with them. This circumstance has implications for predicting site locations and archaeological sensitivity. Site sensitivity is then hardest to predict in the open valley floor, where changes in stream courses and lake levels occurred on numerous occasions.

Nonetheless, the position of southern San Joaquin Valley prehistory relative to the changing settlement and demographic patterns seen in surrounding areas is still somewhat unknown (cf. Siefkin 1999), including to the two NRHP themes identified above. The presence of large lake systems in the valley bottoms can be expected to have mediated some of the effects of desiccation seen elsewhere. But, as the reconstruction of Soda Lake in the nearby Carrizo Plain demonstrates (see Whitley et al. 2007), environmental perturbations had serious impacts on lake systems too. Identifying certain of the prehistoric demographic trends for the southern San Joaquin Valley, and determining how these trends (if present) correlate with those seen elsewhere, is another primary regional research objective.

Archaeological sites would primarily be evaluated for NRHP eligibility under Criterion D, research potential.

2.5.2 Historical Archaeology: Native American

Less research has been conducted on the regional historical archaeological record, both Native American and Euro-American. For Native American historical sites, the ethnographic and ethnohistoric periods in the southern San Joaquin Valley extended from first Euro-American contact, in AD 1772, to circa 1900, when tribal populations were first consolidated on reservations. The major significant historic NRHP themes during this period of significance involve the related topics of Historic-Aboriginal Archaeology, and Native American Ethnic Heritage. More specifically, these concern the Adaptation of the Indigenous Population to Euro-American Encroachment and Settlement, and their Acculturation to Western Society. These processes included the impact of missionization on the San Joaquin Valley (circa 1800 to about 1845); the introduction of the horse and the development of a San Joaquin Valley "horse culture," including raiding onto the coast and Los Angeles Basin (after about 1810); the use of the region as a refuge for mission neophyte escapees (after 1820); responses to epidemics from introduced diseases (especially in the 1830s); armed resistance to Euro-American encroachment (in the 1840s and early 1850s); the origins of the reservation system and the development of new tribal organizations and ethnic identities; and, ultimately, the adoption of the Euro-American society's economic system and subsistence practices, and acculturation into that society.

Site types that have been identified in the region dating to the ethnographic/ethnohistoric period of significance primarily include villages and habitations, some of which contain cemeteries and rock art (including pictographs and cupules). Dispersed farmsteads, dating specifically from the reservation period or post-1853, would also be expected. The different social processes associated with this historical theme may be manifest in the material cultural record in terms of changing settlement patterns and village organization (from traditional nucleated villages to single family dispersed farmsteads); the breakdown of traditional trading networks with their replacement by new economic relationships; changing subsistence practices, especially the introduction of agriculture initially via escaped mission neophytes; the use of Euro-American artifacts and materials rather than traditional tools and materials; and, possibly, changing mortuary practices.

Inasmuch as culture change is a primary intellectual interest in archaeology, ethnographic villages and habitations may be NRHP eligible under Criterion D, research potential. Rock art sites, especially pictographs, may be eligible under Criterion C as examples of artistic mastery. They may also be eligible under Criterion A, association with events contributing to broad patterns of history. Ethnographic sites, further, may be NRHP eligible as Traditional Cultural Properties due to potential continued connections to tribal descendants, and their resulting importance in traditional practices and beliefs, including their significance for historical memory, tribal- and self-identity formation, and tribal education.

For Criteria A, C and D, eligibility requires site integrity (including the ability to convey historical association for Criterion A). These may include intact archaeological deposits for Criterion D, as well as setting and feel for Criteria C and A. Historical properties may lack physical integrity, as normally understood in heritage management, but still retain their significance to Native American tribes as Traditional Cultural Properties if they retain their tribal associations and uses.

2.5.3 Historical Archaeology: Euro-American

Approaches to historical Euro-American archaeological research relevant to the region have been summarized by Caltrans (1999, 2000, 2007, 2008). These concern the general topics of historical landscapes, agriculture and farming, irrigation (water conveyance systems), and mining. Caltrans has also identified an evaluation matrix aiding determinations of eligibility. The identified research issues include site structure and land-use (lay-out, land use, feature function); economics (self-sufficiency, consumer behavior, wealth indicators); technology and science (innovations, methods); ethnicity and cultural diversity (religion, race); household composition and lifeways (gender, children); and labor relations. Principles useful for determining the research potential of an individual site or feature are conceptualized in terms of the mnemonic AIMS-R, as follows:

> 1. *Association* refers to the ability to link an assemblage of artifacts, ecofacts, and other cultural remains with an individual household, an ethnic or socioeconomic group, or a specific activity or property use.
>
> 2. *Integrit*y addresses the physical condition of the deposit, referring to the intact nature of the archaeological remains. In order for a feature to be most useful, it should be in much the same state as when it was deposited. However, even disturbed deposits can yield important information (e.g., a tightly dated deposit with an unequivocal association).
>
> 3. *Materials* refers to the number and variety of artifacts present. Large assemblages provide more secure interpretations as there are more datable items to determine when the deposit was made, and the collection will be more representative of the household, or activity. Likewise, the interpretive potential of a deposit is generally increased with the diversity of its contents, although the lack of diversity in certain assemblages also may signal important behavioral or consumer patterns.
>
> 4. *Stratigraphy* refers to the vertically or horizontally discrete depositional units that are distinguishable. Remains from an archaeological feature with a complex stratigraphic sequence representative of several events over time can have the added advantage of providing an independent chronological check on artifact diagnosis and the interpretation of the sequence of environmental or sociocultural events.
>
> 5. *Rarity* refers to remains linked to household types or activities that are uncommon. Because they are scarce, they may have importance even in cases where they otherwise fail to meet other thresholds of importance (Caltrans 2007:209).

For agricultural sites, Caltrans (2007) has identified six themes to guide research: Site Structure and Land Use Pattern; Economic Strategies; Ethnicity and Cultural Adaptation; Agricultural Technology and Science; Household Composition and Lifeways; and Labor History. Expected site types would include farm and ranch homesteads and facilities, line camps, and refuse dumps. In general terms, historical Euro-American archaeological sites would be evaluated for NRHP eligibility under Criterion D, research potential. However, they also potentially could be eligible under Criteria A and B for their associate values with major historical trends or individuals. Historical landscapes might also be considered.

Historical structures, which are most likely to be pertinent to the APE, are typically evaluated for NRHP eligibility under Criteria A and/or B, for their associate values with major historical trends or individuals, and C for potential design or engineering importance.

3. ARCHIVAL RECORDS SEARCH

3.1 ARCHIVAL RECORDS SEARCH

In order to determine whether the APE had been previously surveyed for cultural resources, and/or whether any such resources were known to exist on any of them, a records search of site files and maps was conducted by the Southern San Joaquin Valley Information Center (IC), California State University, Bakersfield on 28 March 2022. The records search was completed to determine: (i) if prehistoric or historical archaeological sites had previously been recorded within the APE; (ii) if the Project area had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive. Records examined included archaeological site files and maps, the NRHP, Historic Property Data File, California Inventory of Historic Resources, and the California Points of Historic Interest.

The IC results indicated that one previous study had covered small portions of the study area on the north (Table 1). No cultural resources of any kind are known to exist within it. An additional eight (8) previous studies had been completed within 0.5-mi of the study area (Table 2), resulting in the recordation of four (4) historic cultural resources within that outer radius (Table 3).

Table 1. Survey Reports within the Study Area

Report No.	Year	Author (s)/Affiliation	Title
TU-01659	2009	Haley, Kathryn/ ICF Jones & Stokes	Historic Property Survey Report for Avenue 280 Road Widening Project, Tulare County, California

Table 2. Survey Reports within 0.5-mi of the Study Area

Report No.	Year	Author (s)/Affiliation	Title
TU-00134	1998	Parr, Robert E. and Sutton, Mark Q./ Center for Archaeological Research, California State University, Bakersfield	Archaeological Assessment of the Tulare Irrigation District Main Canal Lining Project, Tulare County, California
TU-00404	1988	Napton, Kyle L./ California State University, Stanislaus	Cultural Resource Investigation of the Westview Garden Apartments and the Virginia Manor Apartments, Farmersville, Tulare County, California
TU-01071	2000	Collet, Tom/ Terracon	Indian Religious Site and American Historical Site Determination for a Proposed Cellular Communications Tower, 70' East of Virginia Ave. & 350' South of Visalia Rd. Farmersville, California, Terracon Project No. 64007869-A
TU-01409	2010	Orfila, Rebecca S./ RSO Consulting	Archaeological Survey for the Southern California Edison Company: Replacement of 11 Deterioriated Power Poles on the Burr, Delta, Hack, Mississippi, Nickerson, Redbanks, Roeding, and Tarusa 12 kV Circuits in Tulare County, California
TU-01439	2010	Windmiller, Ric/Ric Windmiller Consulting Archaeologist	Cultural Resources Inventory and Evaluation in Farmersville, Tulare County, California

TU-01456	2007	Henrikson, Suzanne L./ Center for Archaeological Research, California State University, Bakersfield	Archaeological Survey for the Southern California Edison Company Replacement of 11 Deteriorated Power Poles on the El Mirador, Ducor, Chinowith, Nickerson, Gill, Roeding, and Caratan 12 kV Distribution Circuits, Tulare County, California
TU-01739	2015	Clifton, Virginia and Travers, Aniela / EBI Consulting	Cultural Resources Survey Farmersville/Ensite #26106 (269407) 586 South Farmersville Boulevard, Farmersville, Tulare County, California
TU-01783	2017	Lloyd, Jay B. and Tibbet Josh / Applied EarthWorks, Inc.	Cultural Resource Inventory for the Deep Creek Restoration Project in Farmersville, Tulare County, California

Table 3. Resources within the 0.5-mi of the Study Area

Primary #	Type	Description
P-54-005076	Building	Single family property
P-54-005296	Structure	Canal
P-54-005306	Structure	Historic bridge
P-54-005308	Structure	Historic bridge

3.2 SACRED LANDS FILE

An SLF request was also submitted to the NAHC on 17 March 2022. The SLF indicated that no tribal cultural resources were known to exist within the APE. Outreach letters were sent on 21 March 2022 to tribal organizations on the NAHC contact list requesting additional information about the Project APE. The Santa Rosa Rancheria Tachi-Yokuts responded on 31 March 2022 and requested to be retained to perform a cultural presentation for all construction staff and to be informed of any and all discoveries made related to the Project. Follow-up emails were also sent to the remaining tribal organizations in April 2022; however, no additional responses have been received.

4. METHODS AND RESULTS

4.1 FIELD METHODS

An intensive Class III inventory/Phase I survey of the Eagle Meadows Project APE was conducted in April 2022 by ASM Associate Archaeologist Robert Azpitarte, B.A., with help from ASM Assistant Archaeologists Maria Silva, B.A., and Cameron Jackson, B.A. The field methods employed included intensive pedestrian examination of the ground surface for evidence of archaeological sites in the form of artifacts, surface features (such as bedrock mortars, historical mining equipment), and archaeological indicators (e.g., organically enriched midden soil, burnt animal bone); the identification and location of any discovered sites, should they be present; tabulation and recording of surface diagnostic artifacts; site sketch mapping; preliminary evaluation of site integrity; and site recording, following the California Office of Historic Preservation Instructions for Recording Historic Resources, using DPR 523 forms.

4.2 SURVEY RESULTS

The Project APE (~48.82-ac) consists of fallow agricultural land with associated dirt roads, in Farmersville, Tulare County, California (Figure 2). Built structures were present on properties that bordered the horizontal APE. These included zero lot-line commercial buildings and residential tract development on the north, northeast, and west (Figure 3). Additional agricultural fields and active irrigation ditches abut the Project horizontal APE on the west and south. The APE is mostly devoid of native vegetation, with wildflowers and seasonal grasses visible along the edges of roads and adjacent fallow fields. Modern refuse in the form of concrete fragments, plastic piping, clothing, and paper products were noted within the APE.

Ground surface visibility was excellent within the orchard portions of the APE. Grass covered much of the fallow agricultural field, impeding visibility in this area. Survey transects were reduced to 5-meter spacing within this area to insure survey coverage at intensive Class III/Phase I levels.

An irrigation conveyance feature – Extension Ditch – borders the APE outside the western and northern peripheries and will not be affected by the proposed Eagle Meadows development project.

No archaeological or built environment resources were identified within the Project APE.

Figure 2. Overview of the approximate center of the Project APE, looking north.

Figure 3. Overview along the northern boundary of the Project APE, looking south..

5. SUMMARY AND RECOMMENDATIONS

5.1 SUMMARY

An intensive Class III inventory/Phase I cultural resources survey was conducted for the Eagle Meadows Project, located in the community of Farmersville, Tulare County, California. A records search was obtained from the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield. This indicated that two previous studies had covered small portions of the study area, and that no cultural resources are known to exist within it.

A Sacred Lands File Request (SLF) was also submitted to the Native American Heritage Commission (NAHC). The SLF indicated that no tribal cultural resources were known to exist within the APE. Outreach letters were sent to tribal organizations on the NAHC contact list requesting additional information about sites. The Santa Rosa Rancheria – Tachi Yokuts responded and requested to be retained to perform a cultural presentation for all construction staff and to be informed of any and all discoveries made related to the Project. Follow-up emails were also sent to the remaining tribal organizations but no additional comments have been received.

The Class III inventory/Phase I survey fieldwork was conducted in April 2022 with the entire 48.82-ac APE walked by an archaeological crew. No archaeological or built environment resources were identified within the APE.

5.2 RECOMMENDATIONS

No cultural resources of any kind have been identified within the Eagle Meadows Project APE, and the Project does not have the potential to results in adverse impacts or affects to historical resources or historic properties. A Determination of No Effect and No Significant Impact for cultural resources is recommended for the Project. It is further recommended that, in the unlikely event that cultural resources are encountered during construction or use of the APE, an archaeologist be contacted to assess the discovery.

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Appendix D

Traffic Study

Project No: 524-33

TRAFFIC STUDY

EAGLE MEADOW SUBDIVISION

CITY OF FARMERSVILLE

Prepared for:

Crawford & Bowen Planning, Inc.

July 2023

Prepared by:

RUETTGERS & SCHULER CIVIL ENGINEERS

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INTRODUCTION

The purpose of this study is to evaluate the potential traffic impacts of a proposed residential development located generally west of Farmersville Boulevard and south of Visalia Road in Farmersville, California. A vicinity map is presented in Figure 1 and a location map is presented in Figure 2.

The study methodology and vehicle miles traveled analysis is consistent with the California Department of Transportation (Caltrans) “Guide for the Preparation of Traffic Impact Studies,” dated December 2002, County of Tulare “SB 743 Guidelines” dated June 8, 2020, and Section 15064.3(b) of the California Environmental Quality Act (CEQA), which became effective July 1, 2020. The scope of the study includes 12 intersections (three signalized, seven stop-controlled, and two roundabouts) and was developed in coordination with staff from the City of Farmersville and Caltrans.

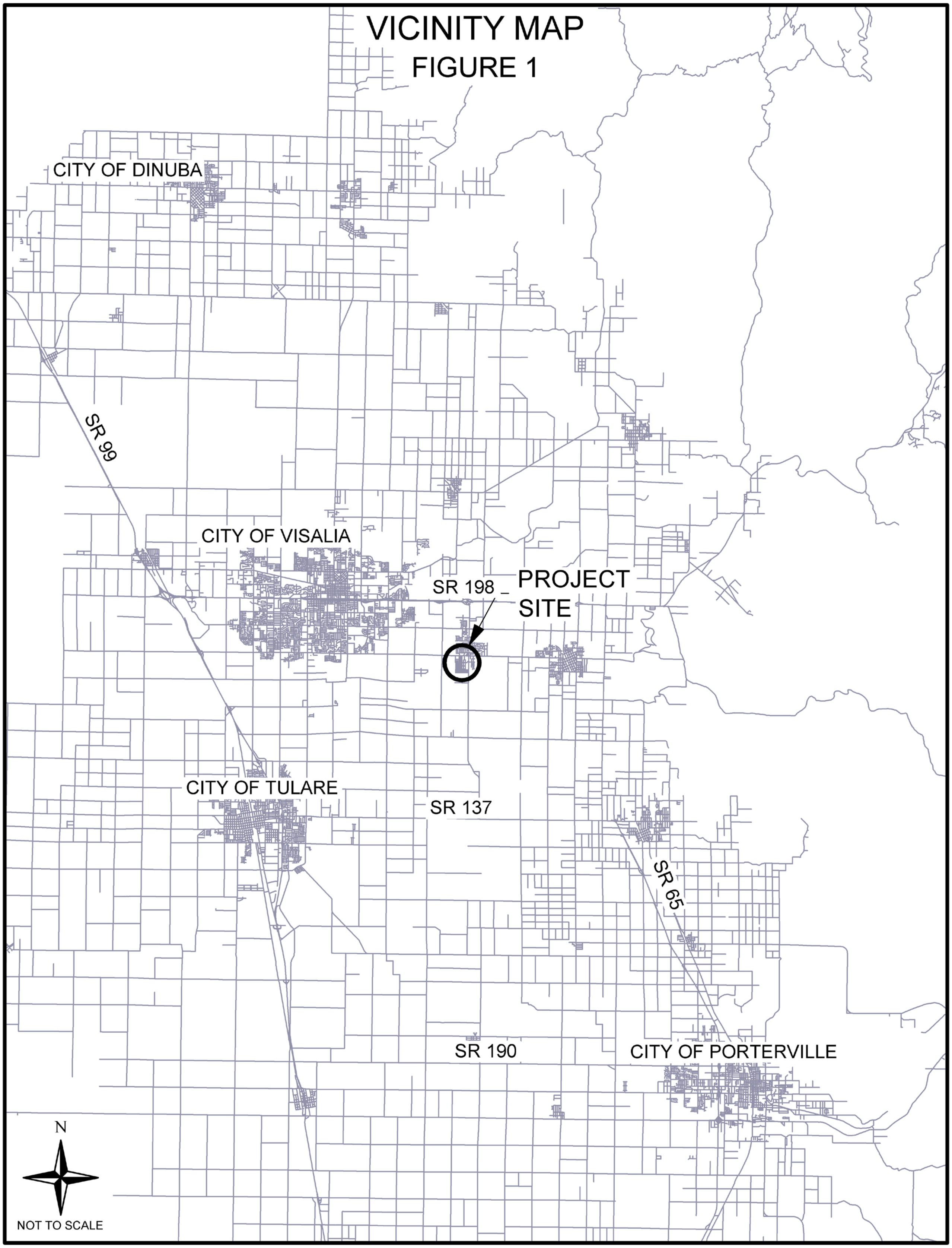
A. Project Land Use and Site Access

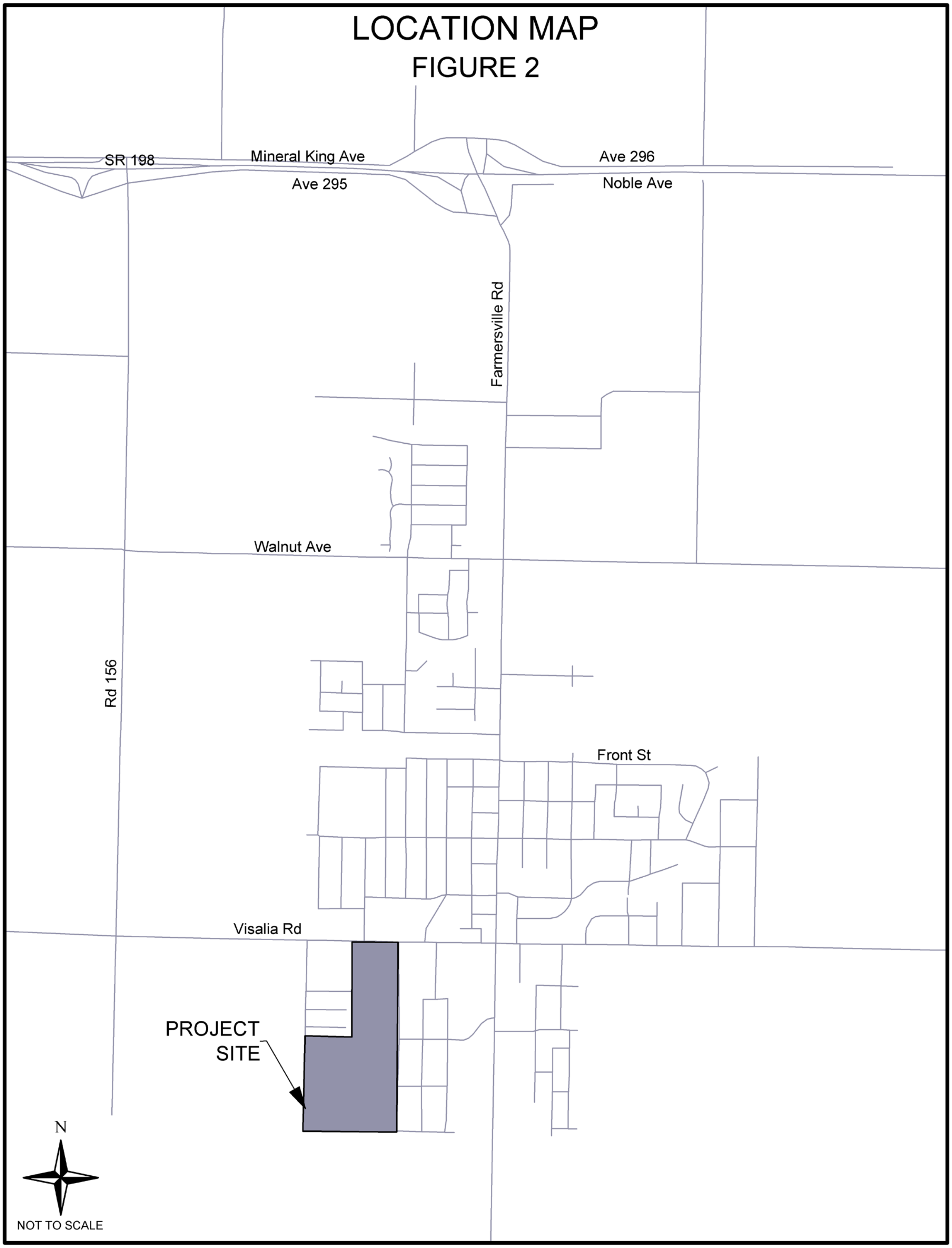
The project site is situated on approximately 50.80 net acres of undeveloped vacant land. The property is zoned R-1-6 and has a General Plan Land Use designation of Low Density Residential. The proposed development would include 248 dwelling units. A tentative subdivision plan is provided in Figure 3, which shows street and lot configurations.

The site is bounded by Visalia Avenue to the north, Ventura Avenue to the east, residential housing to the west, and vacant land to the south.

B. Existing Land Uses in Project Vicinity

Land uses in the vicinity of the development include residential to the north and east. Commercial, school, and church facilities exist to the north and east as well. Agricultural land uses exist to the south.


VICINITY MAP
FIGURE 1
CITY OF DINUBA
SR 99
CITY OF VISALIA
SR 198
PROJECT SITE
CITY OF TULARE
SR 137
SR 65
SR 190
CITY OF PORTERVILLE
N
NOT TO SCALE



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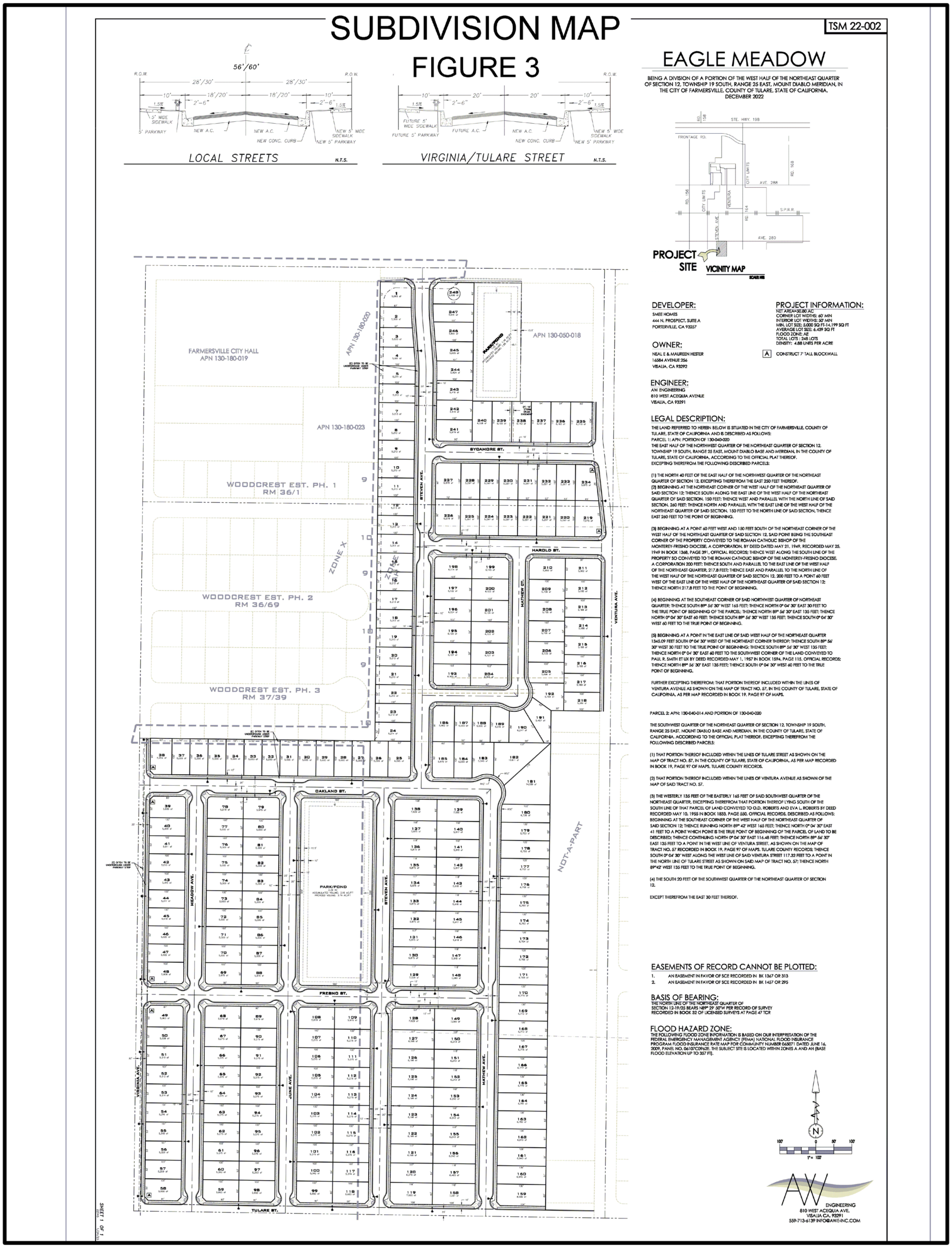

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C. Roadway Descriptions

Avenue 295/Noble Avenue is an east-west collector that extends west from Farmersville Road. In the vicinity of the project it exists as a two-lane roadway and provides access to commercial and industrial land uses as well as the State Route 198.

Avenue 296/Mineral King Avenue is an east-west collector which exists north of State Route 198. In the vicinity of the project it exists as a two-lane roadway and provides access to commercial, residential and agricultural land uses as well as the State Route 198.

Farmersville Boulevard is a four-lane, north-south arterial that extends south from Avenue 296. Farmersville Boulevard provides access to State Route 198 as well as commercial, residential, and industrial land uses.

Front Street is an east-west local roadway that extends from Ventura Avenue to Dwight Avenue. In the vicinity of the project it exists as a two-lane roadway and provides access to commercial and residential land uses. The intersection of Front Street and Farmersville Boulevard is designated in the General Plan for a future traffic signal.

Hacienda Drive is a north-south future collector that is anticipated to extend from Walnut Avenue to Visalia Road and provide access to residential land uses.

Road 156 is a north-south collector that extends from State Route 198 to south of Farmersville. In the vicinity of the project it exists as a two-lane roadway and provides access to agricultural and commercial land uses.

Steven Avenue is a north-south local roadway that extends from Front Street to Visalia Road. It provides access to residential land uses.

Ventura Avenue is a north-south local roadway that extends south from Visalia Road and provides access to residential and commercial land uses.

Virginia Avenue is a north-south local roadway that extends south from Visalia Road and provides access to residential land uses.

Visalia Road is an east-west arterial that extends from Exeter to Visalia. In the vicinity of the project it exists as a four-lane roadway and provides access to residential, commercial, and educational land uses.

Walnut Avenue is a two-lane, east-west collector that extends west from Road 168 in Farmersville to Visalia. Walnut Avenue provides access to residential, commercial, educational, and agricultural land uses.

PROJECT TRIP GENERATION

The project trip generation volumes shown in Table 1 were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Trip rates, equations, and directional splits for ITE Land Use Code 210 (Single Family Detached Housing) were used to estimate project trips for weekday peak hour of adjacent street traffic. The AM and PM peak hours of adjacent street traffic were determined to be between 6:00 AM and 7:00 AM, and between 4:00 PM and 5:00 PM, based on a review of two-hour AM & PM peak hour vehicle turn movement counts taken March 2022.

Table 1
Project Trip Generation

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
210	Single-Family detached Housing	248 Dwelling Units	eq	2327	eq	26% 43	74% 127	eq	63% 147	37% 86
Total				2,327		43	127		147	86

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project peak hour trips is shown in Table 2 and represents the movement of traffic accessing the project site by direction. The project trip distribution was developed based on site location and travel patterns anticipated for the proposed land uses.

Table 2
Project Trip Distribution

Direction	Percent
North	10
East	15
South	10
West	65

Project peak hour trips were assigned to the study intersections as shown in Figure 4. Project trip assignment was developed based on trip generation, trip distribution and likely travel routes for traffic accessing the project site.

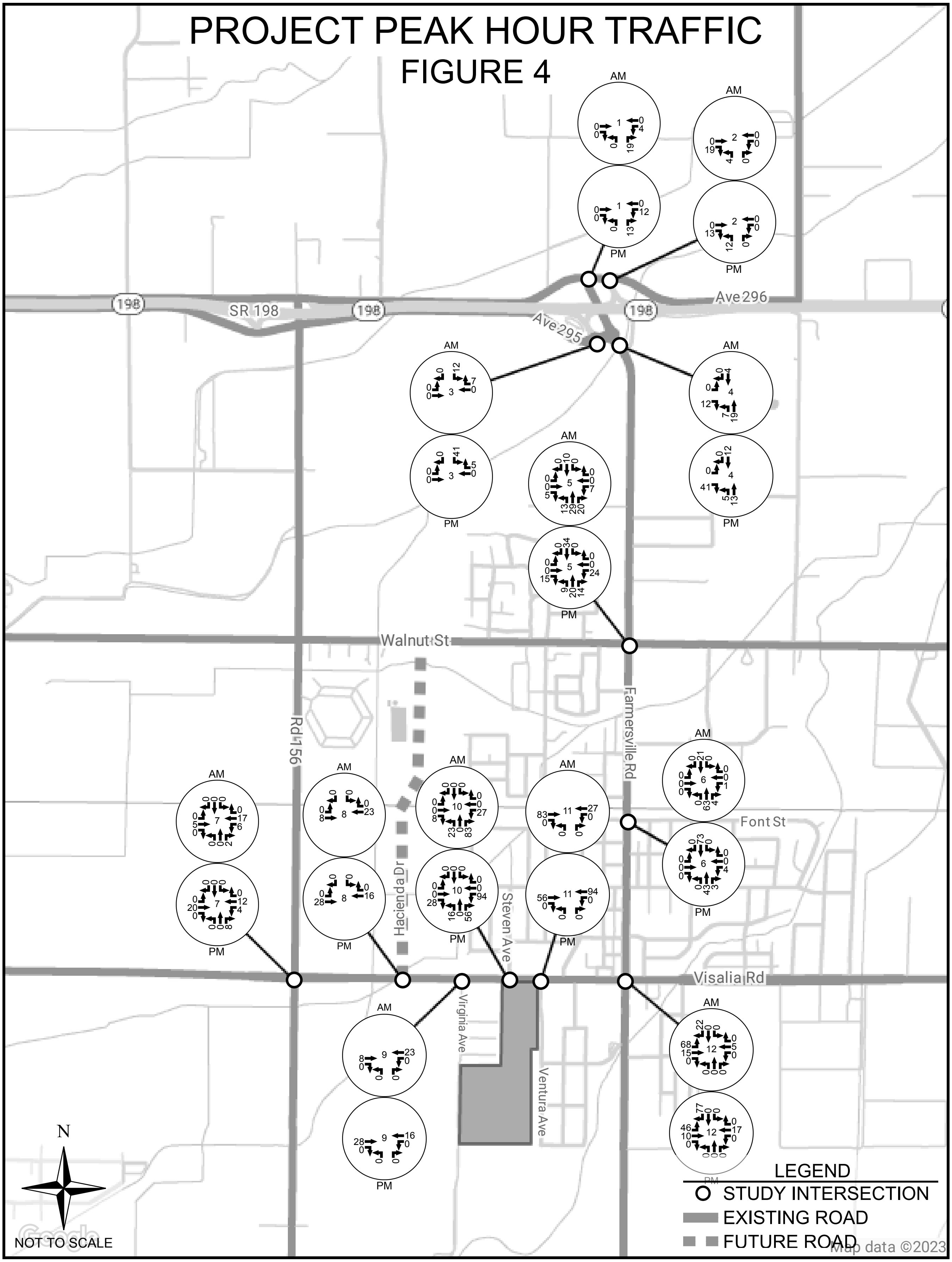
EXISTING AND FUTURE TRAFFIC

Existing peak hour turning movement counts were obtained in March and July 2022 and grown out to 2023.

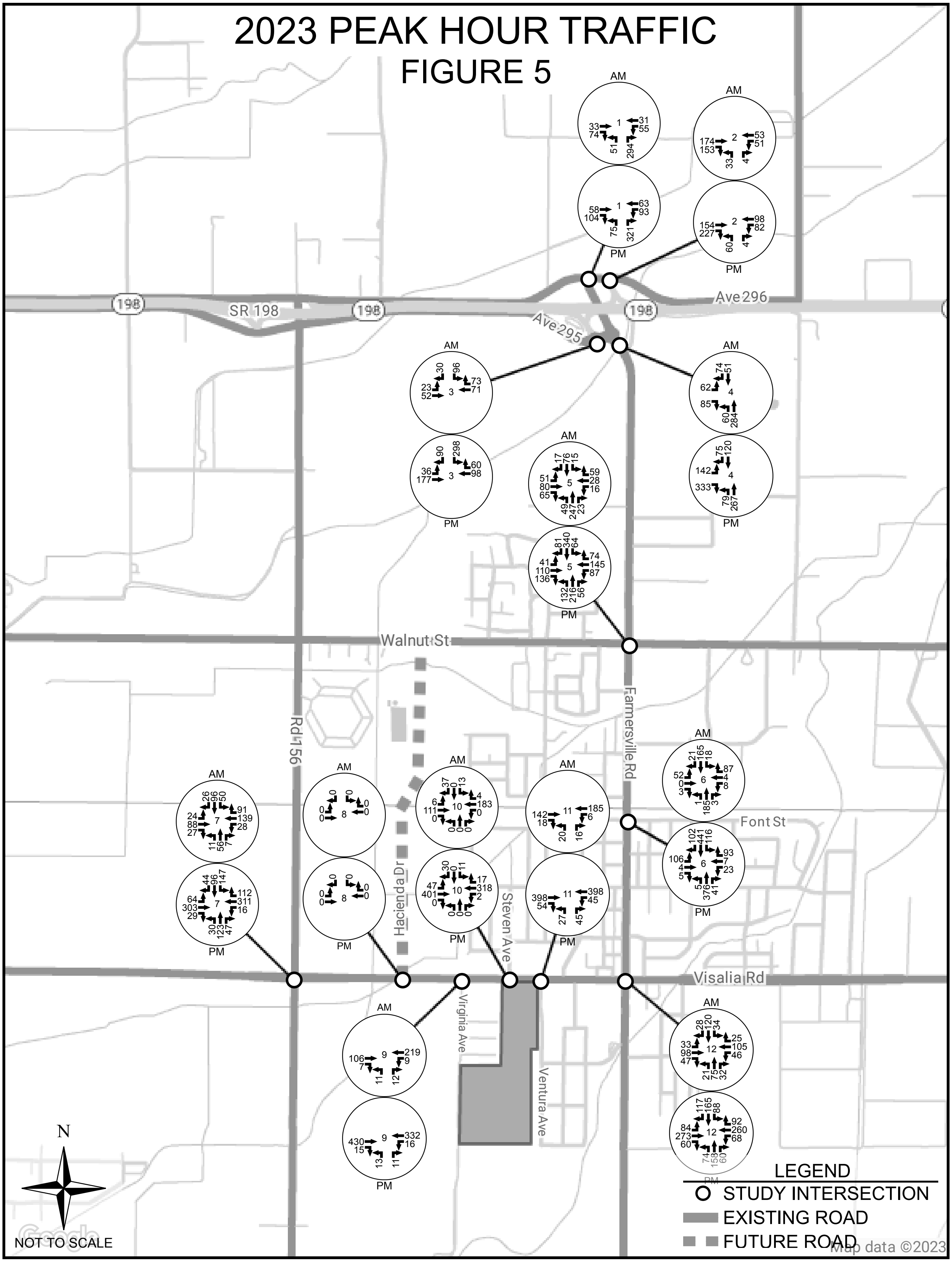
Average annual growth rates ranging between 1.10 and 2.25 percent were applied to the 2023 peak hour volumes to estimate peak hour volumes for the year 2043. These growth rates were developed based on a review of historical count data and output from TCAG's regional travel demand model as well as a discussion with the City of Farmersville Planning Consultant. Cumulative volumes were estimated based on information provided by the City of Farmersville regarding build year, land use, size and location for each pending development.

Existing peak hour volumes are shown in Figure 5, and existing plus project peak hour volumes are shown in Figure 6. Future volumes for the year 2043, both without and with project traffic, are shown in Figures 7 and 8, respectively.

PROJECT PEAK HOUR TRAFFIC
FIGURE 4



2023 PEAK HOUR TRAFFIC
FIGURE 5



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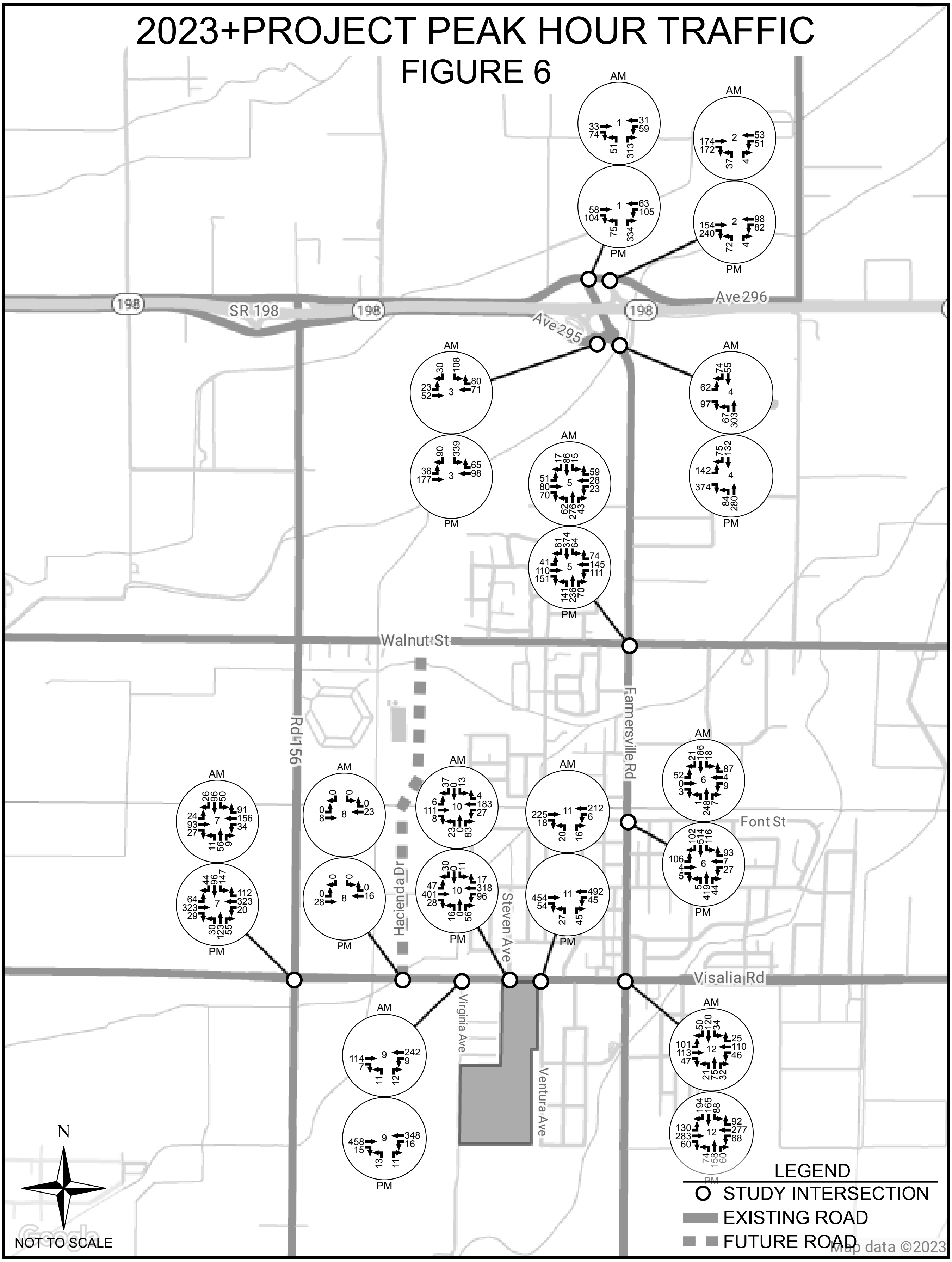
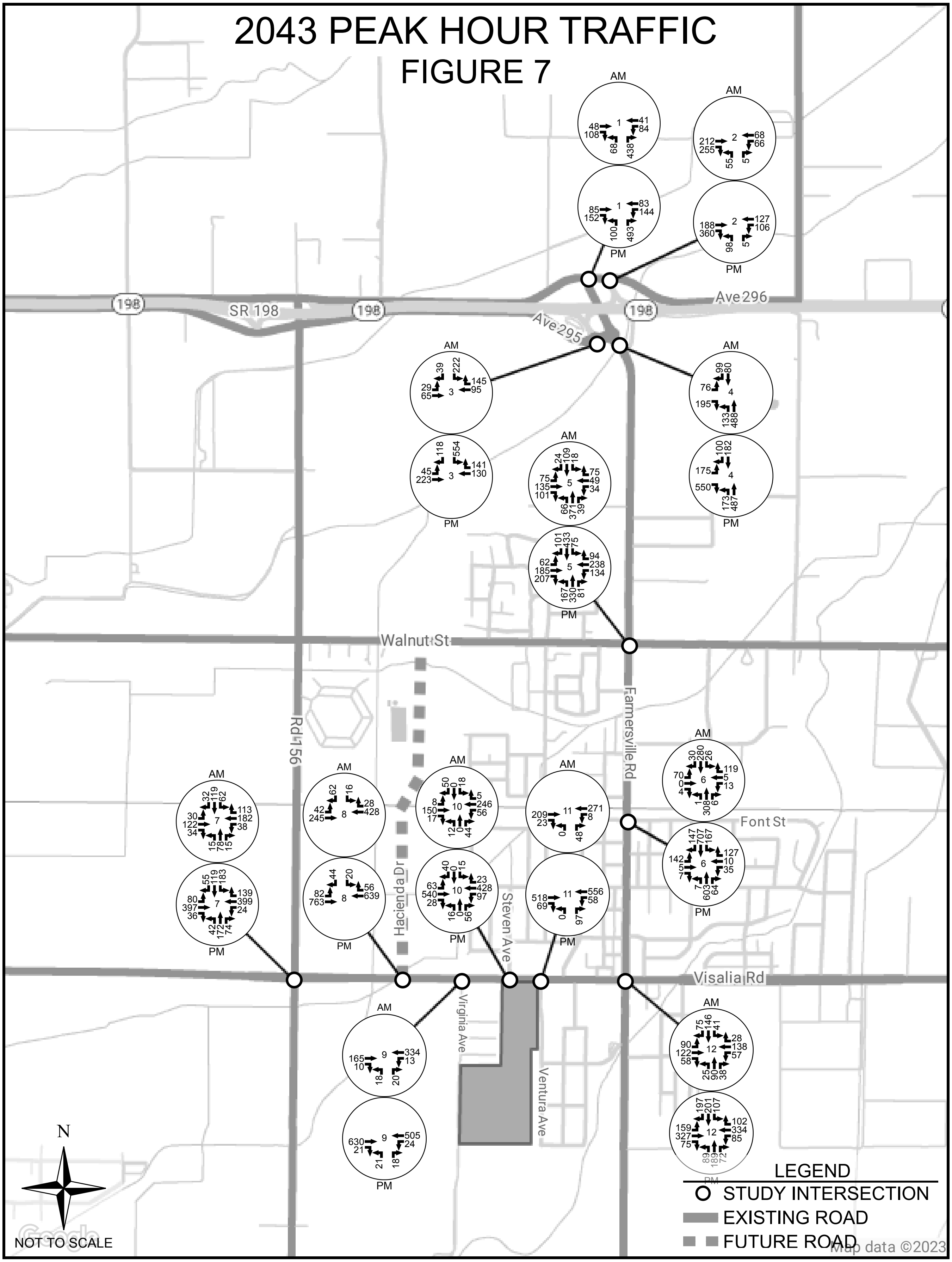
2023+PROJECT PEAK HOUR TRAFFIC
FIGURE 6



2043 PEAK HOUR TRAFFIC
FIGURE 7



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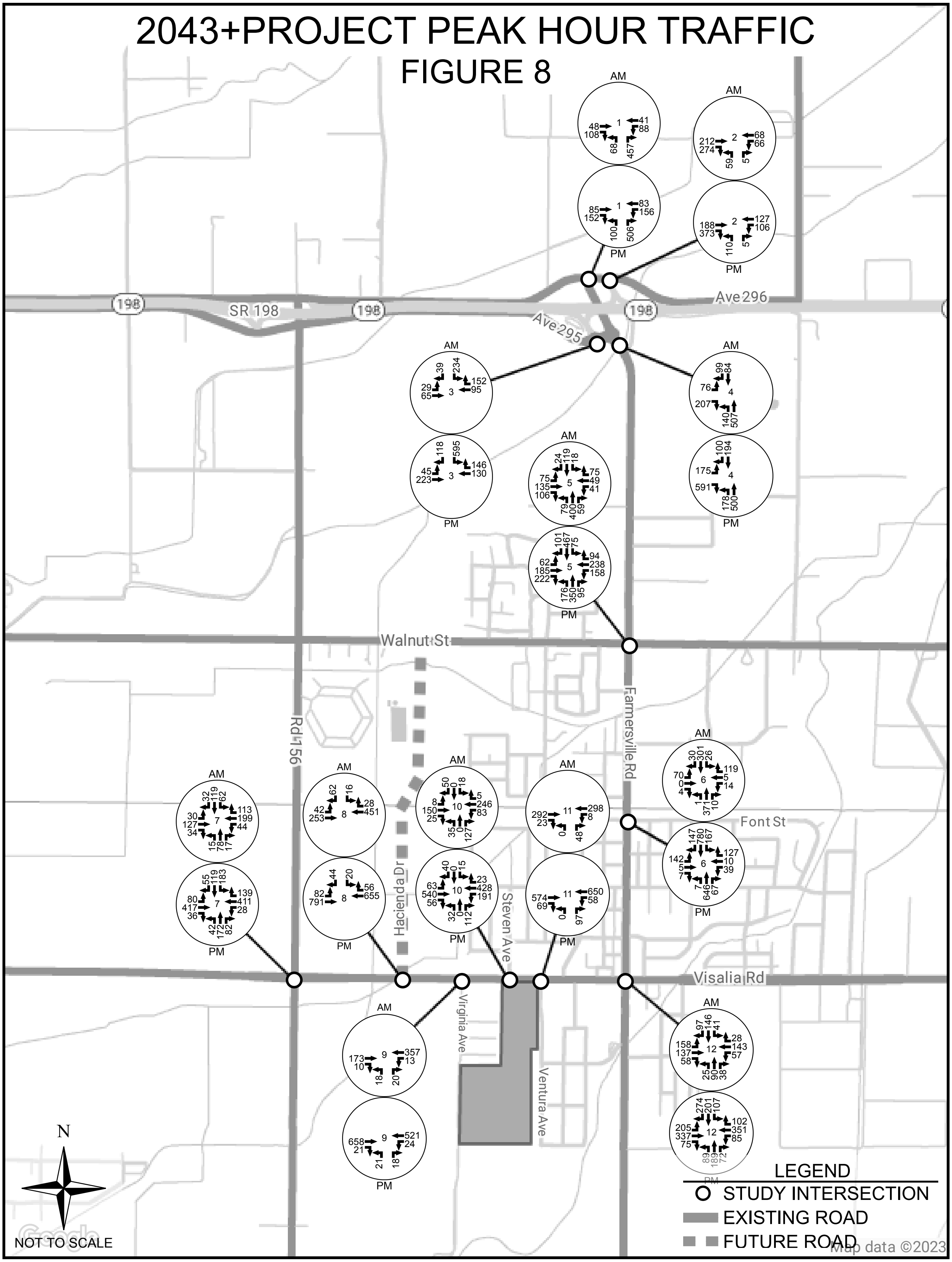
2043+PROJECT PEAK HOUR TRAFFIC
FIGURE 8



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INTERSECTION ANALYSIS

A capacity analysis of the study intersections was conducted using Synchro software from Trafficware. This software utilizes the capacity analysis methodology in the Transportation Research Board's Highway Capacity Manual 2010 (HCM 2010). The analysis was performed for each of the following traffic scenarios.

- Existing (2023)
- Existing (2023) + Project
- Future Cumulative (2043)
- Future Cumulative (2043) + Project

Level of service (LOS) criteria for unsignalized and signalized intersections, as defined in HCM 2010, are presented in the tables below. The City of Farmersville's Circulation Element designates LOS C as the minimum acceptable intersection peak hour level of service.

LEVEL OF SERVICE CRITERIA
UNSIGNALIZED INTERSECTION

Level of Service	Average Control Delay (sec/veh)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no delay
B	> 10 and ≤ 15	Short delays
C	> 15 and ≤ 25	Average delays
D	> 25 and ≤ 35	Long delays
E	> 35 and ≤ 50	Very long delays
F	> 50	Extreme delays

LEVEL OF SERVICE CRITERIA
SIGNALIZED INTERSECTIONS

Level of Service	Average Control Delay (sec/veh)	Volume-to-Capacity Ratio
A	≤ 10	< 0.60
B	> 10 and ≤ 20	0.61 - 0.70
C	> 20 and ≤ 35	0.71 - 0.80
D	> 35 and ≤ 55	0.81 - 0.90
E	> 55 and ≤ 80	0.91 - 1.00
F	> 80	> 1.00

Peak hour level of service for the study intersections is presented in Tables 3a and 3b. Intersection delay in seconds per vehicle is shown within parentheses for intersections operating below LOS C.

Table 3a
Intersection Level of Service
Weekday PM Peak Hour

#	Intersection	Control Type	2023	2023+ Project	2043	2043+ Project	2043+ Project w/Mitigation[1]
1	Farmersville Rd & Ave 296	AWSC	B	B	C	C	-
2	SR 198 EB Ramps & Ave 296	NB	B	C	C	C	-
3	SR 198 EB Ramps & Ave 295	Roundabout	A	A	A	B	-
4	Farmersville Rd & Ave 295	Roundabout	A	A	B	B	-
5	Farmersville Rd & Walnut Ave/W Walnut Ave	Signal	C	C	C	C	-
6	Farmersville Rd & Front St	AWSC	C	C	F (71.2)	F (91.2)	-
		Signal	-	-	-	-	B
7	Rd 156 & Visalia Rd	Signal	B	B	C	C	-
8	Hacienda Dr & Visalia Rd	AWSC	-	A	F (113.4)	F (124.3)	-
		Signal	-	-	-	-	C
9	Virginia Ave & Visalia Rd	NB	B	C	C	D (26.2)	-
		Signal	-	-	-	-	C
10	Steven Ave & Visalia Rd	SB	B	B	C	C	-
11	Ventura Ave & Visalia Rd	NB	C	C	C[2]	C[2]	-
12	Farmersville Rd & Visalia Rd	Signal	B	B	C	C	-

[1]See Table 6 for mitigation measures.
[2]Reconfigure intersection median in the future condition to preclude northbound left turns.

Table 3b
Intersection Level of Service
Weekday AM Peak Hour

#	Intersection	Control Type	2023	2023+ Project	2043	2043+ Project	2043+ Project w/Mitigation[1]
1	Farmersville Rd & Ave 296	AWSC	B	B	C	C	-
2	SR 198 EB Ramps & Ave 296	NB	B	B	C	C	-
3	SR 198 EB Ramps & Ave 295	Roundabout	A	A	A	A	-
4	Farmersville Rd & Ave 295	Roundabout	A	A	B	B	-
5	Farmersville Rd & Walnut Ave/W Walnut Ave	Signal	B	B	C	C	-
6	Farmersville Rd & Front St	AWSC	A	A	C	C	-
		Signal	-	-	-	-	B[2]
7	Rd 156 & Visalia Rd	Signal	B	B	B	B	-
8	Hacienda Dr & Visalia Rd	AWSC	-	A	C	C	-
		Signal	-	-	-	-	B[2]
9	Virginia Ave & Visalia Rd	NB	B	B	B	B	-
		Signal	-	-	-	-	B[2]
10	Steven Ave & Visalia Rd	SB	A	A	B	B	-
11	Ventura Ave & Visalia Rd	NB	B	B	A[3]	A[3]	-
12	Farmersville Rd & Visalia Rd	Signal	B	B	C	C	-

[1]See Table 6 for mitigation measures.
[2]Mitigation required due to PM Peak Hour.
[3]Reconfigure intersection median in the future condition to preclude northbound left turns.

TRAFFIC SIGNAL WARRANT ANALYSIS

Peak hour signal warrants were evaluated for the one unsignalized intersection within the study based on the 2014 California Manual on Uniform Traffic Control Devices (2014 CA MUTCD). Peak hour signal warrants assess delay to traffic on minor street approaches when entering or crossing a major street. Signal warrant analysis results are shown in Tables 4a and 4b.

Table 4a
Traffic Signal Warrants
Weekday PM Peak Hour

		2023			2023+Project			2043			2043+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	Farmersville Rd at Ave 296	396	162	NO	409	168	NO	599	237	YES	612	249	YES
2	SR 198 EB Ramps at Ave 296	561	64	NO	574	76	NO	844	113	NO	857	125	NO
6	Farmersville Rd at Front St	1081	123	YES	1200	127	YES	2075	182	YES	2194	186	YES
8	Hacienda Dr at Visalia Rd	-	-	-	44	0	NO	1718	64	NO	1762	64	NO
9	Virginia Ave at Visalia Rd	793	24	NO	837	24	NO	1358	39	NO	1402	39	NO
10	Steven Ave at Visalia Rd	785	41	NO	907	72	NO	1492	405	YES	1614	477	YES
11	Ventura Ave at Visalia Rd	899	72	NO	1049	72	NO	1673	97	YES	1823	97	YES

Table 4b
Traffic Signal Warrants
Weekday AM Peak Hour

		2023			2023+Project			2043			2043+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	Farmersville Rd at Ave 296	345	107	NO	364	107	NO	509	156	NO	528	156	NO
2	SR 198 EB Ramps at Ave 296	431	37	NO	450	41	NO	658	62	NO	677	66	NO
6	Farmersville Rd at Front St	393	99	NO	481	100	NO	861	142	NO	949	143	NO
8	Hacienda Dr at Visalia Rd	-	-	-	31	0	NO	842	78	NO	873	78	NO
9	Virginia Ave at Visalia Rd	341	23	NO	372	23	NO	621	38	NO	652	38	NO
10	Steven Ave at Visalia Rd	304	50	NO	339	106	NO	614	277	YES	649	383	YES
11	Ventura Ave at Visalia Rd	351	36	NO	461	36	NO	765	49	NO	875	49	NO

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered in order to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service or operate below an acceptable level of service and not meet signal warrant criteria.

ROADWAY ANALYSIS

A capacity analysis of the study roadways was conducted using Table 4 in the State of Florida Department of Transportation *Quality/Level of Service Handbook* dated June 2020 (see Appendix). The City of Farmersville Circulation Element states that the peak hour level of service for roadways shall be no lower than LOS "C" for urban areas. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2023)
- Existing (2023) + Project
- Future Cumulative (2043)
- Future Cumulative (2043) + Project

Table 5a
PM Roadway Level of Service

Street	2023 Two-Way LOS		2023+Project Two-Way LOS		2043 Two-Way LOS		2043+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Ave 296: Farmersville Rd to SR 198 WB Ramps	539	C	578	C	805	C	851	C
Ave 295: SR 198 EB Ramps Farmersville Rd	639	C	699	C	1051	C	1124	C
Visalia Rd: Rd 156 to Hacienda Dr	936	C	1005	C	1528	D	1611	C
Visalia Rd: Hacienda Dr to Virgina Ave	790	C	855	C	1478	D	1560	C
Visalia Rd: Virgina Ave to Steven Ave	796	C	861	C	1177	C	1252	C
Visalia Rd: Steven Ave to Ventura Ave	881	C	1057	C	1183	C	1366	C
Visalia Rd: Ventura Ave to Farmersville Rd	886	C	1062	C	1193	C	1337	C
Farmersville Rd: Visalia Rd to Font St	891	C	1039	C	1423	C	1585	C
Farmersville Rd: Font St Walnut St	1234	C	1384	C	1893	C	2059	C
Farversville Rd: Walnut St to Ave 295	816	C	892	C	1392	C	1500	C
Farversville Rd: Ave 295 to Ave 296	605	C	646	C	945	C	994	C

Table 5b
AM Roadway Level of Service

Street	2023 Two-Way LOS		2023+Project Two-Way LOS		2043 Two-Way LOS		2043+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Ave 296: Farmersville Rd to SR 198 WB Ramps	413	C	447	C	611	C	650	C
Ave 295: SR 198 EB Ramps Farmersville Rd	292	C	319	C	527	C	560	C
Visalia Rd: Rd 156 to Hacienda Dr	403	C	444	C	777	C	828	C
Visalia Rd: Hacienda Dr to Virgina Ave	343	C	383	C	717	C	767	C
Visalia Rd: Virgina Ave to Steven Ave	337	C	386	C	532	C	577	C
Visalia Rd: Steven Ave to Ventura Ave	365	C	487	C	530	C	656	C
Visalia Rd: Ventura Ave to Farmersville Rd	349	C	470	C	510	C	636	C
Farmersville Rd: Visalia Rd to Font St	365	C	465	C	612	C	719	C
Farmersville Rd: Font St Walnut St	528	C	627	C	833	C	940	C
Farversville Rd: Walnut St to Ave 295	480	C	535	C	896	C	961	C
Farversville Rd: Ave 295 to Ave 296	471	C	506	C	743	C	785	C

IMPROVEMENTS

Intersection improvements needed by the year 2043 to maintain or improve the operational level of service of the street system in the vicinity of the project are presented in Table 6.

Table 6
Future Intersection Improvements

#	Intersection	Total Improvements Required by 2043	Project Share
6	Farmersville Rd & Front St	Signal	14.91%
8	Hacienda Dr & Visalia Rd	Signal	2.67%
9	Virginia Ave & Visalia Rd	Signal	9.87%

Project percent share is calculated using the following formula:

$$\% \text{ Share} = \frac{\text{Project Traffic}}{(\text{Future+Project Traffic}) - \text{Existing Traffic}} \times 100\%$$

VMT ANALYSIS

An evaluation of vehicle miles traveled (VMT) for project traffic was conducted in accordance with California Environmental Quality Act (CEQA) requirements. The City of Farmersville has adopted the "County of Tulare SB 743 Guidelines", dated June 8, 2020, which contain recommendations regarding VMT assessment, significance thresholds and mitigation measures.

Analysis

Baseline VMT was determined utilizing data from the California Statewide Travel Demand Model (CSTDM). The proposed residential project is located in Traffic Analysis Zone (TAZ) 2757, which has an average VMT/capita of 11.27 miles. The proposed residential project is considered a typical project within the TAZ and therefore the project would be expected to have the same VMT per capita. There are no special considerations with the project to assume the project would produce a VMT/capita lower than the average for the TAZ. The threshold of significance for residential project VMT/capita is if the project VMT is below the average in the TAZ where the project is located. Since VMT/capita is assumed to be equal to the average for the aforementioned zone, it is anticipated that the proposed project will have a significant transportation impact prior to mitigation.

Mitigation

The Tulare County guidelines include detailed instructions for mitigation if a project has significant impacts. The guidelines state "The preferred method of VMT mitigation in Tulare County is for project applicants to provide transportation improvements that facilitate travel by walking, bicycling, or transit." In accordance with these guidelines, a survey was conducted within a half mile of the project to determine any pedestrian, bicycle or transit facilities deficiencies exist. After review, ADA compliant wheelchair ramps are proposed to be constructed.

The proposed addition of ADA compliant wheelchair ramps are located at the following locations:

- Ventura Avenue & Oakland Street (2 ramps)
- Kern Avenue & Oakland Street (1 ramp)
- Ventura Avenue & Fresno Street (2 ramps)
- Kern Avenue & Fresno Street (4 ramps)
- Shasta Avenue & Fresno Street (2 ramps)
- Ventura Avenue & Tulare Street (2 ramps)
- Kern Avenue & Tulare Street (2 ramps)

- Shasta Avenue & Tulare Street (1 ramp)

The total project cost is estimated at approximately $48,000 with a 20% contingency. The guidelines include a minimum cost for mitigation of $20 per daily trip generated by the project or 0.5% of the total construction cost of the project (not including land acquisition). As shown in Table 1, the project is anticipated to generate 2,327 daily trips, which equates to a target value of improvements of $46,540.

Pursuant to the guidelines, if a project provides mitigation which meets the minimum threshold listed above, the project can presume a 1% reduction in VMT. The assumed VMT/capita reduction is 1% of 11.27 or 0.11. The resulting VMT/capita after mitigation is 11.16 which is below the average VMT/capita in the TAZ which the project is located. After mitigation, the project will have a less than significant transportation impact.

FIGURE 9
PROPOSED VMT MITIGATION

SUMMARY AND CONCLUSIONS

The purpose of this study is to evaluate the potential traffic impacts of a proposed residential development located generally west of Farmersville Boulevard and south of Visalia Road in Farmersville, California.

All 12 study intersections currently operate at or above LOS C during peak hours prior to and with the addition of project traffic.

In 2043, it is anticipated that the intersections of Farmersville Road & Front Street, Hacienda Drive & Visalia Road, and Ventura Avenue & Visalia Road will operate below an acceptable level of service prior to the addition of project traffic. All remaining intersections operate at an acceptable level of service prior to and with the addition of project traffic. The intersections can be mitigated to acceptable levels of service with a traffic signal. The median at the intersection of Ventura Avenue & Visalia Road should be modified to preclude northbound left turns.

All roadway segments within the scope of the study currently operate above LOS C during peak hours prior to, and with the addition of project traffic in both 2023 and 2043.

Project VMT analysis showed a VMT which was equal to the existing local VMT in the area, which indicates a transportation impact under CEQA. With implementation of the mitigation measures identified above for reduction of VMT, the project will have a less than significant transportation impact.

REFERENCES

1. California Manual on Uniform Traffic Control Devices for Streets and Highways, 2014 Edition, California Department of Transportation (Caltrans)
2. City of Farmersville General Plan
3. County of Tulare SB 743 Guidelines, June 8, 2020
4. Highway Capacity Manual 2010, Transportation Research Board
5. Interactive Traffic Counts Map, Tulare County Association of Governments (TCAG)
6. Trip Generation Manual, 11th Edition, Institute of Transportation Engineers (ITE)

APPENDIX

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	74	55	31	51	294
Future Vol, veh/h	33	74	55	31	51	294
Peak Hour Factor	0.80	0.80	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	93	71	40	66	382
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	8.7	9.3	10.8
HCM LOS	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	64%
Vol Thru, %	0%	0%	31%	36%
Vol Right, %	0%	100%	69%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	294	107	86
LT Vol	51	0	0	55
Through Vol	0	0	33	31
RT Vol	0	294	74	0
Lane Flow Rate	66	382	134	112
Geometry Grp	7	7	2	2
Degree of Util (X)	0.104	0.47	0.173	0.162
Departure Headway (Hd)	5.638	4.432	4.663	5.221
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	635	809	766	685
Service Time	3.375	2.169	2.711	3.271
HCM Lane V/C Ratio	0.104	0.472	0.175	0.164
HCM Control Delay	9	11.1	8.7	9.3
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	2.5	0.6	0.6

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	174	153	51	53	33	4
Future Vol, veh/h	174	153	51	53	33	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	73	73	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	229	201	70	73	43	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	430	0	543	330
Stage 1	-	-	-	-	330	-
Stage 2	-	-	-	-	213	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1129	-	501	712
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1129	-	468	712
Mov Cap-2 Maneuver	-	-	-	-	468	-
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	770	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.1	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	468	712	-	-	1129	-
HCM Lane V/C Ratio	0.093	0.007	-	-	0.062	-
HCM Control Delay (s)	13.5	10.1	-	-	8.4	0
HCM Lane LOS	B	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	3.8
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	0
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	88	192	0
Demand Flow Rate, veh/h	90	196	0
Vehicles Circulating, veh/h	110	28	97
Vehicles Exiting, veh/h	132	172	127
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.9	0.0
Approach LOS	A	A	-

Lane	Left	Left
Designated Moves	LT	TR
Assumed Moves	LT	TR
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
Entry Flow, veh/h	90	196
Cap Entry Lane, veh/h	1233	1341
Entry HV Adj Factor	0.975	0.980
Flow Entry, veh/h	88	192
Cap Entry, veh/h	1203	1314
V/C Ratio	0.073	0.146
Control Delay, s/veh	3.6	3.9
LOS	A	A
95th %tile Queue, veh	0	1

Intersection	
Intersection Delay, s/veh	5.0
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	163	430	139
Demand Flow Rate, veh/h	166	438	142
Vehicles Circulating, veh/h	58	70	76
Vehicles Exiting, veh/h	160	154	432
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.2	6.0	3.8
Approach LOS	A	A	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.422	0.578	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	70	96	438	142
Cap Entry Lane, veh/h	1347	1347	1285	1277
Entry HV Adj Factor	0.986	0.979	0.982	0.978
Flow Entry, veh/h	69	94	430	139
Cap Entry, veh/h	1328	1319	1261	1249
V/C Ratio	0.052	0.071	0.341	0.111
Control Delay, s/veh	3.1	3.3	6.0	3.8
LOS	A	A	A	A
95th %tile Queue, veh	0	0	2	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	80	65	16	28	59	49	247	23	15	76	17
Future Volume (veh/h)	51	80	65	16	28	59	49	247	23	15	76	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	65	103	83	24	42	89	79	398	37	19	96	22
Peak Hour Factor	0.78	0.78	0.78	0.66	0.66	0.66	0.62	0.62	0.62	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	149	399	305	104	348	261	118	584	442	54	511	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.21	0.21	0.06	0.19	0.19	0.07	0.31	0.31	0.03	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.2	14.2	14.4	19.9	14.5	15.7	25.6	14.1	10.4	23.8	11.9	11.4
Ln Grp LOS	C	B	B	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h		251			155			514			137	
Approach Delay, s/veh		15.8			16.0			15.6			13.5	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	5.4	17.2	6.7	13.0	7.0	15.6	7.8	11.9
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green (Gmax), s	5.1	33.8	4.3	31.2	6.9	32.0	5.0	30.5
Max Allow Headway (MAH), s	4.1	4.0	4.1	4.2	4.1	4.1	4.1	4.3
Max Q Clear (g_c+I1), s	2.5	9.9	2.6	4.1	4.0	3.7	3.6	4.3
Green Ext Time (g_e), s	0.0	1.5	0.0	0.6	0.0	0.4	0.0	0.4
Prob of Phs Call (p_c)	0.20	1.00	0.25	0.99	0.60	1.00	0.53	0.98
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1641		1641		1641		1641	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1416		1429		1414		1406

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	19	0	24	0	79	0	65	0
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	0.5	0.0	0.6	0.0	2.0	0.0	1.6	0.0
Cycle Q Clear Time (g_c), s	0.5	0.0	0.6	0.0	2.0	0.0	1.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	54	0	104	0	118	0	149	0
V/C Ratio (X)	0.35	0.00	0.23	0.00	0.67	0.00	0.44	0.00
Avail Cap (c_a), veh/h	221	0	233	0	291	0	260	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	20.0	0.0	18.8	0.0	19.1	0.0	18.2	0.0
Incr Delay (d2), s/veh	3.8	0.0	1.1	0.0	6.5	0.0	2.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	23.8	0.0	19.9	0.0	25.6	0.0	20.2	0.0
1st-Term Q (Q1), veh/ln	0.1	0.0	0.2	0.0	0.6	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.2	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.2	0.0	0.2	0.0	0.8	0.0	0.5	0.0
%ile Storage Ratio (RQ%)	0.05	0.00	0.05	0.00	0.20	0.00	0.14	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	398	0	103	0	96	0	42
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	7.9	0.0	1.9	0.0	1.7	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	7.9	0.0	1.9	0.0	1.7	0.0	0.8
Lane Grp Cap (c), veh/h	0	584	0	399	0	511	0	348
V/C Ratio (X)	0.00	0.68	0.00	0.26	0.00	0.19	0.00	0.12
Avail Cap (c_a), veh/h	0	1521	0	1455	0	1442	0	1424
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.7	0.0	13.9	0.0	11.8	0.0	14.3
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.3	0.0	0.2	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.1	0.0	14.2	0.0	11.9	0.0	14.5
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	0.6	0.0	0.5	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.6	0.0	0.5	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	37	0	83	0	22	0	89
Grp Sat Flow (s), veh/h/ln	0	1416	0	1429	0	1414	0	1406
Q Serve Time (g_s), s	0.0	0.8	0.0	2.1	0.0	0.5	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	2.1	0.0	0.5	0.0	2.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	442	0	305	0	386	0	261
V/C Ratio (X)	0.00	0.08	0.00	0.27	0.00	0.06	0.00	0.34
Avail Cap (c_a), veh/h	0	1151	0	1112	0	1090	0	1070
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.3	0.0	13.9	0.0	11.3	0.0	15.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.5	0.0	0.1	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.4	0.0	14.4	0.0	11.4	0.0	15.7
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.5	0.0	0.1	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.5	0.0	0.1	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.23	0.00	0.03	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		15.5
HCM 6th LOS		B

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	0	3	8	4	87	1	185	3	18	165	21
Future Vol, veh/h	52	0	3	8	4	87	1	185	3	18	165	21
Peak Hour Factor	0.54	0.54	0.54	0.65	0.65	0.65	0.71	0.71	0.71	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	0	6	12	6	134	1	261	4	26	236	30
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.8	9.6	9.9	10
HCM LOS	B	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	0%	95%	67%	0%	18%	0%
Vol Thru, %	99%	97%	0%	33%	0%	82%	80%
Vol Right, %	0%	3%	5%	0%	100%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	96	55	12	87	101	104
LT Vol	1	0	52	8	0	18	0
Through Vol	93	93	0	4	0	83	83
RT Vol	0	3	3	0	87	0	21
Lane Flow Rate	132	135	102	18	134	144	148
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.208	0.211	0.18	0.033	0.203	0.229	0.226
Departure Headway (Hd)	5.678	5.65	6.375	6.498	5.453	5.734	5.5
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	633	636	563	552	659	627	655
Service Time	3.4	3.372	4.405	4.228	3.182	3.455	3.221
HCM Lane V/C Ratio	0.209	0.212	0.181	0.033	0.203	0.23	0.226
HCM Control Delay	9.9	9.9	10.8	9.5	9.6	10.2	9.8
HCM Lane LOS	A	A	B	A	A	B	A
HCM 95th-tile Q	0.8	0.8	0.7	0.1	0.8	0.9	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	88	27	28	139	91	11	56	7	50	96	26
Future Volume (veh/h)	24	88	27	28	139	91	11	56	7	50	96	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	32	116	36	42	207	136	14	70	9	62	119	32
Peak Hour Factor	0.76	0.76	0.76	0.67	0.67	0.67	0.80	0.80	0.80	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	120	268	83	315	331	218	168	327	39	235	235	57
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.20	0.15	0.19	0.31	0.27	0.23	0.23	0.20	0.23	0.23	0.20
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.8	0.0	12.0	10.6	0.0	10.5	10.0	0.0	0.0	11.1	0.0	0.0
Ln Grp LOS	B	A	B	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		184			385			93			213	
Approach Delay, s/veh		12.5			10.5			10.0			11.1	
Approach LOS		B			B			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	4	3		6	8	7
Case No		8.0	4.0	2.0		8.0	4.0	2.0
Phs Duration (G+Y+Rc), s		11.0	10.1	10.0		11.0	13.8	6.3
Change Period (Y+Rc), s		4.9	5.3	5.3		4.9	5.3	5.3
Max Green (Gmax), s		28.1	37.7	8.7		28.1	37.7	8.7
Max Allow Headway (MAH), s		4.1	4.1	4.1		4.1	4.1	4.1
Max Q Clear (g_c+I1), s		3.3	4.3	2.7		5.4	7.3	2.6
Green Ext Time (g_e), s		0.3	0.5	0.0		0.7	1.3	0.0
Prob of Phs Call (p_c)		1.00	0.99	0.30		1.00	0.99	0.24
Prob of Max Out (p_x)		0.00	0.00	0.08		0.00	0.00	0.06
Left-Turn Movement Data								
Assigned Mvmt		5		3		1		7
Mvmt Sat Flow, veh/h		154		1641		378		1641
Through Movement Data								
Assigned Mvmt		2	4			6	8	
Mvmt Sat Flow, veh/h		1448	1369			1039	1054	
Right-Turn Movement Data								
Assigned Mvmt		12	14			16	18	
Mvmt Sat Flow, veh/h		172	425			251	692	
Left Lane Group Data								
Assigned Mvmt	0	5	0	3	0	1	0	7
Lane Assignment		L+T+R		L (Prot)		L+T+R		L (Prot)

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	93	0	42	0	213	0	32
Grp Sat Flow (s), veh/h/ln	0	1774	0	1641	0	1668	0	1641
Q Serve Time (g_s), s	0.0	0.0	0.0	0.7	0.0	2.0	0.0	0.6
Cycle Q Clear Time (g_c), s	0.0	1.3	0.0	0.7	0.0	3.4	0.0	0.6
Perm LT Sat Flow (s_l), veh/h/ln	0	1256	0	0	0	1341	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	1856	0	0	0	1844	0	0
Perm LT Eff Green (g_p), s	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	3.6	0.0	0.0	0.0	5.7	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Time to First Blk (g_f), s	0.0	2.9	0.0	0.0	0.0	1.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	1.3	0.0	0.0	0.0	1.4	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.15	0.00	1.00	0.00	0.29	0.00	1.00
Lane Grp Cap (c), veh/h	0	534	0	315	0	527	0	120
V/C Ratio (X)	0.00	0.17	0.00	0.13	0.00	0.40	0.00	0.27
Avail Cap (c_a), veh/h	0	1744	0	528	0	1680	0	528
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.8	0.0	10.4	0.0	10.6	0.0	13.6
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.5	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.0	0.0	10.6	0.0	11.1	0.0	14.8
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.1	0.0	0.6	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	0.7	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.01	0.00	0.02	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	8	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	18	0
Lane Assignment			T+R				T+R	
Lanes in Grp	0	0	1	0	0	0	1	0
Grp Vol (v), veh/h	0	0	152	0	0	0	343	0
Grp Sat Flow (s), veh/h/ln	0	0	1794	0	0	0	1746	0
Q Serve Time (g_s), s	0.0	0.0	2.3	0.0	0.0	0.0	5.3	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	2.3	0.0	0.0	0.0	5.3	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	0.24	0.00	0.00	0.15	0.40	0.00
Lane Grp Cap (c), veh/h	0	0	351	0	0	0	549	0
V/C Ratio (X)	0.00	0.00	0.43	0.00	0.00	0.00	0.62	0.00
Avail Cap (c_a), veh/h	0	0	2253	0	0	0	2193	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	11.1	0.0	0.0	0.0	9.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	0.0	0.0	0.0	1.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	12.0	0.0	0.0	0.0	10.5	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.5	0.0	0.0	0.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.6	0.0	0.0	0.0	1.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	106	7	9	219	11	12
Future Vol, veh/h	106	7	9	219	11	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	8	10	249	22	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	130	0	395	126
Stage 1	-	-	-	-	126	-
Stage 2	-	-	-	-	269	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1455	-	610	924
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1455	-	606	924
Mov Cap-2 Maneuver	-	-	-	-	606	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	771	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	739	-	-	1455	-
HCM Lane V/C Ratio	0.062	-	-	0.007	-
HCM Control Delay (s)	10.2	-	-	7.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	111	0	0	183	4	0	0	0	13	0	37
Future Vol, veh/h	6	111	0	0	183	4	0	0	0	13	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	87	87	87	92	92	92	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	126	0	0	210	5	0	0	0	16	0	46

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	215	0	-	-	-	0				290	-	108
Stage 1	-	-	-	-	-	-				213	-	-
Stage 2	-	-	-	-	-	-				77	-	-
Critical Hdwy	4.14	-	-	-	-	-				6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	-	-
Follow-up Hdwy	2.22	-	-	-	-	-				3.52	-	3.32
Pot Cap-1 Maneuver	1352	-	0	0	-	-				677	0	925
Stage 1	-	-	0	0	-	-				802	0	-
Stage 2	-	-	0	0	-	-				937	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1352	-	-	-	-	-				674	0	925
Mov Cap-2 Maneuver	-	-	-	-	-	-				674	0	-
Stage 1	-	-	-	-	-	-				798	0	-
Stage 2	-	-	-	-	-	-				937	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1352	-	-	-	843
HCM Lane V/C Ratio	0.005	-	-	-	0.074
HCM Control Delay (s)	7.7	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection						
Int Delay, s/veh	1.6					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	18	6	185	20	16
Future Vol, veh/h	142	18	6	185	20	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	21	7	210	40	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	184	0	293	92
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	119	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1388	-	674	947
Stage 1	-	-	-	-	839	-
Stage 2	-	-	-	-	893	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1388	-	670	947
Mov Cap-2 Maneuver	-	-	-	-	670	-
Stage 1	-	-	-	-	839	-
Stage 2	-	-	-	-	888	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	770	-	-	1388	-
HCM Lane V/C Ratio	0.094	-	-	0.005	-
HCM Control Delay (s)	10.2	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	98	47	46	105	25	21	75	32	34	120	28
Future Volume (veh/h)	33	98	47	46	105	25	21	75	32	34	120	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	47	140	67	63	144	34	33	117	50	44	156	36
Peak Hour Factor	0.70	0.70	0.70	0.73	0.73	0.73	0.64	0.64	0.64	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	131	488	221	149	621	142	80	434	175	94	533	119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.21	0.17	0.09	0.22	0.18	0.05	0.18	0.16	0.06	0.19	0.17
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.5	11.8	12.3	16.6	11.3	11.6	19.1	12.6	12.9	19.2	12.5	12.6
Ln Grp LOS	B	B	B	B	B	B	B	B	B	B	B	B
Approach Vol, veh/h		254			241			200			236	
Approach Delay, s/veh		12.9			12.8			13.8			13.8	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	6.0	10.1	7.1	11.1	5.7	10.3	6.7	11.4
Change Period (Y+Rc), s	4.6	4.6	5.3	5.3	4.6	4.6	5.3	5.3
Max Green (Gmax), s	4.3	33.7	5.2	32.0	4.0	34.0	4.0	33.2
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	2.9	3.5	3.2	3.9	2.7	3.7	2.9	3.5
Green Ext Time (g_e), s	0.0	0.5	0.0	0.7	0.0	0.6	0.0	0.6
Prob of Phs Call (p_c)	0.34	1.00	0.45	0.98	0.27	1.00	0.36	0.99
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1641		1641		1641		1641	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2451		2359		2870		2857
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		990		1066		643		654
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	44	0	63	0	33	0	47	0
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	0.9	0.0	1.2	0.0	0.7	0.0	0.9	0.0
Cycle Q Clear Time (g_c), s	0.9	0.0	1.2	0.0	0.7	0.0	0.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	94	0	149	0	80	0	131	0
V/C Ratio (X)	0.47	0.00	0.42	0.00	0.41	0.00	0.36	0.00
Avail Cap (c_a), veh/h	235	0	312	0	221	0	254	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	15.6	0.0	14.7	0.0	15.8	0.0	14.9	0.0
Incr Delay (d2), s/veh	3.6	0.0	1.9	0.0	3.3	0.0	1.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	19.2	0.0	16.6	0.0	19.1	0.0	16.5	0.0
1st-Term Q (Q1), veh/ln	0.2	0.0	0.3	0.0	0.2	0.0	0.2	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.4	0.0	0.2	0.0	0.3	0.0
%ile Storage Ratio (RQ%)	0.05	0.00	0.05	0.00	0.04	0.00	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	83	0	103	0	95	0	88
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	0	1777
Q Serve Time (g_s), s	0.0	1.4	0.0	1.7	0.0	1.6	0.0	1.4
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	1.7	0.0	1.6	0.0	1.4
Lane Grp Cap (c), veh/h	0	315	0	368	0	330	0	386
V/C Ratio (X)	0.00	0.26	0.00	0.28	0.00	0.29	0.00	0.23
Avail Cap (c_a), veh/h	0	1782	0	1730	0	1798	0	1792
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.1	0.0	11.4	0.0	12.0	0.0	11.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.4	0.0	0.5	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.6	0.0	11.8	0.0	12.5	0.0	11.3
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.4	0.0	0.4	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.4	0.0	0.4	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	84	0	104	0	97	0	90
Grp Sat Flow (s), veh/h/ln	0	1664	0	1648	0	1736	0	1735
Q Serve Time (g_s), s	0.0	1.5	0.0	1.9	0.0	1.7	0.0	1.5
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	1.9	0.0	1.7	0.0	1.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.59	0.00	0.65	0.00	0.37	0.00	0.38
Lane Grp Cap (c), veh/h	0	295	0	341	0	322	0	377
V/C Ratio (X)	0.00	0.29	0.00	0.30	0.00	0.30	0.00	0.24
Avail Cap (c_a), veh/h	0	1668	0	1605	0	1757	0	1750
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.4	0.0	11.9	0.0	12.1	0.0	11.3
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.5	0.0	0.5	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.9	0.0	12.3	0.0	12.6	0.0	11.6
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.4	0.0	0.4	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.5	0.0	0.4	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	74	62	31	51	318
Future Vol, veh/h	33	74	62	31	51	318
Peak Hour Factor	0.80	0.80	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	93	81	40	66	413
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	8.8	9.5	11.4
HCM LOS	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	67%
Vol Thru, %	0%	0%	31%	33%
Vol Right, %	0%	100%	69%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	318	107	93
LT Vol	51	0	0	62
Through Vol	0	0	33	31
RT Vol	0	318	74	0
Lane Flow Rate	66	413	134	121
Geometry Grp	7	7	2	2
Degree of Util (X)	0.104	0.512	0.176	0.178
Departure Headway (Hd)	5.668	4.461	4.748	5.299
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	631	805	752	674
Service Time	3.41	2.204	2.804	3.357
HCM Lane V/C Ratio	0.105	0.513	0.178	0.18
HCM Control Delay	9.1	11.8	8.8	9.5
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	3	0.6	0.6

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	174	177	51	53	40	4
Future Vol, veh/h	174	177	51	53	40	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	73	73	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	229	233	70	73	53	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	462	0	559	346
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	213	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1099	-	490	697
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1099	-	458	697
Mov Cap-2 Maneuver	-	-	-	-	458	-
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	769	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.2	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	458	697	-	-	1099	-
HCM Lane V/C Ratio	0.115	0.008	-	-	0.064	-
HCM Control Delay (s)	13.9	10.2	-	-	8.5	0
HCM Lane LOS	B	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	3.9
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	0
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	88	206	0
Demand Flow Rate, veh/h	90	210	0
Vehicles Circulating, veh/h	114	28	97
Vehicles Exiting, veh/h	132	176	141
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	4.0	0.0
Approach LOS	A	A	-

Lane	Left	Left
Designated Moves	LT	TR
Assumed Moves	LT	TR
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
Entry Flow, veh/h	90	210
Cap Entry Lane, veh/h	1228	1341
Entry HV Adj Factor	0.975	0.981
Flow Entry, veh/h	88	206
Cap Entry, veh/h	1198	1316
V/C Ratio	0.073	0.157
Control Delay, s/veh	3.6	4.0
LOS	A	A
95th %tile Queue, veh	0	1

Intersection	
Intersection Delay, s/veh	5.3
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	168	473	146
Demand Flow Rate, veh/h	171	483	149
Vehicles Circulating, veh/h	65	70	90
Vehicles Exiting, veh/h	174	166	463
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.3	6.5	3.9
Approach LOS	A	A	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.409	0.591	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	70	101	483	149
Cap Entry Lane, veh/h	1339	1339	1285	1259
Entry HV Adj Factor	0.986	0.980	0.980	0.978
Flow Entry, veh/h	69	99	473	146
Cap Entry, veh/h	1319	1312	1259	1231
V/C Ratio	0.052	0.075	0.376	0.118
Control Delay, s/veh	3.1	3.3	6.5	3.9
LOS	A	A	A	A
95th %tile Queue, veh	0	0	2	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	80	66	16	28	59	52	281	25	15	87	17
Future Volume (veh/h)	51	80	66	16	28	59	52	281	25	15	87	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	65	103	85	24	42	89	84	453	40	19	110	22
Peak Hour Factor	0.78	0.78	0.78	0.66	0.66	0.66	0.62	0.62	0.62	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	144	390	298	101	340	256	124	629	477	53	549	415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.21	0.21	0.06	0.18	0.18	0.08	0.34	0.34	0.03	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.4	15.0	15.3	21.0	15.3	16.6	26.3	14.4	10.1	25.0	11.9	11.3
Ln Grp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		253			155			577			151	
Approach Delay, s/veh		16.7			17.0			15.9			13.5	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	5.4	18.9	6.7	13.2	7.3	17.0	7.9	12.1
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green (Gmax), s	5.1	34.3	4.0	31.0	7.4	32.0	4.3	30.7
Max Allow Headway (MAH), s	4.1	4.0	4.1	4.2	4.1	4.1	4.1	4.3
Max Q Clear (g_c+I1), s	2.5	11.4	2.6	4.2	4.2	4.0	3.7	4.5
Green Ext Time (g_e), s	0.0	1.8	0.0	0.6	0.0	0.4	0.0	0.4
Prob of Phs Call (p_c)	0.21	1.00	0.26	0.99	0.64	1.00	0.55	0.99
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1641		1641		1641		1641	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1417		1429		1415		1405
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	19	0	24	0	84	0	65	0
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	0.5	0.0	0.6	0.0	2.2	0.0	1.7	0.0
Cycle Q Clear Time (g_c), s	0.5	0.0	0.6	0.0	2.2	0.0	1.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	53	0	101	0	124	0	144	0
V/C Ratio (X)	0.36	0.00	0.24	0.00	0.68	0.00	0.45	0.00
Avail Cap (c_a), veh/h	211	0	211	0	296	0	222	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	21.0	0.0	19.8	0.0	20.0	0.0	19.2	0.0
Incr Delay (d2), s/veh	4.0	0.0	1.2	0.0	6.3	0.0	2.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	25.0	0.0	21.0	0.0	26.3	0.0	21.4	0.0
1st-Term Q (Q1), veh/ln	0.2	0.0	0.2	0.0	0.7	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.2	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.2	0.0	0.2	0.0	0.9	0.0	0.6	0.0
%ile Storage Ratio (RQ%)	0.05	0.00	0.05	0.00	0.22	0.00	0.15	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	453	0	103	0	110	0	42
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	9.4	0.0	2.0	0.0	2.0	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	9.4	0.0	2.0	0.0	2.0	0.0	0.8
Lane Grp Cap (c), veh/h	0	629	0	390	0	549	0	340
V/C Ratio (X)	0.00	0.72	0.00	0.26	0.00	0.20	0.00	0.12
Avail Cap (c_a), veh/h	0	1473	0	1380	0	1376	0	1367
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.9	0.0	14.7	0.0	11.8	0.0	15.2
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.4	0.0	0.2	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.4	0.0	15.0	0.0	11.9	0.0	15.3
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	0.6	0.0	0.5	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	0.7	0.0	0.6	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	40	0	85	0	22	0	89
Grp Sat Flow (s), veh/h/ln	0	1417	0	1429	0	1415	0	1405
Q Serve Time (g_s), s	0.0	0.9	0.0	2.2	0.0	0.5	0.0	2.5
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	2.2	0.0	0.5	0.0	2.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	477	0	298	0	415	0	256
V/C Ratio (X)	0.00	0.08	0.00	0.29	0.00	0.05	0.00	0.35
Avail Cap (c_a), veh/h	0	1116	0	1054	0	1041	0	1027
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.0	0.0	14.8	0.0	11.2	0.0	15.8
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.5	0.0	0.1	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.1	0.0	15.3	0.0	11.3	0.0	16.6
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.5	0.0	0.1	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.6	0.0	0.1	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.26	0.00	0.03	0.00	0.15
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	0	3	9	4	87	1	225	5	18	179	21
Future Vol, veh/h	52	0	3	9	4	87	1	225	5	18	179	21
Peak Hour Factor	0.54	0.54	0.54	0.65	0.65	0.65	0.71	0.71	0.71	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	0	6	14	6	134	1	317	7	26	256	30
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	11.1	9.9	10.5	10.3
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	0%	95%	69%	0%	17%	0%
Vol Thru, %	99%	96%	0%	31%	0%	83%	81%
Vol Right, %	0%	4%	5%	0%	100%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	118	55	13	87	108	111
LT Vol	1	0	52	9	0	18	0
Through Vol	113	113	0	4	0	90	90
RT Vol	0	5	3	0	87	0	21
Lane Flow Rate	160	165	102	20	134	154	158
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.255	0.262	0.186	0.037	0.21	0.249	0.246
Departure Headway (Hd)	5.74	5.705	6.58	6.718	5.658	5.838	5.619
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	627	631	546	533	634	616	639
Service Time	3.467	3.432	4.616	4.454	3.393	3.566	3.347
HCM Lane V/C Ratio	0.255	0.261	0.187	0.038	0.211	0.25	0.247
HCM Control Delay	10.4	10.5	11.1	9.7	9.9	10.5	10.2
HCM Lane LOS	B	B	B	A	A	B	B
HCM 95th-tile Q	1	1	0.7	0.1	0.8	1	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	97	27	40	163	91	11	56	11	50	96	26
Future Volume (veh/h)	24	97	27	40	163	91	11	56	11	50	96	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	32	128	36	60	243	136	14	70	14	62	119	32
Peak Hour Factor	0.76	0.76	0.76	0.67	0.67	0.67	0.80	0.80	0.80	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	117	280	79	335	374	209	160	305	56	229	231	56
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.20	0.16	0.20	0.33	0.29	0.22	0.22	0.19	0.22	0.22	0.19
Unsig. Movement Delay												
Ln Grp Delay, s/veh	15.4	0.0	12.4	10.8	0.0	10.6	10.5	0.0	0.0	11.6	0.0	0.0
Ln Grp LOS	B	A	B	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		196			439			98			213	
Approach Delay, s/veh		12.8			10.6			10.5			11.6	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	4	3		6	8	7
Case No		8.0	4.0	2.0		8.0	4.0	2.0
Phs Duration (G+Y+Rc), s		11.1	10.4	10.5		11.1	14.7	6.3
Change Period (Y+Rc), s		4.9	5.3	5.3		4.9	5.3	5.3
Max Green (Gmax), s		27.1	37.7	9.7		27.1	39.7	7.7
Max Allow Headway (MAH), s		4.1	4.1	4.1		4.1	4.1	4.1
Max Q Clear (g_c+l1), s		3.4	4.6	3.0		5.6	8.0	2.6
Green Ext Time (g_e), s		0.3	0.5	0.1		0.7	1.4	0.0
Prob of Phs Call (p_c)		1.00	0.99	0.41		1.00	1.00	0.25
Prob of Max Out (p_x)		0.00	0.00	0.05		0.00	0.00	0.23
Left-Turn Movement Data								
Assigned Mvmt		5		3		1		7
Mvmt Sat Flow, veh/h		145		1641		377		1641
Through Movement Data								
Assigned Mvmt		2	4			6	8	
Mvmt Sat Flow, veh/h		1369	1404			1039	1126	
Right-Turn Movement Data								
Assigned Mvmt		12	14			16	18	
Mvmt Sat Flow, veh/h		252	395			250	630	
Left Lane Group Data								
Assigned Mvmt	0	5	0	3	0	1	0	7
Lane Assignment		L+T+R		L (Prot)		L+T+R		L (Prot)

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	98	0	60	0	213	0	32
Grp Sat Flow (s), veh/h/ln	0	1766	0	1641	0	1666	0	1641
Q Serve Time (g_s), s	0.0	0.0	0.0	1.0	0.0	2.1	0.0	0.6
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	1.0	0.0	3.6	0.0	0.6
Perm LT Sat Flow (s_l), veh/h/ln	0	1256	0	0	0	1335	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	1857	0	0	0	1844	0	0
Perm LT Eff Green (g_p), s	0.0	7.1	0.0	0.0	0.0	7.1	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	3.6	0.0	0.0	0.0	5.7	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Time to First Blk (g_f), s	0.0	3.0	0.0	0.0	0.0	1.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	1.4	0.0	0.0	0.0	1.5	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.14	0.00	1.00	0.00	0.29	0.00	1.00
Lane Grp Cap (c), veh/h	0	521	0	335	0	516	0	117
V/C Ratio (X)	0.00	0.19	0.00	0.18	0.00	0.41	0.00	0.27
Avail Cap (c_a), veh/h	0	1627	0	562	0	1572	0	460
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.3	0.0	10.6	0.0	11.1	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.3	0.0	0.5	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.5	0.0	10.8	0.0	11.6	0.0	15.4
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.2	0.0	0.7	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.2	0.0	0.8	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.02	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	8	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	18	0
Lane Assignment			T+R				T+R	
Lanes in Grp	0	0	1	0	0	0	1	0
Grp Vol (v), veh/h	0	0	164	0	0	0	379	0
Grp Sat Flow (s), veh/h/ln	0	0	1799	0	0	0	1757	0
Q Serve Time (g_s), s	0.0	0.0	2.6	0.0	0.0	0.0	6.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	2.6	0.0	0.0	0.0	6.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.14	0.22	0.00	0.00	0.15	0.36	0.00
Lane Grp Cap (c), veh/h	0	0	359	0	0	0	583	0
V/C Ratio (X)	0.00	0.00	0.46	0.00	0.00	0.00	0.65	0.00
Avail Cap (c_a), veh/h	0	0	2186	0	0	0	2244	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	11.4	0.0	0.0	0.0	9.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.0	0.0	0.0	1.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	12.4	0.0	0.0	0.0	10.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.6	0.0	0.0	0.0	1.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.7	0.0	0.0	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	6	17	0	0	19
Future Vol, veh/h	6	6	17	0	0	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	7	18	0	0	21
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.2	7.1	6.5
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	0%	0%
Vol Thru, %	50%	100%	0%
Vol Right, %	0%	0%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	12	17	19
LT Vol	6	0	0
Through Vol	6	17	0
RT Vol	0	0	19
Lane Flow Rate	13	18	21
Geometry Grp	1	1	1
Degree of Util (X)	0.015	0.02	0.019
Departure Headway (Hd)	4.083	3.98	3.388
Convergence, Y/N	Yes	Yes	Yes
Cap	881	904	1058
Service Time	2.088	1.984	1.402
HCM Lane V/C Ratio	0.015	0.02	0.02
HCM Control Delay	7.2	7.1	6.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	106	7	9	219	11	12
Future Vol, veh/h	106	7	9	219	11	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	8	10	249	22	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	130	0	395	126
Stage 1	-	-	-	-	126	-
Stage 2	-	-	-	-	269	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1455	-	610	924
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1455	-	606	924
Mov Cap-2 Maneuver	-	-	-	-	606	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	771	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	739	-	-	1455	-
HCM Lane V/C Ratio	0.062	-	-	0.007	-
HCM Control Delay (s)	10.2	-	-	7.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	155	0	0	198	4	0	0	0	13	0	37
Future Vol, veh/h	6	155	0	0	198	4	0	0	0	13	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	87	87	87	92	92	92	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	176	0	0	228	5	0	0	0	16	0	46

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	233	0	-	-	-	0				333	-	117
Stage 1	-	-	-	-	-	-				231	-	-
Stage 2	-	-	-	-	-	-				102	-	-
Critical Hdwy	4.14	-	-	-	-	-				6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	-	-
Follow-up Hdwy	2.22	-	-	-	-	-				3.52	-	3.32
Pot Cap-1 Maneuver	1332	-	0	0	-	-				636	0	913
Stage 1	-	-	0	0	-	-				785	0	-
Stage 2	-	-	0	0	-	-				911	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1332	-	-	-	-	-				633	0	913
Mov Cap-2 Maneuver	-	-	-	-	-	-				633	0	-
Stage 1	-	-	-	-	-	-				781	0	-
Stage 2	-	-	-	-	-	-				911	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1332	-	-	-	819
HCM Lane V/C Ratio	0.005	-	-	-	0.076
HCM Control Delay (s)	7.7	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	186	18	6	200	20	16
Future Vol, veh/h	186	18	6	200	20	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	214	21	7	227	40	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	235	0	353	118
Stage 1	-	-	-	-	225	-
Stage 2	-	-	-	-	128	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1329	-	618	912
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	884	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1329	-	614	912
Mov Cap-2 Maneuver	-	-	-	-	614	-
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	879	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	718	-	-	1329	-
HCM Lane V/C Ratio	0.1	-	-	0.005	-
HCM Control Delay (s)	10.6	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	101	47	46	106	25	21	75	32	34	120	42
Future Volume (veh/h)	74	101	47	46	106	25	21	75	32	34	120	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	106	144	67	63	145	34	33	117	50	44	156	55
Peak Hour Factor	0.70	0.70	0.70	0.73	0.73	0.73	0.64	0.64	0.64	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	186	516	227	147	551	125	80	443	179	93	490	166
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.22	0.18	0.09	0.19	0.16	0.05	0.18	0.16	0.06	0.19	0.17
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.5	11.8	12.3	17.1	12.4	12.7	19.6	12.8	13.1	19.7	12.8	13.0
Ln Grp LOS	B	B	B	B	B	B	B	B	B	B	B	B
Approach Vol, veh/h		317			242			200			255	
Approach Delay, s/veh		13.9			13.7			14.0			14.1	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	6.0	10.3	7.1	11.6	5.7	10.6	8.0	10.8
Change Period (Y+Rc), s	4.6	4.6	5.3	5.3	4.6	4.6	5.3	5.3
Max Green (Gmax), s	4.0	33.7	4.0	33.5	4.0	33.7	4.7	32.8
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	2.9	3.5	3.3	3.9	2.7	3.9	4.1	3.6
Green Ext Time (g_e), s	0.0	0.5	0.0	0.7	0.0	0.7	0.0	0.6
Prob of Phs Call (p_c)	0.35	1.00	0.46	0.99	0.27	1.00	0.64	0.99
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1641		1641		1641		1641	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2451		2381		2590		2860

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		990		1049		876		651

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	44	0	63	0	33	0	106	0
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	0.9	0.0	1.3	0.0	0.7	0.0	2.1	0.0
Cycle Q Clear Time (g_c), s	0.9	0.0	1.3	0.0	0.7	0.0	2.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	93	0	147	0	80	0	186	0
V/C Ratio (X)	0.47	0.00	0.43	0.00	0.41	0.00	0.57	0.00
Avail Cap (c_a), veh/h	215	0	248	0	215	0	281	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	16.0	0.0	15.1	0.0	16.2	0.0	14.7	0.0
Incr Delay (d2), s/veh	3.7	0.0	2.0	0.0	3.4	0.0	2.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	19.7	0.0	17.1	0.0	19.6	0.0	17.5	0.0
1st-Term Q (Q1), veh/ln	0.2	0.0	0.3	0.0	0.2	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.4	0.0	0.3	0.0	0.7	0.0
%ile Storage Ratio (RQ%)	0.06	0.00	0.05	0.00	0.04	0.00	0.12	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	83	0	105	0	105	0	88
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	0	1777
Q Serve Time (g_s), s	0.0	1.4	0.0	1.7	0.0	1.8	0.0	1.5
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	1.7	0.0	1.8	0.0	1.5
Lane Grp Cap (c), veh/h	0	321	0	385	0	336	0	342
V/C Ratio (X)	0.00	0.26	0.00	0.27	0.00	0.31	0.00	0.26
Avail Cap (c_a), veh/h	0	1738	0	1764	0	1738	0	1728
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.3	0.0	11.4	0.0	12.3	0.0	12.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.4	0.0	0.5	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.8	0.0	11.8	0.0	12.8	0.0	12.4
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.4	0.0	0.4	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.4	0.0	0.5	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	84	0	106	0	106	0	91
Grp Sat Flow (s), veh/h/ln	0	1664	0	1653	0	1688	0	1734
Q Serve Time (g_s), s	0.0	1.5	0.0	1.9	0.0	1.9	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	1.9	0.0	1.9	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.59	0.00	0.63	0.00	0.52	0.00	0.38
Lane Grp Cap (c), veh/h	0	301	0	358	0	319	0	334
V/C Ratio (X)	0.00	0.28	0.00	0.29	0.00	0.33	0.00	0.27
Avail Cap (c_a), veh/h	0	1628	0	1641	0	1652	0	1687
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.6	0.0	11.9	0.0	12.4	0.0	12.3
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.5	0.0	0.6	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.1	0.0	12.3	0.0	13.0	0.0	12.7
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.4	0.0	0.4	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.5	0.0	0.5	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		13.9
HCM 6th LOS		B

Intersection	
Intersection Delay, s/veh	17
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	48	108	84	41	68	438
Future Vol, veh/h	48	108	84	41	68	438
Peak Hour Factor	0.80	0.80	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	135	109	53	88	569
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	10.6	11.2	20.3
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	67%
Vol Thru, %	0%	0%	31%	33%
Vol Right, %	0%	100%	69%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	438	156	125
LT Vol	68	0	0	84
Through Vol	0	0	48	41
RT Vol	0	438	108	0
Lane Flow Rate	88	569	195	162
Geometry Grp	7	7	2	2
Degree of Util (X)	0.149	0.77	0.29	0.268
Departure Headway (Hd)	6.081	4.87	5.359	5.944
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	593	745	669	604
Service Time	3.781	2.57	3.4	3.985
HCM Lane V/C Ratio	0.148	0.764	0.291	0.268
HCM Control Delay	9.8	21.9	10.6	11.2
HCM Lane LOS	A	C	B	B
HCM 95th-tile Q	0.5	7.4	1.2	1.1

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	212	255	66	68	55	5
Future Vol, veh/h	212	255	66	68	55	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	73	73	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	279	336	90	93	72	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	615	0	720	447
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	273	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	965	-	395	612
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	773	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	965	-	356	612
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	697	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.5	17.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	356	612	-	-	965	-
HCM Lane V/C Ratio	0.203	0.011	-	-	0.094	-
HCM Control Delay (s)	17.7	10.9	-	-	9.1	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	0	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	4.8
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	0
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	110	320	0
Demand Flow Rate, veh/h	113	327	0
Vehicles Circulating, veh/h	254	35	130
Vehicles Exiting, veh/h	175	332	232
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.4	4.9	0.0
Approach LOS	A	A	-

Lane	Left	Left
Designated Moves	LT	TR
Assumed Moves	LT	TR
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
Entry Flow, veh/h	113	327
Cap Entry Lane, veh/h	1065	1331
Entry HV Adj Factor	0.978	0.980
Flow Entry, veh/h	110	320
Cap Entry, veh/h	1041	1305
V/C Ratio	0.106	0.246
Control Delay, s/veh	4.4	4.9
LOS	A	A
95th %tile Queue, veh	0	1

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	301	776	199
Demand Flow Rate, veh/h	307	791	203
Vehicles Circulating, veh/h	91	86	169
Vehicles Exiting, veh/h	281	312	708
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	10.8	4.7
Approach LOS	A	B	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.280	0.720	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	86	221	791	203
Cap Entry Lane, veh/h	1307	1307	1264	1161
Entry HV Adj Factor	0.977	0.982	0.981	0.981
Flow Entry, veh/h	84	217	776	199
Cap Entry, veh/h	1277	1284	1240	1140
V/C Ratio	0.066	0.169	0.626	0.175
Control Delay, s/veh	3.3	4.2	10.8	4.7
LOS	A	A	B	A
95th %tile Queue, veh	0	1	5	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	135	101	34	49	75	66	371	39	18	109	24
Future Volume (veh/h)	75	135	101	34	49	75	66	371	39	18	109	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	96	173	129	52	74	114	106	598	63	23	138	30
Peak Hour Factor	0.78	0.78	0.78	0.66	0.66	0.66	0.62	0.62	0.62	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	168	371	283	143	341	257	154	738	560	53	623	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.10	0.20	0.20	0.09	0.18	0.18	0.09	0.39	0.39	0.03	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	26.8	20.6	8.9	25.5	19.6	21.4	29.8	17.2	3.7	31.9	13.5	12.7
Ln Grp LOS	C	C	A	C	B	C	C	B	A	C	B	B
Approach Vol, veh/h		398			240			767			191	
Approach Delay, s/veh		18.3			21.7			17.8			15.6	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	3.0	2.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	5.8	25.9	15.0	8.8	9.2	22.5	9.7	14.1
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green (Gmax), s	10.4	46.4	32.0	8.6	22.0	34.8	9.3	31.3
Max Allow Headway (MAH), s	4.1	4.0	4.2	4.1	4.1	4.1	4.1	4.3
Max Q Clear (g_c+I1), s	2.8	17.8	6.5	3.7	5.5	5.0	5.1	6.0
Green Ext Time (g_e), s	0.0	2.6	1.1	0.0	0.2	0.5	0.1	0.6
Prob of Phs Call (p_c)	0.30	1.00	1.00	0.55	0.81	1.00	0.77	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.35	0.00	0.00	0.89	0.00
Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1641			1641	1641		1641	
Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		1870	1870			1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1419	1428			1417		1405
Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

Lanes in Grp	1	0	0	1	1	0	1	0
Grp Vol (v), veh/h	23	0	0	52	106	0	96	0
Grp Sat Flow (s), veh/h/ln	1641	0	0	1641	1641	0	1641	0
Q Serve Time (g_s), s	0.8	0.0	0.0	1.7	3.5	0.0	3.1	0.0
Cycle Q Clear Time (g_c), s	0.8	0.0	0.0	1.7	3.5	0.0	3.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	53	0	0	143	154	0	168	0
V/C Ratio (X)	0.43	0.00	0.00	0.36	0.69	0.00	0.57	0.00
Avail Cap (c_a), veh/h	325	0	0	304	667	0	325	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	26.4	0.0	0.0	23.9	24.4	0.0	23.8	0.0
Incr Delay (d2), s/veh	5.5	0.0	0.0	1.6	5.4	0.0	3.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	31.9	0.0	0.0	25.5	29.8	0.0	26.8	0.0
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	0.5	1.1	0.0	1.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.2	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.3	0.0	0.0	0.6	1.4	0.0	1.1	0.0
%ile Storage Ratio (RQ%)	0.08	0.00	0.00	0.15	0.34	0.00	0.29	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	598	173	0	0	138	0	74
Grp Sat Flow (s), veh/h/ln	0	1870	1870	0	0	1870	0	1870
Q Serve Time (g_s), s	0.0	15.8	4.5	0.0	0.0	3.0	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	15.8	4.5	0.0	0.0	3.0	0.0	1.9
Lane Grp Cap (c), veh/h	0	738	371	0	0	623	0	341
V/C Ratio (X)	0.00	0.81	0.47	0.00	0.00	0.22	0.00	0.22
Avail Cap (c_a), veh/h	0	1582	1134	0	0	1192	0	1111
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.0	19.7	0.0	0.0	13.3	0.0	19.3
Incr Delay (d2), s/veh	0.0	2.2	0.9	0.0	0.0	0.2	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.2	20.6	0.0	0.0	13.5	0.0	19.6
1st-Term Q (Q1), veh/ln	0.0	4.7	1.6	0.0	0.0	0.9	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.1	1.7	0.0	0.0	1.0	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.05	0.01	0.00	0.00	0.01	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	R			R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	63	129	0	0	30	0	114
Grp Sat Flow (s), veh/h/ln	0	1419	1428	0	0	1417	0	1405
Q Serve Time (g_s), s	0.0	0.9	2.8	0.0	0.0	0.8	0.0	4.0
Cycle Q Clear Time (g_c), s	0.0	0.9	2.8	0.0	0.0	0.8	0.0	4.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	560	283	0	0	472	0	257
V/C Ratio (X)	0.00	0.11	0.46	0.00	0.00	0.06	0.00	0.44
Avail Cap (c_a), veh/h	0	1200	866	0	0	903	0	835
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.6	7.7	0.0	0.0	12.6	0.0	20.2
Incr Delay (d2), s/veh	0.0	0.1	1.1	0.0	0.0	0.1	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.7	8.9	0.0	0.0	12.7	0.0	21.4
1st-Term Q (Q1), veh/ln	0.0	0.3	1.1	0.0	0.0	0.2	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	1.2	0.0	0.0	0.2	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.06	0.56	0.00	0.00	0.05	0.00	0.28
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	0	4	13	5	119	1	308	6	26	280	30
Future Vol, veh/h	70	0	4	13	5	119	1	308	6	26	280	30
Peak Hour Factor	0.54	0.54	0.54	0.65	0.65	0.65	0.71	0.71	0.71	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	130	0	7	20	8	183	1	434	8	37	400	43
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	13.8	12.6	13.7	14
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	0%	95%	72%	0%	16%	0%
Vol Thru, %	99%	96%	0%	28%	0%	84%	82%
Vol Right, %	0%	4%	5%	0%	100%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	155	160	74	18	119	166	170
LT Vol	1	0	70	13	0	26	0
Through Vol	154	154	0	5	0	140	140
RT Vol	0	6	4	0	119	0	30
Lane Flow Rate	218	225	137	28	183	237	243
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.4	0.411	0.291	0.06	0.339	0.43	0.426
Departure Headway (Hd)	6.598	6.568	7.645	7.749	6.67	6.646	6.44
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	550	471	464	542	545	563
Service Time	4.309	4.279	5.669	5.469	4.384	4.346	4.14
HCM Lane V/C Ratio	0.398	0.409	0.291	0.06	0.338	0.435	0.432
HCM Control Delay	13.6	13.8	13.8	11	12.8	14.3	13.8
HCM Lane LOS	B	B	B	B	B	B	B
HCM 95th-tile Q	1.9	2	1.2	0.2	1.5	2.1	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	122	34	38	182	113	15	78	15	62	119	32
Future Volume (veh/h)	30	122	34	38	182	113	15	78	15	62	119	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	39	161	45	57	272	169	19	98	19	77	147	40
Peak Hour Factor	0.76	0.76	0.76	0.67	0.67	0.67	0.80	0.80	0.80	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	117	485	136	138	385	239	146	336	60	219	250	61
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.34	0.31	0.08	0.36	0.32	0.24	0.24	0.22	0.24	0.24	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.7	0.0	9.3	17.8	0.0	11.8	11.6	0.0	0.0	13.1	0.0	0.0
Ln Grp LOS	B	A	A	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		245			498			136			264	
Approach Delay, s/veh		10.6			12.5			11.6			13.1	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	8	7
Case No		8.0	2.0	4.0		8.0	4.0	2.0
Phs Duration (G+Y+Rc), s		12.8	7.1	16.5		12.8	17.0	6.6
Change Period (Y+Rc), s		4.9	5.3	5.3		4.9	5.3	5.3
Max Green (Gmax), s		24.1	12.1	38.3		24.1	44.1	6.3
Max Allow Headway (MAH), s		4.1	4.1	4.1		4.1	4.1	4.1
Max Q Clear (g_c+I1), s		4.2	3.2	5.1		7.1	10.0	2.8
Green Ext Time (g_e), s		0.4	0.1	0.7		0.8	1.8	0.0
Prob of Phs Call (p_c)		1.00	0.44	1.00		1.00	1.00	0.33
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	1.00

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		7
Mvmt Sat Flow, veh/h		137	1641			377		1641
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		1389		1406		1034	1079	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		248		393		252	671	
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	7
Lane Assignment			L+T+RL (Prot)			L+T+R		L (Prot)

Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	136	57	0	0	264	0	39
Grp Sat Flow (s), veh/h/ln	0	1774	1641	0	0	1663	0	1641
Q Serve Time (g_s), s	0.0	0.0	1.2	0.0	0.0	2.8	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	2.2	1.2	0.0	0.0	5.1	0.0	0.8
Perm LT Sat Flow (s_l), veh/h/ln	0	1215	0	0	0	1295	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	1857	0	0	0	1843	0	0
Perm LT Eff Green (g_p), s	0.0	8.8	0.0	0.0	0.0	8.8	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	3.7	0.0	0.0	0.0	6.6	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
Time to First Blk (g_f), s	0.0	3.8	0.0	0.0	0.0	1.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	2.2	0.0	0.0	0.0	1.8	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.14	1.00	0.00	0.00	0.29	0.00	1.00
Lane Grp Cap (c), veh/h	0	542	138	0	0	530	0	117
V/C Ratio (X)	0.00	0.25	0.41	0.00	0.00	0.50	0.00	0.33
Avail Cap (c_a), veh/h	0	1296	604	0	0	1245	0	343
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.4	15.8	0.0	0.0	12.4	0.0	16.1
Incr Delay (d2), s/veh	0.0	0.2	2.0	0.0	0.0	0.7	0.0	1.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.6	17.8	0.0	0.0	13.1	0.0	17.7
1st-Term Q (Q1), veh/ln	0.0	0.5	0.3	0.0	0.0	1.1	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.4	0.0	0.0	1.2	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.02	0.03	0.00	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment				T+R			T+R	
Lanes in Grp	0	0	0	1	0	0	1	0
Grp Vol (v), veh/h	0	0	0	206	0	0	441	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1800	0	0	1750	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.1	0.0	0.0	8.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.1	0.0	0.0	8.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.14	0.00	0.22	0.00	0.15	0.38	0.00
Lane Grp Cap (c), veh/h	0	0	0	620	0	0	625	0
V/C Ratio (X)	0.00	0.00	0.00	0.33	0.00	0.00	0.71	0.00
Avail Cap (c_a), veh/h	0	0	0	1958	0	0	2182	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	8.9	0.0	0.0	10.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	1.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	9.3	0.0	0.0	11.8	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	1.8	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.1
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	42	245	428	28	16	62
Future Vol, veh/h	42	245	428	28	16	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	266	465	30	17	67
Number of Lanes	0	1	1	0	1	0
Approach	EB		WB		SB	
Opposing Approach	WB		EB			
Opposing Lanes	1		1		0	
Conflicting Approach Left	SB				WB	
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right			SB		EB	
Conflicting Lanes Right	0		1		1	
HCM Control Delay	11		14.4		9.1	
HCM LOS	B		B		A	

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	21%
Vol Thru, %	85%	94%	0%
Vol Right, %	0%	6%	79%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	287	456	78
LT Vol	42	0	16
Through Vol	245	428	0
RT Vol	0	28	62
Lane Flow Rate	312	496	85
Geometry Grp	1	1	1
Degree of Util (X)	0.408	0.614	0.124
Departure Headway (Hd)	4.706	4.463	5.247
Convergence, Y/N	Yes	Yes	Yes
Cap	761	808	678
Service Time	2.752	2.503	3.316
HCM Lane V/C Ratio	0.41	0.614	0.125
HCM Control Delay	11	14.4	9.1
HCM Lane LOS	B	B	A
HCM 95th-tile Q	2	4.3	0.4

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	165	10	13	334	18	20
Future Vol, veh/h	165	10	13	334	18	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	190	11	15	380	36	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	201	0	606	196
Stage 1	-	-	-	-	196	-
Stage 2	-	-	-	-	410	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1371	-	460	845
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	670	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1371	-	455	845
Mov Cap-2 Maneuver	-	-	-	-	455	-
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	663	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	601	-	-	1371	-
HCM Lane V/C Ratio	0.126	-	-	0.011	-
HCM Control Delay (s)	11.9	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	150	17	56	246	5	12	0	44	18	0	50
Future Vol, veh/h	8	150	17	56	246	5	12	0	44	18	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	87	87	87	92	92	92	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	170	19	64	283	6	13	0	48	23	0	63

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	289	0	0	189	0	0				517	-	145
Stage 1	-	-	-	-	-	-				414	-	-
Stage 2	-	-	-	-	-	-				103	-	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	-	3.32
Pot Cap-1 Maneuver	1270	-	-	1382	-	-				488	0	876
Stage 1	-	-	-	-	-	-				635	0	-
Stage 2	-	-	-	-	-	-				910	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1270	-	-	1382	-	-				458	0	876
Mov Cap-2 Maneuver	-	-	-	-	-	-				458	0	-
Stage 1	-	-	-	-	-	-				631	0	-
Stage 2	-	-	-	-	-	-				860	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	1.4	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1270	-	-	1382	-	-	706
HCM Lane V/C Ratio	0.007	-	-	0.047	-	-	0.12
HCM Control Delay (s)	7.9	-	-	7.7	-	-	10.8
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0.4

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	209	23	8	271	0	48
Future Vol, veh/h	209	23	8	271	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	240	26	9	308	0	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	266	0	-	133
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	1295	-	0	892
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1295	-	-	892
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	892	-	-	1295	-
HCM Lane V/C Ratio	0.108	-	-	0.007	-
HCM Control Delay (s)	9.5	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	122	58	57	138	28	25	90	38	41	146	75
Future Volume (veh/h)	90	122	58	57	138	28	25	90	38	41	146	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	129	174	83	78	189	38	39	141	59	53	190	97
Peak Hour Factor	0.70	0.70	0.70	0.73	0.73	0.73	0.64	0.64	0.64	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	220	499	227	197	582	114	83	486	193	99	475	231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.21	0.18	0.12	0.20	0.16	0.05	0.20	0.18	0.06	0.21	0.19
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.3	13.6	14.1	17.1	13.9	14.2	22.0	13.7	14.0	22.2	14.0	14.4
Ln Grp LOS	B	B	B	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h		386			305			239			340	
Approach Delay, s/veh		15.3			14.8			15.2			15.5	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	8	7
Case No	2.0	4.0	4.0	2.0	2.0	4.0	4.0	2.0
Phs Duration (G+Y+Rc), s	6.3	11.7	12.3	8.7	6.0	12.0	11.7	9.2
Change Period (Y+Rc), s	4.6	4.6	5.3	5.3	4.6	4.6	5.3	5.3
Max Green (Gmax), s	6.4	33.7	44.3	12.8	5.6	34.5	32.4	24.7
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	3.2	4.0	4.6	3.7	2.9	5.0	4.2	4.9
Green Ext Time (g_e), s	0.0	0.7	0.9	0.1	0.0	1.0	0.7	0.4
Prob of Phs Call (p_c)	0.44	1.00	1.00	0.57	0.34	1.00	1.00	0.75
Prob of Max Out (p_x)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1			3	5			7
Mvmt Sat Flow, veh/h	1641			1641	1641			1641
Through Movement Data								
Assigned Mvmt		2	4			6	8	
Mvmt Sat Flow, veh/h		2464	2356			2299	2947	
Right-Turn Movement Data								
Assigned Mvmt		12	14			16	18	
Mvmt Sat Flow, veh/h		980	1069			1118	579	
Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	0	7
Lane Assignment	L (Prot)			L (Prot)	L (Prot)			L (Prot)

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	53	0	0	78	39	0	0	129
Grp Sat Flow (s), veh/h/ln	1641	0	0	1641	1641	0	0	1641
Q Serve Time (g_s), s	1.2	0.0	0.0	1.7	0.9	0.0	0.0	2.9
Cycle Q Clear Time (g_c), s	1.2	0.0	0.0	1.7	0.9	0.0	0.0	2.9
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	99	0	0	197	83	0	0	220
V/C Ratio (X)	0.54	0.00	0.00	0.40	0.47	0.00	0.00	0.59
Avail Cap (c_a), veh/h	295	0	0	594	261	0	0	1095
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	17.8	0.0	0.0	15.8	18.0	0.0	0.0	15.8
Incr Delay (d2), s/veh	4.5	0.0	0.0	1.3	4.0	0.0	0.0	2.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	22.2	0.0	0.0	17.1	22.0	0.0	0.0	18.3
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	0.4	0.2	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	0.5	0.3	0.0	0.0	0.9
%ile Storage Ratio (RQ%)	0.08	0.00	0.00	0.06	0.06	0.00	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	8	0
Lane Assignment		T	T			T	T	
Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	100	129	0	0	145	112	0
Grp Sat Flow (s), veh/h/ln	0	1777	1777	0	0	1777	1777	0
Q Serve Time (g_s), s	0.0	1.9	2.4	0.0	0.0	2.7	2.1	0.0
Cycle Q Clear Time (g_c), s	0.0	1.9	2.4	0.0	0.0	2.7	2.1	0.0
Lane Grp Cap (c), veh/h	0	350	376	0	0	367	351	0
V/C Ratio (X)	0.00	0.28	0.34	0.00	0.00	0.39	0.32	0.00
Avail Cap (c_a), veh/h	0	1565	2080	0	0	1601	1537	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	13.3	13.0	0.0	0.0	13.3	13.4	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.5	0.0	0.0	0.7	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.7	13.6	0.0	0.0	14.0	13.9	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.6	0.0	0.0	0.7	0.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.7	0.0	0.0	0.8	0.6	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	18	0
Lane Assignment		T+R	T+R			T+R	T+R	
Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	100	128	0	0	142	115	0
Grp Sat Flow (s), veh/h/ln	0	1667	1649	0	0	1640	1750	0
Q Serve Time (g_s), s	0.0	2.0	2.6	0.0	0.0	3.0	2.2	0.0
Cycle Q Clear Time (g_c), s	0.0	2.0	2.6	0.0	0.0	3.0	2.2	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.59	0.65	0.00	0.00	0.68	0.33	0.00
Lane Grp Cap (c), veh/h	0	329	349	0	0	339	346	0
V/C Ratio (X)	0.00	0.31	0.37	0.00	0.00	0.42	0.33	0.00
Avail Cap (c_a), veh/h	0	1468	1930	0	0	1477	1514	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	13.5	13.5	0.0	0.0	13.6	13.6	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.6	0.0	0.0	0.8	0.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.0	14.1	0.0	0.0	14.4	14.2	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.6	0.0	0.0	0.7	0.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.7	0.0	0.0	0.8	0.6	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	48	108	88	41	68	457
Future Vol, veh/h	48	108	88	41	68	457
Peak Hour Factor	0.80	0.80	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	135	114	53	88	594
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	10.8	11.4	22.9
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	68%
Vol Thru, %	0%	0%	31%	32%
Vol Right, %	0%	100%	69%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	457	156	129
LT Vol	68	0	0	88
Through Vol	0	0	48	41
RT Vol	0	457	108	0
Lane Flow Rate	88	594	195	168
Geometry Grp	7	7	2	2
Degree of Util (X)	0.15	0.808	0.295	0.28
Departure Headway (Hd)	6.111	4.9	5.437	6.014
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	591	742	659	596
Service Time	3.811	2.6	3.481	4.061
HCM Lane V/C Ratio	0.149	0.801	0.296	0.282
HCM Control Delay	9.9	24.8	10.8	11.4
HCM Lane LOS	A	C	B	B
HCM 95th-tile Q	0.5	8.5	1.2	1.1

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	212	274	66	68	59	5
Future Vol, veh/h	212	274	66	68	59	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	73	73	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	279	361	90	93	78	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	640	0	733	460
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	273	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	944	-	388	601
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	773	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	944	-	349	601
Mov Cap-2 Maneuver	-	-	-	-	349	-
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	695	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.5	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	349	601	-	-	944	-
HCM Lane V/C Ratio	0.222	0.011	-	-	0.096	-
HCM Control Delay (s)	18.2	11.1	-	-	9.2	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	0	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	4.8
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	0
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	110	330	0
Demand Flow Rate, veh/h	113	337	0
Vehicles Circulating, veh/h	268	35	130
Vehicles Exiting, veh/h	175	346	242
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.5	5.0	0.0
Approach LOS	A	A	-

Lane	Left	Left
Designated Moves	LT	TR
Assumed Moves	LT	TR
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
Entry Flow, veh/h	113	337
Cap Entry Lane, veh/h	1050	1331
Entry HV Adj Factor	0.978	0.981
Flow Entry, veh/h	110	330
Cap Entry, veh/h	1026	1306
V/C Ratio	0.108	0.253
Control Delay, s/veh	4.5	5.0
LOS	A	A
95th %tile Queue, veh	0	1

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	314	809	203
Demand Flow Rate, veh/h	321	825	207
Vehicles Circulating, veh/h	95	86	178
Vehicles Exiting, veh/h	290	330	733
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.1	11.4	4.8
Approach LOS	A	B	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.268	0.732	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	86	235	825	207
Cap Entry Lane, veh/h	1302	1302	1264	1151
Entry HV Adj Factor	0.977	0.979	0.981	0.981
Flow Entry, veh/h	84	230	809	203
Cap Entry, veh/h	1272	1275	1240	1129
V/C Ratio	0.066	0.180	0.653	0.180
Control Delay, s/veh	3.4	4.3	11.4	4.8
LOS	A	A	B	A
95th %tile Queue, veh	0	1	5	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	135	106	41	49	75	79	400	59	18	119	24
Future Volume (veh/h)	75	135	106	41	49	75	79	400	59	18	119	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	96	173	136	62	74	114	127	645	95	23	151	30
Peak Hour Factor	0.78	0.78	0.78	0.66	0.66	0.66	0.62	0.62	0.62	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	166	363	277	140	334	251	181	778	590	52	631	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.10	0.19	0.19	0.09	0.18	0.18	0.11	0.42	0.42	0.03	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.3	21.9	9.5	27.7	20.9	22.8	30.0	17.6	3.8	33.7	14.2	13.2
Ln Grp LOS	C	C	A	C	C	C	C	B	A	C	B	B
Approach Vol, veh/h		405			250			867			204	
Approach Delay, s/veh		19.3			23.4			17.9			16.2	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	3.0	2.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	5.8	28.4	15.4	9.0	10.5	23.8	9.9	14.5
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green (Gmax), s	9.4	47.4	32.3	7.3	24.1	32.7	8.3	31.3
Max Allow Headway (MAH), s	4.1	4.0	4.2	4.1	4.1	4.1	4.1	4.3
Max Q Clear (g_c+I1), s	2.8	20.0	6.8	4.1	6.4	5.4	5.3	6.3
Green Ext Time (g_e), s	0.0	3.0	1.1	0.0	0.3	0.6	0.1	0.6
Prob of Phs Call (p_c)	0.31	1.00	1.00	0.64	0.87	1.00	0.79	1.00
Prob of Max Out (p_x)	0.02	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1641			1641	1641		1641	
Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		1870	1870			1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1420	1428			1417		1405
Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

Lanes in Grp	1	0	0	1	1	0	1	0
Grp Vol (v), veh/h	23	0	0	62	127	0	96	0
Grp Sat Flow (s), veh/h/ln	1641	0	0	1641	1641	0	1641	0
Q Serve Time (g_s), s	0.8	0.0	0.0	2.1	4.4	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	0.8	0.0	0.0	2.1	4.4	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	52	0	0	140	181	0	166	0
V/C Ratio (X)	0.44	0.00	0.00	0.44	0.70	0.00	0.58	0.00
Avail Cap (c_a), veh/h	280	0	0	252	692	0	280	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	27.9	0.0	0.0	25.5	25.1	0.0	25.1	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.0	2.2	4.9	0.0	3.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	33.7	0.0	0.0	27.7	30.0	0.0	28.3	0.0
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	0.7	1.4	0.0	1.1	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.2	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.4	0.0	0.0	0.8	1.7	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.09	0.00	0.00	0.19	0.43	0.00	0.31	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	645	173	0	0	151	0	74
Grp Sat Flow (s), veh/h/ln	0	1870	1870	0	0	1870	0	1870
Q Serve Time (g_s), s	0.0	18.0	4.8	0.0	0.0	3.4	0.0	2.0
Cycle Q Clear Time (g_c), s	0.0	18.0	4.8	0.0	0.0	3.4	0.0	2.0
Lane Grp Cap (c), veh/h	0	778	363	0	0	631	0	334
V/C Ratio (X)	0.00	0.83	0.48	0.00	0.00	0.24	0.00	0.22
Avail Cap (c_a), veh/h	0	1533	1086	0	0	1063	0	1054
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.3	21.0	0.0	0.0	14.0	0.0	20.6
Incr Delay (d2), s/veh	0.0	2.4	1.0	0.0	0.0	0.2	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.6	21.9	0.0	0.0	14.2	0.0	20.9
1st-Term Q (Q1), veh/ln	0.0	5.4	1.7	0.0	0.0	1.1	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.9	1.8	0.0	0.0	1.1	0.0	0.8
%ile Storage Ratio (RQ%)	0.00	0.06	0.01	0.00	0.00	0.01	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	R			R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	95	136	0	0	30	0	114
Grp Sat Flow (s), veh/h/ln	0	1420	1428	0	0	1417	0	1405
Q Serve Time (g_s), s	0.0	1.4	3.1	0.0	0.0	0.8	0.0	4.3
Cycle Q Clear Time (g_c), s	0.0	1.4	3.1	0.0	0.0	0.8	0.0	4.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	590	277	0	0	478	0	251
V/C Ratio (X)	0.00	0.16	0.49	0.00	0.00	0.06	0.00	0.45
Avail Cap (c_a), veh/h	0	1163	829	0	0	805	0	791
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.7	8.1	0.0	0.0	13.1	0.0	21.5
Incr Delay (d2), s/veh	0.0	0.1	1.3	0.0	0.0	0.1	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.8	9.5	0.0	0.0	13.2	0.0	22.8
1st-Term Q (Q1), veh/ln	0.0	0.5	1.3	0.0	0.0	0.2	0.0	1.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	1.4	0.0	0.0	0.2	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	0.09	0.64	0.00	0.00	0.05	0.00	0.30
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		18.8
HCM 6th LOS		B

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	0	4	14	5	119	1	371	10	26	301	30
Future Vol, veh/h	70	0	4	14	5	119	1	371	10	26	301	30
Peak Hour Factor	0.54	0.54	0.54	0.65	0.65	0.65	0.71	0.71	0.71	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	130	0	7	22	8	183	1	523	14	37	430	43
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	14.5	13.2	16	15.5
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	0%	95%	74%	0%	15%	0%
Vol Thru, %	99%	95%	0%	26%	0%	85%	83%
Vol Right, %	0%	5%	5%	0%	100%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	187	196	74	19	119	177	181
LT Vol	1	0	70	14	0	26	0
Through Vol	186	186	0	5	0	151	151
RT Vol	0	10	4	0	119	0	30
Lane Flow Rate	263	275	137	29	183	252	258
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.491	0.511	0.303	0.066	0.355	0.479	0.476
Departure Headway (Hd)	6.723	6.684	7.967	8.076	6.98	6.836	6.642
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	536	540	451	444	516	527	544
Service Time	4.462	4.422	6.012	5.818	4.721	4.574	4.38
HCM Lane V/C Ratio	0.491	0.509	0.304	0.065	0.355	0.478	0.474
HCM Control Delay	15.8	16.2	14.5	11.4	13.5	15.7	15.3
HCM Lane LOS	C	C	B	B	B	C	C
HCM 95th-tile Q	2.7	2.9	1.3	0.2	1.6	2.6	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	127	34	44	199	113	15	78	17	62	119	32
Future Volume (veh/h)	30	127	34	44	199	113	15	78	17	62	119	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	39	167	45	66	297	169	19	98	21	77	147	40
Peak Hour Factor	0.76	0.76	0.76	0.67	0.67	0.67	0.80	0.80	0.80	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	116	498	134	144	412	235	142	328	65	215	248	60
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.35	0.32	0.09	0.37	0.33	0.24	0.24	0.22	0.24	0.24	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.2	0.0	9.3	18.4	0.0	11.9	12.0	0.0	0.0	13.5	0.0	0.0
Ln Grp LOS	B	A	A	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		251			532			138			264	
Approach Delay, s/veh		10.7			12.7			12.0			13.5	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	8	7
Case No		8.0	2.0	4.0		8.0	4.0	2.0
Phs Duration (G+Y+Rc), s		12.9	7.3	17.1		12.9	17.7	6.6
Change Period (Y+Rc), s		4.9	5.3	5.3		4.9	5.3	5.3
Max Green (Gmax), s		24.1	12.7	37.7		24.1	44.2	6.2
Max Allow Headway (MAH), s		4.1	4.1	4.1		4.1	4.1	4.1
Max Q Clear (g_c+I1), s		4.3	3.4	5.3		7.2	10.6	2.8
Green Ext Time (g_e), s		0.4	0.1	0.7		0.8	1.9	0.0
Prob of Phs Call (p_c)		1.00	0.50	1.00		1.00	1.00	0.33
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	1.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1		7
Mvmt Sat Flow, veh/h		135	1641			378		1641
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		1368		1419		1034	1119	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		270		382		252	637	
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	7
Lane Assignment			L+T+RL (Prot)			L+T+R		L (Prot)

Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	138	66	0	0	264	0	39
Grp Sat Flow (s), veh/h/ln	0	1773	1641	0	0	1664	0	1641
Q Serve Time (g_s), s	0.0	0.0	1.4	0.0	0.0	2.9	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	2.3	1.4	0.0	0.0	5.2	0.0	0.8
Perm LT Sat Flow (s_l), veh/h/ln	0	1215	0	0	0	1293	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	1858	0	0	0	1843	0	0
Perm LT Eff Green (g_p), s	0.0	8.9	0.0	0.0	0.0	8.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	3.7	0.0	0.0	0.0	6.6	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
Time to First Blk (g_f), s	0.0	3.9	0.0	0.0	0.0	1.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	2.3	0.0	0.0	0.0	1.8	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.14	1.00	0.00	0.00	0.29	0.00	1.00
Lane Grp Cap (c), veh/h	0	534	144	0	0	523	0	116
V/C Ratio (X)	0.00	0.26	0.46	0.00	0.00	0.50	0.00	0.34
Avail Cap (c_a), veh/h	0	1263	616	0	0	1215	0	330
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.7	16.2	0.0	0.0	12.8	0.0	16.5
Incr Delay (d2), s/veh	0.0	0.3	2.2	0.0	0.0	0.8	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.0	18.4	0.0	0.0	13.5	0.0	18.2
1st-Term Q (Q1), veh/ln	0.0	0.6	0.4	0.0	0.0	1.2	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.5	0.0	0.0	1.3	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.02	0.04	0.00	0.00	0.03	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment				T+R			T+R	
Lanes in Grp	0	0	0	1	0	0	1	0
Grp Vol (v), veh/h	0	0	0	212	0	0	466	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1802	0	0	1756	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.3	0.0	0.0	8.6	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.3	0.0	0.0	8.6	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.15	0.00	0.21	0.00	0.15	0.36	0.00
Lane Grp Cap (c), veh/h	0	0	0	632	0	0	647	0
V/C Ratio (X)	0.00	0.00	0.00	0.34	0.00	0.00	0.72	0.00
Avail Cap (c_a), veh/h	0	0	0	1884	0	0	2142	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.0	0.0	0.0	10.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	1.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	9.3	0.0	0.0	11.9	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		12.4
HCM 6th LOS		B

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	42	253	451	28	16	62
Future Vol, veh/h	42	253	451	28	16	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	275	490	30	17	67
Number of Lanes	0	1	1	0	1	0
Approach	EB		WB		SB	
Opposing Approach	WB		EB			
Opposing Lanes	1		1		0	
Conflicting Approach Left	SB				WB	
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right			SB		EB	
Conflicting Lanes Right	0		1		1	
HCM Control Delay	11.2		15.4		9.2	
HCM LOS	B		C		A	

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	0%	21%
Vol Thru, %	86%	94%	0%
Vol Right, %	0%	6%	79%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	295	479	78
LT Vol	42	0	16
Through Vol	253	451	0
RT Vol	0	28	62
Lane Flow Rate	321	521	85
Geometry Grp	1	1	1
Degree of Util (X)	0.422	0.648	0.125
Departure Headway (Hd)	4.737	4.48	5.319
Convergence, Y/N	Yes	Yes	Yes
Cap	757	807	669
Service Time	2.783	2.519	3.394
HCM Lane V/C Ratio	0.424	0.646	0.127
HCM Control Delay	11.2	15.4	9.2
HCM Lane LOS	B	C	A
HCM 95th-tile Q	2.1	4.9	0.4

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	173	10	13	357	18	20
Future Vol, veh/h	173	10	13	357	18	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	199	11	15	406	36	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	210	0	641	205
Stage 1	-	-	-	-	205	-
Stage 2	-	-	-	-	436	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1361	-	439	836
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	652	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1361	-	434	836
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	645	-

Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		12.1	
HCM LOS					B	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	581	-	-	1361	-
HCM Lane V/C Ratio	0.131	-	-	0.011	-
HCM Control Delay (s)	12.1	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection												
Int Delay, s/veh	2.6											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱					↰		
Traffic Vol, veh/h	8	150	25	83	246	5	35	0	127	18	0	50
Future Vol, veh/h	8	150	25	83	246	5	35	0	127	18	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	87	87	87	92	92	92	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	170	28	95	283	6	38	0	138	23	0	63

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	289	0	0	198	0	0				579	-	145
Stage 1	-	-	-	-	-	-				476	-	-
Stage 2	-	-	-	-	-	-				103	-	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	-	3.32
Pot Cap-1 Maneuver	1270	-	-	1372	-	-				446	0	876
Stage 1	-	-	-	-	-	-				591	0	-
Stage 2	-	-	-	-	-	-				910	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1270	-	-	1372	-	-				406	0	876
Mov Cap-2 Maneuver	-	-	-	-	-	-				406	0	-
Stage 1	-	-	-	-	-	-				587	0	-
Stage 2	-	-	-	-	-	-				834	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	1.9	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1270	-	-	1372	-	-	671
HCM Lane V/C Ratio	0.007	-	-	0.07	-	-	0.127
HCM Control Delay (s)	7.9	-	-	7.8	-	-	11.1
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	0.2	-	-	0.4

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	292	23	8	298	0	48
Future Vol, veh/h	292	23	8	298	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	336	26	9	339	0	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	362	0	-	181
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	1193	-	0	831
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1193	-	-	831
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	831	-	-	1193	-
HCM Lane V/C Ratio	0.116	-	-	0.008	-
HCM Control Delay (s)	9.9	-	-	8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	137	58	57	143	28	25	90	38	41	146	97
Future Volume (veh/h)	158	137	58	57	143	28	25	90	38	41	146	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	226	196	83	78	196	38	39	141	59	53	190	126
Peak Hour Factor	0.70	0.70	0.70	0.73	0.73	0.73	0.64	0.64	0.64	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	337	500	203	307	552	105	78	484	193	93	427	267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.20	0.18	0.19	0.19	0.16	0.05	0.20	0.18	0.06	0.21	0.19
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.8	16.1	16.7	16.0	16.6	16.8	25.7	15.8	16.1	26.2	16.5	17.0
Ln Grp LOS	B	B	B	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h		505			312			239			369	
Approach Delay, s/veh		17.5			16.5			17.6			18.1	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	8	7
Case No	2.0	4.0	4.0	2.0	2.0	4.0	4.0	2.0
Phs Duration (G+Y+Rc), s	6.5	12.8	13.2	12.4	6.1	13.2	12.4	13.2
Change Period (Y+Rc), s	4.6	4.6	5.3	5.3	4.6	4.6	5.3	5.3
Max Green (Gmax), s	5.4	33.7	48.1	13.0	4.0	35.1	32.4	28.7
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	3.4	4.3	5.3	3.8	3.0	5.9	4.7	7.7
Green Ext Time (g_e), s	0.0	0.7	1.0	0.1	0.0	1.1	0.8	0.7
Prob of Phs Call (p_c)	0.48	1.00	1.00	0.62	0.39	1.00	1.00	0.94
Prob of Max Out (p_x)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1			3	5			7
Mvmt Sat Flow, veh/h	1641			1641	1641			1641
Through Movement Data								
Assigned Mvmt		2	4			6	8	
Mvmt Sat Flow, veh/h		2464	2447			2078	2967	
Right-Turn Movement Data								
Assigned Mvmt		12	14			16	18	
Mvmt Sat Flow, veh/h		980	994			1301	563	
Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	0	7
Lane Assignment	L (Prot)			L (Prot)	L (Prot)			L (Prot)

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	53	0	0	78	39	0	0	226
Grp Sat Flow (s), veh/h/ln	1641	0	0	1641	1641	0	0	1641
Q Serve Time (g_s), s	1.4	0.0	0.0	1.8	1.0	0.0	0.0	5.7
Cycle Q Clear Time (g_c), s	1.4	0.0	0.0	1.8	1.0	0.0	0.0	5.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	93	0	0	307	78	0	0	337
V/C Ratio (X)	0.57	0.00	0.00	0.25	0.50	0.00	0.00	0.67
Avail Cap (c_a), veh/h	219	0	0	522	168	0	0	1094
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	20.7	0.0	0.0	15.6	20.9	0.0	0.0	16.5
Incr Delay (d2), s/veh	5.5	0.0	0.0	0.4	4.8	0.0	0.0	2.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	26.2	0.0	0.0	16.0	25.7	0.0	0.0	18.8
1st-Term Q (Q1), veh/ln	0.4	0.0	0.0	0.5	0.3	0.0	0.0	1.6
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	0.5	0.4	0.0	0.0	1.8
%ile Storage Ratio (RQ%)	0.10	0.00	0.00	0.07	0.07	0.00	0.00	0.33
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	8	0
Lane Assignment		T	T			T	T	
Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	100	140	0	0	161	116	0
Grp Sat Flow (s), veh/h/ln	0	1777	1777	0	0	1777	1777	0
Q Serve Time (g_s), s	0.0	2.1	3.1	0.0	0.0	3.6	2.5	0.0
Cycle Q Clear Time (g_c), s	0.0	2.1	3.1	0.0	0.0	3.6	2.5	0.0
Lane Grp Cap (c), veh/h	0	349	363	0	0	365	331	0
V/C Ratio (X)	0.00	0.29	0.39	0.00	0.00	0.44	0.35	0.00
Avail Cap (c_a), veh/h	0	1355	1952	0	0	1411	1332	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	15.4	15.5	0.0	0.0	15.6	15.9	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.0	0.0	0.8	0.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.8	16.1	0.0	0.0	16.5	16.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.9	0.0	0.0	1.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.7	1.0	0.0	0.0	1.1	0.8	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.02	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	18	0
Lane Assignment		T+R	T+R			T+R	T+R	
Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	100	139	0	0	155	118	0
Grp Sat Flow (s), veh/h/ln	0	1667	1664	0	0	1602	1753	0
Q Serve Time (g_s), s	0.0	2.3	3.3	0.0	0.0	3.9	2.7	0.0
Cycle Q Clear Time (g_c), s	0.0	2.3	3.3	0.0	0.0	3.9	2.7	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.59	0.60	0.00	0.00	0.81	0.32	0.00
Lane Grp Cap (c), veh/h	0	328	340	0	0	329	326	0
V/C Ratio (X)	0.00	0.31	0.41	0.00	0.00	0.47	0.36	0.00
Avail Cap (c_a), veh/h	0	1272	1828	0	0	1272	1313	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	15.6	15.9	0.0	0.0	15.9	16.2	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.8	0.0	0.0	1.1	0.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.1	16.7	0.0	0.0	17.0	16.8	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.9	0.0	0.0	1.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.7	1.0	0.0	0.0	1.1	0.9	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.02	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	0	4	19	5	119	1	498	17	26	377	30
Future Volume (veh/h)	70	0	4	19	5	119	1	498	17	26	377	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	130	0	7	29	8	183	1	701	24	37	539	43
Peak Hour Factor	0.54	0.54	0.54	0.65	0.65	0.65	0.71	0.71	0.71	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	233	2	8	272	67	223	40	2564	88	155	2182	173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.00	0.15	0.15	0.15	0.15	0.75	0.75	0.75	0.75	0.75	0.75
Unsig. Movement Delay												
Ln Grp Delay, s/veh	39.8	0.0	0.0	33.1	0.0	44.1	4.1	0.0	4.2	3.9	0.0	4.0
Ln Grp LOS	D	A	A	C	A	D	A	A	A	A	A	A
Approach Vol, veh/h		137			220			726			619	
Approach Delay, s/veh		39.8			42.3			4.1			4.0	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		8.0		8.0		8.0		7.0
Phs Duration (G+Y+Rc), s		71.7		18.3		71.7		18.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		50.5		30.5		50.5		30.5
Max Allow Headway (MAH), s		4.0		4.5		4.2		4.3
Max Q Clear (g_c+I1), s		7.9		13.4		7.2		12.9
Green Ext Time (g_e), s		2.7		0.4		2.5		0.7
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		0		1014		147		1308
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3433		14		2922		436
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		117		55		231		1460
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L+T		L+T+R		L+T		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	382	0	137	0	310	0	37
Grp Sat Flow (s), veh/h/ln	0	1870	0	1083	0	1640	0	1744
Q Serve Time (g_s), s	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.8	0.0	11.4	0.0	4.5	0.0	1.6
Perm LT Sat Flow (s_l), veh/h/ln	0	846	0	1211	0	741	0	1431
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	1795
Perm LT Eff Green (g_p), s	0.0	67.2	0.0	13.8	0.0	67.2	0.0	13.8
Perm LT Serve Time (g_u), s	0.0	62.0	0.0	12.2	0.0	61.4	0.0	2.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	61.1	0.0	0.1	0.0	14.6	0.0	0.6
Serve Time pre Blk (g_fs), s	0.0	5.8	0.0	0.1	0.0	4.5	0.0	0.6
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	0.95	0.00	0.12	0.00	0.78
Lane Grp Cap (c), veh/h	0	1437	0	244	0	1270	0	338
V/C Ratio (X)	0.00	0.27	0.00	0.56	0.00	0.24	0.00	0.11
Avail Cap (c_a), veh/h	0	1437	0	468	0	1270	0	615
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.6	0.0	37.7	0.0	3.5	0.0	32.9
Incr Delay (d2), s/veh	0.0	0.5	0.0	2.0	0.0	0.5	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.1	0.0	39.8	0.0	3.9	0.0	33.1
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	2.7	0.0	0.9	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.3	0.0	2.9	0.0	1.0	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.06	0.00	0.01	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		R
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	344	0	0	0	309	0	183
Grp Sat Flow (s), veh/h/ln	0	1681	0	0	0	1660	0	1460
Q Serve Time (g_s), s	0.0	5.9	0.0	0.0	0.0	5.2	0.0	10.9
Cycle Q Clear Time (g_c), s	0.0	5.9	0.0	0.0	0.0	5.2	0.0	10.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	0.05	0.00	0.14	0.00	1.00
Lane Grp Cap (c), veh/h	0	1256	0	0	0	1240	0	223
V/C Ratio (X)	0.00	0.27	0.00	0.00	0.00	0.25	0.00	0.82
Avail Cap (c_a), veh/h	0	1256	0	0	0	1240	0	495
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.6	0.0	0.0	0.0	3.5	0.0	36.9
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.5	0.0	7.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.2	0.0	0.0	0.0	4.0	0.0	44.1
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	0.0	0.0	0.9	0.0	3.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.2	0.0	0.0	0.0	1.0	0.0	4.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.01	0.00	2.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	42	290	513	28	16	62
Future Volume (veh/h)	42	290	513	28	16	62
Number	7	4	8	18	1	16
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	315	558	30	17	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	68	374	630	34	176	694
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.36	0.36	0.72	0.72	0.54	0.54
Unsig. Movement Delay						
Ln Grp Delay, s/veh	30.1	0.0	0.0	14.4	10.2	0.0
Ln Grp LOS	C	A	A	B	B	A
Approach Vol, veh/h		361	588		85	
Approach Delay, s/veh		30.1	14.4		10.2	
Approach LOS		C	B		B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6			4				8
Case No	12.0			8.0				8.0
Phs Duration (G+Y+Rc), s	52.8			37.2				37.2
Change Period (Y+Rc), s	4.5			4.5				4.5
Max Green (Gmax), s	22.5			58.5				58.5
Max Allow Headway (MAH), s	4.3			4.2				4.0
Max Q Clear (g_c+I1), s	4.3			31.7				24.2
Green Ext Time (g_e), s	0.2			1.4				2.4
Prob of Phs Call (p_c)	1.00			1.00				1.00
Prob of Max Out (p_x)	0.00			0.00				0.00
Left-Turn Movement Data								
Assigned Mvmt	1			7				3
Mvmt Sat Flow, veh/h	325			63				0
Through Movement Data								
Assigned Mvmt	6			4				8
Mvmt Sat Flow, veh/h	19			1045				1759
Right-Turn Movement Data								
Assigned Mvmt	16			14				18
Mvmt Sat Flow, veh/h	1280			0				95
Left Lane Group Data								
Assigned Mvmt	1	0	0	7	0	0	0	3
Lane Assignment	L+T+R			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	85	0	0	361	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1624	0	0	1107	0	0	0	0
Q Serve Time (g_s), s	2.3	0.0	0.0	7.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.3	0.0	0.0	29.7	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	841	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	32.2	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	10.6	0.0	0.0	0.0	32.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	10.6	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.20	0.00	0.00	0.13	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	880	0	0	441	0	0	0	0
V/C Ratio (X)	0.10	0.00	0.00	0.82	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	880	0	0	912	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	10.0	0.0	0.0	26.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	3.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.2	0.0	0.0	30.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.7	0.0	0.0	5.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	5.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.11	0.00	0.00	0.18	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment								T+R
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	588
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1853
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	664
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1205
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		19.5
HCM 6th LOS		B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	210	10	13	419	18	20
Future Volume (veh/h)	210	10	13	419	18	20
Number	4	14	3	8	5	12
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1723	1723	1870	1723	1723
Adj Flow Rate, veh/h	241	11	15	476	36	40
Peak Hour Factor	0.87	0.87	0.88	0.88	0.50	0.50
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence			Yes		Yes	
Cap, veh/h	508	23	295	536	442	492
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.57	0.57	0.29	0.29	0.61	0.61
Unsig. Movement Delay						
Ln Grp Delay, s/veh	0.0	15.8	28.8	36.0	7.2	0.0
Ln Grp LOS	A	B	C	D	A	A
Approach Vol, veh/h	252			491	77	
Approach Delay, s/veh	15.8			35.8	7.2	
Approach LOS	B			D	A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Case No		12.0		8.0				6.0
Phs Duration (G+Y+Rc), s		59.7		30.3				30.3
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green (Gmax), s		25.5		55.5				55.5
Max Allow Headway (MAH), s		4.2		4.0				4.0
Max Q Clear (g_c+I1), s		3.8		9.2				23.9
Green Ext Time (g_e), s		0.2		0.9				1.9
Prob of Phs Call (p_c)		1.00		1.00				1.00
Prob of Max Out (p_x)		0.00		0.00				0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7				3
Mvmt Sat Flow, veh/h		721		0				1039
Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		20		1775				1870
Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		801		81				0
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	0	0	3
Lane Assignment		L+T+R						L

Lanes in Grp	0	1	0	0	0	0	0	1
Grp Vol (v), veh/h	0	77	0	0	0	0	0	15
Grp Sat Flow (s), veh/h/ln	0	1542	0	0	0	0	0	1039
Q Serve Time (g_s), s	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear Time (g_c), s	0.0	1.8	0.0	0.0	0.0	0.0	0.0	8.2
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	1039
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.8
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Time to First Blk (g_f), s	0.0	0.0	0.0	25.8	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.47	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	946	0	0	0	0	0	295
V/C Ratio (X)	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.05
Avail Cap (c_a), veh/h	0	946	0	0	0	0	0	638
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.1	0.0	0.0	0.0	0.0	0.0	28.7
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.2	0.0	0.0	0.0	0.0	0.0	28.8
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment								T
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	476
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.9
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	536
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1153
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment				T+R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	252	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1856	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.52	0.00	0.04	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	532	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1144	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	15.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	15.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	58	104	93	63	75	321
Future Vol, veh/h	58	104	93	63	75	321
Peak Hour Factor	0.82	0.82	0.86	0.86	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	127	108	73	82	349
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	9.6	10.3	11.2
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	60%
Vol Thru, %	0%	0%	36%	40%
Vol Right, %	0%	100%	64%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	321	162	156
LT Vol	75	0	0	93
Through Vol	0	0	58	63
RT Vol	0	321	104	0
Lane Flow Rate	82	349	198	181
Geometry Grp	7	7	2	2
Degree of Util (X)	0.135	0.46	0.263	0.267
Departure Headway (Hd)	5.959	4.749	4.794	5.298
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	598	754	743	673
Service Time	3.731	2.521	2.869	3.375
HCM Lane V/C Ratio	0.137	0.463	0.266	0.269
HCM Control Delay	9.7	11.6	9.6	10.3
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.5	2.4	1.1	1.1

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	154	227	82	98	60	4
Future Vol, veh/h	154	227	82	98	60	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	83	83	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	159	234	99	118	73	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	393	0	592	276
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	316	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1166	-	469	763
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1166	-	426	763
Mov Cap-2 Maneuver	-	-	-	-	426	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	672	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.8	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	426	763	-	-	1166	-
HCM Lane V/C Ratio	0.172	0.006	-	-	0.085	-
HCM Control Delay (s)	15.2	9.7	-	-	8.4	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	0.6	0	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	5.2
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	0
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	237	195	0
Demand Flow Rate, veh/h	242	198	0
Vehicles Circulating, veh/h	330	41	123
Vehicles Exiting, veh/h	223	531	116
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.2	4.0	0.0
Approach LOS	A	A	-

Lane	Left	Left
Designated Moves	LT	TR
Assumed Moves	LT	TR
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
Entry Flow, veh/h	242	198
Cap Entry Lane, veh/h	986	1323
Entry HV Adj Factor	0.980	0.983
Flow Entry, veh/h	237	195
Cap Entry, veh/h	965	1301
V/C Ratio	0.246	0.150
Control Delay, s/veh	6.2	4.0
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	534	428	241
Demand Flow Rate, veh/h	544	437	246
Vehicles Circulating, veh/h	151	163	100
Vehicles Exiting, veh/h	195	532	500
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.3	6.9	4.7
Approach LOS	A	A	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.300	0.700	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	163	381	437	246
Cap Entry Lane, veh/h	1238	1238	1169	1246
Entry HV Adj Factor	0.982	0.982	0.980	0.980
Flow Entry, veh/h	160	374	428	241
Cap Entry, veh/h	1215	1215	1145	1221
V/C Ratio	0.132	0.308	0.374	0.197
Control Delay, s/veh	4.1	5.8	6.9	4.7
LOS	A	A	A	A
95th %tile Queue, veh	0	1	2	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	110	136	87	145	74	132	216	56	64	340	81
Future Volume (veh/h)	41	110	136	87	145	74	132	216	56	64	340	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	46	122	151	96	159	81	152	248	64	69	366	87
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.87	0.87	0.87	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	111	389	297	167	453	342	204	635	481	101	517	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.21	0.21	0.10	0.24	0.24	0.12	0.34	0.34	0.06	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	27.2	19.0	20.8	28.3	17.8	17.2	33.6	14.3	12.8	33.2	19.8	15.7
Ln Grp LOS	C	B	C	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		319			336			464			522	
Approach Delay, s/veh		21.0			20.7			20.4			20.9	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	7.4	22.8	9.6	15.5	10.9	19.3	7.7	17.4
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green (Gmax), s	6.3	33.1	4.0	31.0	7.4	32.0	4.0	31.0
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.2	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	4.3	7.6	5.1	7.2	6.9	11.7	3.5	5.9
Green Ext Time (g_e), s	0.0	1.1	0.0	1.0	0.0	1.6	0.0	0.8
Prob of Phs Call (p_c)	0.65	1.00	0.77	1.00	0.90	1.00	0.51	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1641		1641		1641		1641	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1417		1429		1414		1412
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	69	0	96	0	152	0	46	0
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	2.3	0.0	3.1	0.0	4.9	0.0	1.5	0.0
Cycle Q Clear Time (g_c), s	2.3	0.0	3.1	0.0	4.9	0.0	1.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	101	0	167	0	204	0	111	0
V/C Ratio (X)	0.68	0.00	0.58	0.00	0.74	0.00	0.42	0.00
Avail Cap (c_a), veh/h	205	0	169	0	237	0	169	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	25.4	0.0	23.7	0.0	23.4	0.0	24.8	0.0
Incr Delay (d2), s/veh	7.8	0.0	4.6	0.0	10.2	0.0	2.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	33.2	0.0	28.3	0.0	33.6	0.0	27.2	0.0
1st-Term Q (Q1), veh/ln	0.7	0.0	1.0	0.0	1.6	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.2	0.0	0.6	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.0	0.0	1.2	0.0	2.2	0.0	0.6	0.0
%ile Storage Ratio (RQ%)	0.23	0.00	0.29	0.00	0.55	0.00	0.14	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	248	0	122	0	366	0	159
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	5.6	0.0	3.1	0.0	9.7	0.0	3.9
Cycle Q Clear Time (g_c), s	0.0	5.6	0.0	3.1	0.0	9.7	0.0	3.9
Lane Grp Cap (c), veh/h	0	635	0	389	0	517	0	453
V/C Ratio (X)	0.00	0.39	0.00	0.31	0.00	0.71	0.00	0.35
Avail Cap (c_a), veh/h	0	1139	0	1106	0	1102	0	1106
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.9	0.0	18.6	0.0	18.0	0.0	17.4
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.5	0.0	1.8	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	19.0	0.0	19.8	0.0	17.8
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	1.1	0.0	3.2	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	1.1	0.0	3.5	0.0	1.4
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.02	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	64	0	151	0	87	0	81
Grp Sat Flow (s), veh/h/ln	0	1417	0	1429	0	1414	0	1412
Q Serve Time (g_s), s	0.0	1.7	0.0	5.2	0.0	2.6	0.0	2.6
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	5.2	0.0	2.6	0.0	2.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	481	0	297	0	391	0	342
V/C Ratio (X)	0.00	0.13	0.00	0.51	0.00	0.22	0.00	0.24
Avail Cap (c_a), veh/h	0	863	0	845	0	833	0	834
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.6	0.0	19.4	0.0	15.4	0.0	16.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	1.3	0.0	0.3	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.8	0.0	20.8	0.0	15.7	0.0	17.2
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	1.4	0.0	0.7	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	1.5	0.0	0.7	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.69	0.00	0.17	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	4	5	23	7	93	5	376	41	116	441	102
Future Vol, veh/h	106	4	5	23	7	93	5	376	41	116	441	102
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.86	0.86	0.86	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	119	4	6	25	8	102	6	437	48	123	469	109
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	13.9	11.6	14.4	18.5
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	92%	77%	0%	34%	0%
Vol Thru, %	97%	82%	3%	23%	0%	66%	68%
Vol Right, %	0%	18%	4%	0%	100%	0%	32%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	193	229	115	30	93	337	323
LT Vol	5	0	106	23	0	116	0
Through Vol	188	188	4	7	0	221	221
RT Vol	0	41	5	0	93	0	102
Lane Flow Rate	224	266	129	33	102	358	343
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.408	0.473	0.281	0.075	0.202	0.64	0.575
Departure Headway (Hd)	6.64	6.499	7.839	8.227	7.114	6.432	6.031
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	545	559	461	438	507	558	594
Service Time	4.34	4.199	5.839	5.932	4.819	4.224	3.823
HCM Lane V/C Ratio	0.411	0.476	0.28	0.075	0.201	0.642	0.577
HCM Control Delay	13.8	14.9	13.9	11.6	11.6	20.1	16.8
HCM Lane LOS	B	B	B	B	B	C	C
HCM 95th-tile Q	2	2.5	1.1	0.2	0.7	4.5	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	303	29	16	311	112	30	123	47	147	96	44
Future Volume (veh/h)	64	303	29	16	311	112	30	123	47	147	96	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	69	326	31	17	327	118	38	156	59	158	103	47
Peak Hour Factor	0.93	0.93	0.93	0.95	0.95	0.95	0.79	0.79	0.79	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	142	639	61	82	451	163	149	316	110	334	161	64
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.38	0.35	0.05	0.34	0.31	0.27	0.27	0.24	0.27	0.27	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.8	0.0	10.1	19.3	0.0	13.2	13.0	0.0	0.0	13.8	0.0	0.0
Ln Grp LOS	B	A	B	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		426			462			253			308	
Approach Delay, s/veh		11.6			13.4			13.0			13.8	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	8	7
Case No		8.0	2.0	4.0		8.0	4.0	2.0
Phs Duration (G+Y+Rc), s		14.6	6.0	19.1		14.6	17.6	7.4
Change Period (Y+Rc), s		4.9	5.3	5.3		4.9	5.3	5.3
Max Green (Gmax), s		34.1	4.1	36.3		34.1	32.7	7.7
Max Allow Headway (MAH), s		4.1	4.1	4.0		4.3	4.1	4.1
Max Q Clear (g_c+I1), s		6.7	2.4	7.9		8.4	10.7	3.6
Green Ext Time (g_e), s		0.9	0.0	1.3		1.2	1.6	0.0
Prob of Phs Call (p_c)		1.00	0.17	1.00		1.00	1.00	0.53
Prob of Max Out (p_x)		0.00	1.00	0.00		0.00	0.00	0.97
Left-Turn Movement Data								
Assigned Mvmt		5	3			1		7
Mvmt Sat Flow, veh/h		166	1641			735		1641
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		1185		1682		605	1312	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		411		160		241	473	
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	7
Lane Assignment			L+T+RL (Prot)			L+T+R		L (Prot)

Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	253	17	0	0	308	0	69
Grp Sat Flow (s), veh/h/ln	0	1762	1641	0	0	1582	0	1641
Q Serve Time (g_s), s	0.0	0.0	0.4	0.0	0.0	1.7	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	4.7	0.4	0.0	0.0	6.4	0.0	1.6
Perm LT Sat Flow (s_l), veh/h/ln	0	1257	0	0	0	1185	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	1856	0	0	0	1803	0	0
Perm LT Eff Green (g_p), s	0.0	10.6	0.0	0.0	0.0	10.6	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	4.1	0.0	0.0	0.0	5.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Time to First Blk (g_f), s	0.0	3.9	0.0	0.0	0.0	0.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	3.9	0.0	0.0	0.0	0.9	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.15	1.00	0.00	0.00	0.51	0.00	1.00
Lane Grp Cap (c), veh/h	0	575	82	0	0	560	0	142
V/C Ratio (X)	0.00	0.44	0.21	0.00	0.00	0.55	0.00	0.49
Avail Cap (c_a), veh/h	0	1606	224	0	0	1422	0	373
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.5	18.1	0.0	0.0	12.9	0.0	17.3
Incr Delay (d2), s/veh	0.0	0.5	1.2	0.0	0.0	0.8	0.0	2.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.0	19.3	0.0	0.0	13.8	0.0	19.8
1st-Term Q (Q1), veh/ln	0.0	1.2	0.1	0.0	0.0	1.5	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.3	0.1	0.0	0.0	1.6	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.04	0.01	0.00	0.00	0.04	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment				T+R			T+R	
Lanes in Grp	0	0	0	1	0	0	1	0
Grp Vol (v), veh/h	0	0	0	357	0	0	445	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1842	0	0	1785	0
Q Serve Time (g_s), s	0.0	0.0	0.0	5.9	0.0	0.0	8.7	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	5.9	0.0	0.0	8.7	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.23	0.00	0.09	0.00	0.15	0.27	0.00
Lane Grp Cap (c), veh/h	0	0	0	700	0	0	613	0
V/C Ratio (X)	0.00	0.00	0.00	0.51	0.00	0.00	0.73	0.00
Avail Cap (c_a), veh/h	0	0	0	1748	0	0	1532	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.5	0.0	0.0	11.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	1.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	10.1	0.0	0.0	13.2	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	0.0	1.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.4	0.0	0.0	2.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.00	0.00	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	430	15	16	332	13	11
Future Vol, veh/h	430	15	16	332	13	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	86	86	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	448	16	19	386	19	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	464	0	880	456
Stage 1	-	-	-	-	456	-
Stage 2	-	-	-	-	424	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1097	-	318	604
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1097	-	313	604
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	649	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	402	-	-	1097	-
HCM Lane V/C Ratio	0.087	-	-	0.017	-
HCM Control Delay (s)	14.8	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	401	0	2	318	17	0	0	0	11	0	30
Future Vol, veh/h	47	401	0	2	318	17	0	0	0	11	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	436	0	2	346	18	0	0	0	16	0	43

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	364	0	-	436	0	0				679	-	182
Stage 1	-	-	-	-	-	-				359	-	-
Stage 2	-	-	-	-	-	-				320	-	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	-	3.32
Pot Cap-1 Maneuver	1191	-	0	1120	-	-				385	0	829
Stage 1	-	-	0	-	-	-				677	0	-
Stage 2	-	-	0	-	-	-				709	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1191	-	-	1120	-	-				368	0	829
Mov Cap-2 Maneuver	-	-	-	-	-	-				368	0	-
Stage 1	-	-	-	-	-	-				648	0	-
Stage 2	-	-	-	-	-	-				708	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1191	-	1120	-	-	620
HCM Lane V/C Ratio	0.043	-	0.002	-	-	0.096
HCM Control Delay (s)	8.2	-	8.2	-	-	11.4
HCM Lane LOS	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	398	54	45	398	27	45
Future Vol, veh/h	398	54	45	398	27	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	86	86	48	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	632	86	52	463	56	94

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	718	0	1011	359
Stage 1	-	-	-	-	675	-
Stage 2	-	-	-	-	336	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	879	-	236	638
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	879	-	217	638
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	640	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	21.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	879	-
HCM Lane V/C Ratio	0.407	-	-	0.06	-
HCM Control Delay (s)	21.3	-	-	9.4	0.3
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.9	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	273	60	68	260	92	74	158	60	88	165	117
Future Volume (veh/h)	84	273	60	68	260	92	74	158	60	88	165	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	101	329	72	72	277	98	79	168	64	98	183	130
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	171	746	161	139	613	211	117	493	180	141	423	283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.10	0.26	0.23	0.08	0.24	0.21	0.07	0.19	0.18	0.09	0.21	0.20
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.4	13.8	14.1	21.6	14.5	15.0	25.9	15.3	15.6	25.1	15.4	15.9
Ln Grp LOS	C		B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		502			447			311			411	
Approach Delay, s/veh		15.5			15.9			18.1			17.9	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	7.7	12.3	7.6	14.9	7.0	12.9	8.4	14.1
Change Period (Y+Rc), s	4.6	4.6	5.3	5.3	4.6	4.6	5.3	5.3
Max Green (Gmax), s	4.4	33.7	4.0	33.1	4.0	34.1	4.0	33.1
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.1	4.1	4.2	4.1	4.1
Max Q Clear (g_c+I1), s	4.5	4.6	3.8	6.1	4.0	5.6	4.5	6.1
Green Ext Time (g_e), s	0.0	0.8	0.0	1.4	0.0	1.1	0.0	1.3
Prob of Phs Call (p_c)	0.69	1.00	0.57	1.00	0.61	1.00	0.70	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1641		1641		1641		1641	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2531		2895		2020		2576
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		924		624		1349		888
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	98	0	72	0	79	0	101	0
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	2.5	0.0	1.8	0.0	2.0	0.0	2.5	0.0
Cycle Q Clear Time (g_c), s	2.5	0.0	1.8	0.0	2.0	0.0	2.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	141	0	139	0	117	0	171	0
V/C Ratio (X)	0.69	0.00	0.52	0.00	0.68	0.00	0.59	0.00
Avail Cap (c_a), veh/h	193	0	205	0	178	0	205	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	18.9	0.0	18.6	0.0	19.2	0.0	18.1	0.0
Incr Delay (d2), s/veh	6.3	0.0	3.0	0.0	6.6	0.0	3.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	25.1	0.0	21.6	0.0	25.9	0.0	21.4	0.0
1st-Term Q (Q1), veh/ln	0.7	0.0	0.5	0.0	0.6	0.0	0.7	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.1	0.0	0.2	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.9	0.0	0.6	0.0	0.8	0.0	0.9	0.0
%ile Storage Ratio (RQ%)	0.16	0.00	0.08	0.00	0.13	0.00	0.16	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	116	0	200	0	160	0	189
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	0	1777
Q Serve Time (g_s), s	0.0	2.4	0.0	4.0	0.0	3.3	0.0	3.8
Cycle Q Clear Time (g_c), s	0.0	2.4	0.0	4.0	0.0	3.3	0.0	3.8
Lane Grp Cap (c), veh/h	0	346	0	458	0	372	0	423
V/C Ratio (X)	0.00	0.33	0.00	0.44	0.00	0.43	0.00	0.45
Avail Cap (c_a), veh/h	0	1436	0	1440	0	1452	0	1440
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.7	0.0	13.2	0.0	14.6	0.0	13.8
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.7	0.0	0.8	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.3	0.0	13.8	0.0	15.4	0.0	14.5
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	1.1	0.0	0.9	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.2	0.0	1.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	116	0	201	0	153	0	186
Grp Sat Flow (s), veh/h/ln	0	1679	0	1743	0	1592	0	1688
Q Serve Time (g_s), s	0.0	2.6	0.0	4.1	0.0	3.6	0.0	4.1
Cycle Q Clear Time (g_c), s	0.0	2.6	0.0	4.1	0.0	3.6	0.0	4.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.55	0.00	0.36	0.00	0.85	0.00	0.53
Lane Grp Cap (c), veh/h	0	327	0	449	0	334	0	402
V/C Ratio (X)	0.00	0.36	0.00	0.45	0.00	0.46	0.00	0.46
Avail Cap (c_a), veh/h	0	1356	0	1412	0	1301	0	1368
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.9	0.0	13.4	0.0	14.9	0.0	14.2
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.7	0.0	1.0	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.6	0.0	14.1	0.0	15.9	0.0	15.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	1.1	0.0	0.9	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.2	0.0	1.0	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		16.7
HCM 6th LOS		B

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	58	104	105	63	75	334
Future Vol, veh/h	58	104	105	63	75	334
Peak Hour Factor	0.82	0.82	0.86	0.86	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	127	122	73	82	363
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	9.7	10.6	11.6
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	62%
Vol Thru, %	0%	0%	36%	38%
Vol Right, %	0%	100%	64%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	334	162	168
LT Vol	75	0	0	105
Through Vol	0	0	58	63
RT Vol	0	334	104	0
Lane Flow Rate	82	363	198	195
Geometry Grp	7	7	2	2
Degree of Util (X)	0.136	0.483	0.266	0.29
Departure Headway (Hd)	6	4.791	4.852	5.342
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	593	744	733	666
Service Time	3.777	2.567	2.936	3.427
HCM Lane V/C Ratio	0.138	0.488	0.27	0.293
HCM Control Delay	9.7	12	9.7	10.6
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.5	2.7	1.1	1.2

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	154	240	82	98	72	4
Future Vol, veh/h	154	240	82	98	72	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	83	83	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	159	247	99	118	88	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	406	0	599	283
Stage 1	-	-	-	-	283	-
Stage 2	-	-	-	-	316	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1153	-	465	756
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1153	-	422	756
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	671	-

Approach	EB		WB		NB	
HCM Control Delay, s	0		3.8		15.5	
HCM LOS					C	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	422	756	-	-	1153	-
HCM Lane V/C Ratio	0.208	0.006	-	-	0.086	-
HCM Control Delay (s)	15.8	9.8	-	-	8.4	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	0.8	0	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	5.4
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	0
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	237	201	0
Demand Flow Rate, veh/h	242	205	0
Vehicles Circulating, veh/h	375	41	123
Vehicles Exiting, veh/h	223	576	123
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.5	4.1	0.0
Approach LOS	A	A	-

Lane	Left	Left
Designated Moves	LT	TR
Assumed Moves	LT	TR
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
Entry Flow, veh/h	242	205
Cap Entry Lane, veh/h	941	1323
Entry HV Adj Factor	0.980	0.978
Flow Entry, veh/h	237	201
Cap Entry, veh/h	922	1295
V/C Ratio	0.257	0.155
Control Delay, s/veh	6.5	4.1
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Intersection Delay, s/veh	6.0
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	580	450	256
Demand Flow Rate, veh/h	591	459	261
Vehicles Circulating, veh/h	166	163	106
Vehicles Exiting, veh/h	201	594	516
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.8	7.1	4.8
Approach LOS	A	A	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.276	0.724	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	163	428	459	261
Cap Entry Lane, veh/h	1221	1221	1169	1238
Entry HV Adj Factor	0.982	0.981	0.981	0.980
Flow Entry, veh/h	160	420	450	256
Cap Entry, veh/h	1199	1198	1146	1214
V/C Ratio	0.133	0.351	0.393	0.211
Control Delay, s/veh	4.1	6.4	7.1	4.8
LOS	A	A	A	A
95th %tile Queue, veh	0	2	2	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	110	151	111	145	74	141	236	70	64	374	81
Future Volume (veh/h)	41	110	151	111	145	74	141	236	70	64	374	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	46	122	168	122	159	81	162	271	80	69	402	87
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.87	0.87	0.87	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	107	400	306	168	471	355	196	652	494	101	543	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.21	0.21	0.10	0.25	0.25	0.12	0.35	0.35	0.06	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	29.1	19.8	22.0	39.9	18.3	17.7	49.3	14.9	13.3	34.9	20.8	16.0
Ln Grp LOS	C	B	C	D	B	B	D	B	B	C	C	B
Approach Vol, veh/h		336			362			513			558	
Approach Delay, s/veh		22.2			25.5			25.5			21.8	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	7.6	24.4	10.0	16.5	11.0	21.0	7.8	18.7
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green (Gmax), s	6.3	32.1	4.3	31.7	6.4	32.0	4.0	32.0
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.2	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	4.4	8.5	6.2	8.1	7.6	13.4	3.6	6.1
Green Ext Time (g_e), s	0.0	1.2	0.0	1.0	0.0	1.7	0.0	0.8
Prob of Phs Call (p_c)	0.67	1.00	0.86	1.00	0.93	1.00	0.53	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1641		1641		1641		1641	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1417		1429		1415		1412

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	69	0	122	0	162	0	46	0
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	2.4	0.0	4.2	0.0	5.6	0.0	1.6	0.0
Cycle Q Clear Time (g_c), s	2.4	0.0	4.2	0.0	5.6	0.0	1.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	101	0	168	0	196	0	107	0
V/C Ratio (X)	0.69	0.00	0.73	0.00	0.83	0.00	0.43	0.00
Avail Cap (c_a), veh/h	193	0	168	0	196	0	160	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	26.9	0.0	25.5	0.0	25.2	0.0	26.3	0.0
Incr Delay (d2), s/veh	8.0	0.0	14.4	0.0	24.1	0.0	2.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	34.9	0.0	39.9	0.0	49.3	0.0	29.1	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	1.4	0.0	1.8	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.7	0.0	1.3	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.0	0.0	2.1	0.0	3.2	0.0	0.6	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.50	0.00	0.80	0.00	0.15	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	271	0	122	0	402	0	159
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	6.5	0.0	3.2	0.0	11.4	0.0	4.1
Cycle Q Clear Time (g_c), s	0.0	6.5	0.0	3.2	0.0	11.4	0.0	4.1
Lane Grp Cap (c), veh/h	0	652	0	400	0	543	0	471
V/C Ratio (X)	0.00	0.42	0.00	0.30	0.00	0.74	0.00	0.34
Avail Cap (c_a), veh/h	0	1045	0	1067	0	1042	0	1077
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.5	0.0	19.3	0.0	18.8	0.0	17.9
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.4	0.0	2.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.9	0.0	19.8	0.0	20.8	0.0	18.3
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	1.1	0.0	3.9	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	1.2	0.0	4.2	0.0	1.5
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.02	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	80	0	168	0	87	0	81
Grp Sat Flow (s), veh/h/ln	0	1417	0	1429	0	1415	0	1412
Q Serve Time (g_s), s	0.0	2.3	0.0	6.1	0.0	2.7	0.0	2.7
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	6.1	0.0	2.7	0.0	2.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	494	0	306	0	411	0	355
V/C Ratio (X)	0.00	0.16	0.00	0.55	0.00	0.21	0.00	0.23
Avail Cap (c_a), veh/h	0	792	0	816	0	788	0	813
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.2	0.0	20.5	0.0	15.7	0.0	17.4
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.5	0.0	0.3	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.3	0.0	22.0	0.0	16.0	0.0	17.7
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	1.7	0.0	0.7	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	1.8	0.0	0.7	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.83	0.00	0.18	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	19.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	4	5	27	7	93	5	419	44	116	514	102
Future Vol, veh/h	106	4	5	27	7	93	5	419	44	116	514	102
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.86	0.86	0.86	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	119	4	6	30	8	102	6	487	51	123	547	109
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	14.4	12.1	16.4	23.3
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	92%	79%	0%	31%	0%
Vol Thru, %	98%	83%	3%	21%	0%	69%	72%
Vol Right, %	0%	17%	4%	0%	100%	0%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	254	115	34	93	373	359
LT Vol	5	0	106	27	0	116	0
Through Vol	210	210	4	7	0	257	257
RT Vol	0	44	5	0	93	0	102
Lane Flow Rate	249	295	129	37	102	397	382
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.473	0.548	0.29	0.088	0.21	0.735	0.669
Departure Headway (Hd)	6.832	6.696	8.088	8.526	7.396	6.671	6.31
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	529	539	446	421	485	544	577
Service Time	4.549	4.413	6.122	6.265	5.135	4.385	4.024
HCM Lane V/C Ratio	0.471	0.547	0.289	0.088	0.21	0.73	0.662
HCM Control Delay	15.5	17.2	14.4	12.1	12.1	25.7	20.9
HCM Lane LOS	C	C	B	B	B	D	C
HCM 95th-tile Q	2.5	3.3	1.2	0.3	0.8	6.2	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	323	29	20	323	112	30	123	55	147	96	44
Future Volume (veh/h)	64	323	29	20	323	112	30	123	55	147	96	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	69	347	31	21	340	118	38	156	70	158	103	47
Peak Hour Factor	0.93	0.93	0.93	0.95	0.95	0.95	0.79	0.79	0.79	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	140	646	58	87	463	161	144	305	125	329	161	64
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.38	0.35	0.05	0.35	0.32	0.27	0.27	0.25	0.27	0.27	0.25
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.3	0.0	10.4	19.8	0.0	13.4	13.4	0.0	0.0	14.1	0.0	0.0
Ln Grp LOS	C	A	B	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		447			479			264			308	
Approach Delay, s/veh		11.9			13.7			13.4			14.1	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	8	7
Case No		8.0	2.0	4.0		8.0	4.0	2.0
Phs Duration (G+Y+Rc), s		14.9	6.1	19.4		14.9	18.1	7.5
Change Period (Y+Rc), s		4.9	5.3	5.3		4.9	5.3	5.3
Max Green (Gmax), s		33.1	4.7	36.7		33.1	33.7	7.7
Max Allow Headway (MAH), s		4.1	4.1	4.0		4.3	4.1	4.1
Max Q Clear (g_c+I1), s		7.1	2.5	8.5		8.7	11.1	3.6
Green Ext Time (g_e), s		0.9	0.0	1.3		1.2	1.7	0.0
Prob of Phs Call (p_c)		1.00	0.21	1.00		1.00	1.00	0.54
Prob of Max Out (p_x)		0.00	1.00	0.00		0.00	0.00	1.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1		7
Mvmt Sat Flow, veh/h		158	1641			722		1641
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		1134		1692		599	1327	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		466		151		238	461	
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	7
Lane Assignment			L+T+RL (Prot)			L+T+R		L (Prot)

Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	264	21	0	0	308	0	69
Grp Sat Flow (s), veh/h/ln	0	1759	1641	0	0	1559	0	1641
Q Serve Time (g_s), s	0.0	0.0	0.5	0.0	0.0	1.6	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	5.1	0.5	0.0	0.0	6.7	0.0	1.6
Perm LT Sat Flow (s_l), veh/h/ln	0	1257	0	0	0	1173	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	1857	0	0	0	1735	0	0
Perm LT Eff Green (g_p), s	0.0	10.9	0.0	0.0	0.0	10.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	4.1	0.0	0.0	0.0	5.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
Time to First Blk (g_f), s	0.0	4.0	0.0	0.0	0.0	0.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	4.0	0.0	0.0	0.0	0.9	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.14	1.00	0.00	0.00	0.51	0.00	1.00
Lane Grp Cap (c), veh/h	0	574	87	0	0	554	0	140
V/C Ratio (X)	0.00	0.46	0.24	0.00	0.00	0.56	0.00	0.49
Avail Cap (c_a), veh/h	0	1529	243	0	0	1349	0	365
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.8	18.4	0.0	0.0	13.2	0.0	17.6
Incr Delay (d2), s/veh	0.0	0.6	1.4	0.0	0.0	0.9	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.4	19.8	0.0	0.0	14.1	0.0	20.3
1st-Term Q (Q1), veh/ln	0.0	1.3	0.1	0.0	0.0	1.6	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.2	0.0	0.0	1.7	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.05	0.01	0.00	0.00	0.04	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment				T+R			T+R	
Lanes in Grp	0	0	0	1	0	0	1	0
Grp Vol (v), veh/h	0	0	0	378	0	0	458	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1843	0	0	1787	0
Q Serve Time (g_s), s	0.0	0.0	0.0	6.5	0.0	0.0	9.1	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	6.5	0.0	0.0	9.1	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.27	0.00	0.08	0.00	0.15	0.26	0.00
Lane Grp Cap (c), veh/h	0	0	0	703	0	0	624	0
V/C Ratio (X)	0.00	0.00	0.00	0.54	0.00	0.00	0.73	0.00
Avail Cap (c_a), veh/h	0	0	0	1732	0	0	1547	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.8	0.0	0.0	11.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	1.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	10.4	0.0	0.0	13.4	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.4	0.0	0.0	2.1	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.5	0.0	0.0	2.4	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.00	0.00	0.04	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	28	16	0	0	0
Future Vol, veh/h	0	28	16	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	30	17	0	0	0
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.1	7	0
HCM LOS	A	A	-

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	28	16	0
LT Vol	0	0	0
Through Vol	28	16	0
RT Vol	0	0	0
Lane Flow Rate	30	17	0
Geometry Grp	1	1	1
Degree of Util (X)	0.033	0.019	0
Departure Headway (Hd)	3.946	3.956	4.016
Convergence, Y/N	Yes	Yes	Yes
Cap	912	909	0
Service Time	1.95	1.961	2.035
HCM Lane V/C Ratio	0.033	0.019	0
HCM Control Delay	7.1	7	7
HCM Lane LOS	A	A	N
HCM 95th-tile Q	0.1	0.1	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	458	15	16	348	13	11
Future Vol, veh/h	458	15	16	348	13	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	86	86	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	477	16	19	405	19	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	493	0	928	485
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	443	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1071	-	297	582
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	647	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1071	-	292	582
Mov Cap-2 Maneuver	-	-	-	-	292	-
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	635	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	378	-	-	1071	-
HCM Lane V/C Ratio	0.092	-	-	0.017	-
HCM Control Delay (s)	15.5	-	-	8.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	401	28	96	318	17	16	0	56	11	0	30
Future Vol, veh/h	47	401	28	96	318	17	16	0	56	11	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	436	30	104	346	18	17	0	61	16	0	43

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	364	0	0	466	0	0				883	-	182
Stage 1	-	-	-	-	-	-				563	-	-
Stage 2	-	-	-	-	-	-				320	-	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	-	3.32
Pot Cap-1 Maneuver	1191	-	-	1092	-	-				285	0	829
Stage 1	-	-	-	-	-	-				534	0	-
Stage 2	-	-	-	-	-	-				709	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1191	-	-	1092	-	-				240	0	829
Mov Cap-2 Maneuver	-	-	-	-	-	-				240	0	-
Stage 1	-	-	-	-	-	-				511	0	-
Stage 2	-	-	-	-	-	-				624	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	1.9	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1191	-	-	1092	-	-	500
HCM Lane V/C Ratio	0.043	-	-	0.096	-	-	0.119
HCM Control Delay (s)	8.2	-	-	8.6	-	-	13.2
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.3	-	-	0.4

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	454	54	45	492	27	45
Future Vol, veh/h	454	54	45	492	27	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	86	86	48	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	721	86	52	572	56	94

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	807	0	1154	404
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	390	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	814	-	190	596
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	814	-	172	596
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	592	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	27
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	310	-	-	814	-
HCM Lane V/C Ratio	0.484	-	-	0.064	-
HCM Control Delay (s)	27	-	-	9.7	0.4
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	2.5	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	283	60	68	277	92	74	158	60	88	165	194
Future Volume (veh/h)	130	283	60	68	277	92	74	158	60	88	165	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	157	341	72	72	295	98	79	168	64	98	183	216
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	205	806	168	129	604	196	115	574	210	140	429	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.28	0.25	0.08	0.23	0.20	0.07	0.23	0.21	0.09	0.24	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	36.3	14.8	15.1	25.0	16.9	17.4	29.0	15.8	16.0	30.8	16.1	17.7
Ln Grp LOS	D	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		570			465			311			497	
Approach Delay, s/veh		20.8			18.4			19.2			19.7	
Approach LOS		C			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phs Duration (G+Y+Rc), s	8.1	14.9	7.8	17.3	7.4	15.6	10.0	15.1
Change Period (Y+Rc), s	4.6	4.6	5.3	5.3	4.6	4.6	5.3	5.3
Max Green (Gmax), s	4.4	33.7	4.0	33.1	4.0	34.1	4.7	32.4
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.1	4.1	4.2	4.1	4.1
Max Q Clear (g_c+l1), s	4.8	4.8	4.0	6.7	4.3	7.9	6.5	6.9
Green Ext Time (g_e), s	0.0	0.8	0.0	1.4	0.0	1.5	0.0	1.4
Prob of Phs Call (p_c)	0.73	1.00	0.62	1.00	0.65	1.00	0.88	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1641		1641		1641		1641	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2532		2916		1777		2621
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		925		607		1553		851
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	98	0	72	0	79	0	157	0
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	2.8	0.0	2.0	0.0	2.3	0.0	4.5	0.0
Cycle Q Clear Time (g_c), s	2.8	0.0	2.0	0.0	2.3	0.0	4.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	140	0	129	0	115	0	205	0
V/C Ratio (X)	0.70	0.00	0.56	0.00	0.69	0.00	0.77	0.00
Avail Cap (c_a), veh/h	171	0	181	0	157	0	205	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	21.4	0.0	21.3	0.0	21.8	0.0	20.4	0.0
Incr Delay (d2), s/veh	9.4	0.0	3.7	0.0	7.2	0.0	15.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	30.8	0.0	25.0	0.0	29.0	0.0	36.3	0.0
1st-Term Q (Q1), veh/ln	0.9	0.0	0.6	0.0	0.7	0.0	1.3	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.1	0.0	0.2	0.0	0.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.2	0.0	0.8	0.0	0.9	0.0	2.2	0.0
%ile Storage Ratio (RQ%)	0.21	0.00	0.09	0.00	0.15	0.00	0.42	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	116	0	206	0	183	0	198
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	0	1777
Q Serve Time (g_s), s	0.0	2.6	0.0	4.6	0.0	4.2	0.0	4.6
Cycle Q Clear Time (g_c), s	0.0	2.6	0.0	4.6	0.0	4.2	0.0	4.6
Lane Grp Cap (c), veh/h	0	403	0	491	0	429	0	410
V/C Ratio (X)	0.00	0.29	0.00	0.42	0.00	0.43	0.00	0.48
Avail Cap (c_a), veh/h	0	1268	0	1271	0	1282	0	1245
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.4	0.0	14.2	0.0	15.4	0.0	16.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.6	0.0	0.7	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.8	0.0	14.8	0.0	16.1	0.0	16.9
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	1.3	0.0	1.2	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	1.4	0.0	1.3	0.0	1.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.03	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	116	0	207	0	216	0	195
Grp Sat Flow (s), veh/h/ln	0	1681	0	1747	0	1553	0	1695
Q Serve Time (g_s), s	0.0	2.8	0.0	4.7	0.0	5.9	0.0	4.9
Cycle Q Clear Time (g_c), s	0.0	2.8	0.0	4.7	0.0	5.9	0.0	4.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.55	0.00	0.35	0.00	1.00	0.00	0.50
Lane Grp Cap (c), veh/h	0	381	0	483	0	375	0	391
V/C Ratio (X)	0.00	0.31	0.00	0.43	0.00	0.58	0.00	0.50
Avail Cap (c_a), veh/h	0	1199	0	1250	0	1121	0	1188
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.6	0.0	14.5	0.0	16.3	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.6	0.0	1.4	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.0	0.0	15.1	0.0	17.7	0.0	17.4
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	1.3	0.0	1.6	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	1.4	0.0	1.7	0.0	1.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.03	0.00	0.02	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	19.5
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	152	144	83	100	493
Future Vol, veh/h	85	152	144	83	100	493
Peak Hour Factor	0.82	0.82	0.86	0.86	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	104	185	167	97	109	536
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	13.5	14.4	24.3
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	63%
Vol Thru, %	0%	0%	36%	37%
Vol Right, %	0%	100%	64%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	493	237	227
LT Vol	100	0	0	144
Through Vol	0	0	85	83
RT Vol	0	493	152	0
Lane Flow Rate	109	536	289	264
Geometry Grp	7	7	2	2
Degree of Util (X)	0.2	0.807	0.456	0.455
Departure Headway (Hd)	6.636	5.419	5.679	6.201
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	540	664	630	578
Service Time	4.388	3.17	3.742	4.266
HCM Lane V/C Ratio	0.202	0.807	0.459	0.457
HCM Control Delay	11.1	27	13.5	14.4
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	0.7	8.3	2.4	2.4

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰	↱
Traffic Vol, veh/h	188	360	106	127	98	5
Future Vol, veh/h	188	360	106	127	98	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	83	83	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	194	371	128	153	120	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	565	0	789	380
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	409	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1007	-	359	667
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1007	-	309	667
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	578	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.1	23.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	309	667	-	-	1007	-
HCM Lane V/C Ratio	0.387	0.009	-	-	0.127	-
HCM Control Delay (s)	23.8	10.4	-	-	9.1	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	1.8	0	-	-	0.4	-

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	0
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	298	334	0
Demand Flow Rate, veh/h	304	340	0
Vehicles Circulating, veh/h	614	51	163
Vehicles Exiting, veh/h	294	867	228
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.5	5.1	0.0
Approach LOS	B	A	-

Lane	Left	Left
Designated Moves	LT	TR
Assumed Moves	LT	TR
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
Entry Flow, veh/h	304	340
Cap Entry Lane, veh/h	738	1310
Entry HV Adj Factor	0.980	0.982
Flow Entry, veh/h	298	334
Cap Entry, veh/h	723	1286
V/C Ratio	0.412	0.260
Control Delay, s/veh	10.5	5.1
LOS	B	A
95th %tile Queue, veh	2	1

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Approach	EB	NB	SB
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	815	815	348
Demand Flow Rate, veh/h	831	831	355
Vehicles Circulating, veh/h	229	201	218
Vehicles Exiting, veh/h	343	859	814
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.5	15.6	6.5
Approach LOS	A	C	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.242	0.758	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	201	630	831	355
Cap Entry Lane, veh/h	1153	1153	1124	1105
Entry HV Adj Factor	0.980	0.981	0.981	0.982
Flow Entry, veh/h	197	618	815	348
Cap Entry, veh/h	1130	1131	1102	1085
V/C Ratio	0.174	0.546	0.739	0.321
Control Delay, s/veh	4.7	9.7	15.6	6.5
LOS	A	A	C	A
95th %tile Queue, veh	1	3	7	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	185	207	134	238	94	167	330	81	75	433	101
Future Volume (veh/h)	62	185	207	134	238	94	167	330	81	75	433	101
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	69	206	230	147	262	103	192	379	93	81	466	109
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.87	0.87	0.87	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	123	368	281	217	474	358	244	721	547	116	575	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.20	0.20	0.13	0.25	0.25	0.15	0.39	0.39	0.07	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	37.2	28.3	17.0	34.4	25.1	22.8	36.4	18.2	5.3	41.2	26.6	19.6
Ln Grp LOS	D	C	B	C	C	C	D	B	A	D	C	B
Approach Vol, veh/h		505			512			664			656	
Approach Delay, s/veh		24.4			27.3			21.6			27.2	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	3.0	2.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	9.2	32.7	18.6	13.8	15.1	26.8	9.6	22.9
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green (Gmax), s	15.1	39.7	31.3	13.3	16.4	38.4	11.7	32.9
Max Allow Headway (MAH), s	4.1	4.1	4.2	4.1	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	5.6	13.6	9.4	8.3	10.4	19.1	5.0	11.0
Green Ext Time (g_e), s	0.1	1.7	1.6	0.2	0.3	2.1	0.1	1.2
Prob of Phs Call (p_c)	0.81	1.00	1.00	0.95	0.98	1.00	0.76	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.49	0.25	0.01	0.06	0.00
Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1641			1641	1641		1641	
Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		1870	1870			1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1419	1428			1416		1412
Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

Lanes in Grp	1	0	0	1	1	0	1	0
Grp Vol (v), veh/h	81	0	0	147	192	0	69	0
Grp Sat Flow (s), veh/h/ln	1641	0	0	1641	1641	0	1641	0
Q Serve Time (g_s), s	3.6	0.0	0.0	6.3	8.4	0.0	3.0	0.0
Cycle Q Clear Time (g_c), s	3.6	0.0	0.0	6.3	8.4	0.0	3.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	116	0	0	217	244	0	123	0
V/C Ratio (X)	0.70	0.00	0.00	0.68	0.79	0.00	0.56	0.00
Avail Cap (c_a), veh/h	347	0	0	331	375	0	296	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	33.8	0.0	0.0	30.8	30.5	0.0	33.2	0.0
Incr Delay (d2), s/veh	7.5	0.0	0.0	3.7	5.9	0.0	4.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	41.2	0.0	0.0	34.4	36.4	0.0	37.2	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	0.0	2.2	2.9	0.0	1.1	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.2	0.4	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.5	0.0	0.0	2.5	3.3	0.0	1.2	0.0
%ile Storage Ratio (RQ%)	0.37	0.00	0.00	0.60	0.85	0.00	0.31	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	379	206	0	0	466	0	262
Grp Sat Flow (s), veh/h/ln	0	1870	1870	0	0	1870	0	1870
Q Serve Time (g_s), s	0.0	11.6	7.4	0.0	0.0	17.1	0.0	9.0
Cycle Q Clear Time (g_c), s	0.0	11.6	7.4	0.0	0.0	17.1	0.0	9.0
Lane Grp Cap (c), veh/h	0	721	368	0	0	575	0	474
V/C Ratio (X)	0.00	0.53	0.56	0.00	0.00	0.81	0.00	0.55
Avail Cap (c_a), veh/h	0	1014	831	0	0	982	0	871
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.6	27.0	0.0	0.0	23.8	0.0	24.1
Incr Delay (d2), s/veh	0.0	0.6	1.3	0.0	0.0	2.8	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.2	28.3	0.0	0.0	26.6	0.0	25.1
1st-Term Q (Q1), veh/ln	0.0	4.1	2.9	0.0	0.0	6.4	0.0	3.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.4	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.2	3.0	0.0	0.0	6.8	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.04	0.02	0.00	0.00	0.04	0.00	0.35
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	R			R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	93	230	0	0	109	0	103
Grp Sat Flow (s), veh/h/ln	0	1419	1428	0	0	1416	0	1412
Q Serve Time (g_s), s	0.0	1.9	7.1	0.0	0.0	4.3	0.0	4.4
Cycle Q Clear Time (g_c), s	0.0	1.9	7.1	0.0	0.0	4.3	0.0	4.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	547	281	0	0	435	0	358
V/C Ratio (X)	0.00	0.17	0.82	0.00	0.00	0.25	0.00	0.29
Avail Cap (c_a), veh/h	0	769	634	0	0	743	0	658
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.1	11.1	0.0	0.0	19.3	0.0	22.3
Incr Delay (d2), s/veh	0.0	0.1	5.9	0.0	0.0	0.3	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.3	17.0	0.0	0.0	19.6	0.0	22.8
1st-Term Q (Q1), veh/ln	0.0	0.8	3.2	0.0	0.0	1.2	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	3.6	0.0	0.0	1.2	0.0	1.3
%ile Storage Ratio (RQ%)	0.00	0.13	1.67	0.00	0.00	0.30	0.00	0.32
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		25.0
HCM 6th LOS		C

Intersection	
Intersection Delay, s/veh	71.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	142	5	7	35	10	127	7	603	64	167	707	147
Future Vol, veh/h	142	5	7	35	10	127	7	603	64	167	707	147
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.86	0.86	0.86	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	160	6	8	38	11	140	8	701	74	178	752	156
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	18.3	15.2	39.4	112.3
HCM LOS	C	C	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	92%	78%	0%	32%	0%
Vol Thru, %	98%	82%	3%	22%	0%	68%	71%
Vol Right, %	0%	18%	5%	0%	100%	0%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	309	366	154	45	127	521	501
LT Vol	7	0	142	35	0	167	0
Through Vol	302	302	5	10	0	354	354
RT Vol	0	64	7	0	127	0	147
Lane Flow Rate	359	425	173	49	140	554	532
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.759	0.884	0.42	0.13	0.325	1.19	1.089
Departure Headway (Hd)	7.933	7.795	8.958	9.884	8.753	7.738	7.362
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	459	468	405	365	413	476	495
Service Time	5.633	5.495	6.958	7.584	6.453	5.438	5.062
HCM Lane V/C Ratio	0.782	0.908	0.427	0.134	0.339	1.164	1.075
HCM Control Delay	31.6	45.9	18.3	14.1	15.6	130.5	93.4
HCM Lane LOS	D	E	C	B	C	F	F
HCM 95th-tile Q	6.4	9.5	2	0.4	1.4	21	17.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	397	36	24	399	139	42	172	74	183	119	55
Future Volume (veh/h)	80	397	36	24	399	139	42	172	74	183	119	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	86	427	39	25	420	146	53	218	94	197	128	59
Peak Hour Factor	0.93	0.93	0.93	0.95	0.95	0.95	0.79	0.79	0.79	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	139	702	64	70	496	172	122	395	157	295	168	69
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.42	0.40	0.04	0.37	0.35	0.36	0.36	0.34	0.36	0.36	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	32.9	0.0	15.6	33.0	0.0	22.6	17.6	0.0	0.0	21.3	0.0	0.0
Ln Grp LOS	C	A	B	C	A	C	B	A	A	C	A	A
Approach Vol, veh/h		552			591			365			384	
Approach Delay, s/veh		18.3			23.1			17.6			21.3	
Approach LOS		B			C			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		8.0	2.0	4.0		8.0	2.0	4.0
Phs Duration (G+Y+Rc), s		26.9	6.7	30.8		26.9	9.4	28.1
Change Period (Y+Rc), s		4.9	5.3	5.3		4.9	5.3	5.3
Max Green (Gmax), s		34.3	4.3	37.9		34.3	5.9	36.3
Max Allow Headway (MAH), s		4.1	4.1	4.0		4.5	4.1	4.1
Max Q Clear (g_c+I1), s		12.9	3.0	14.8		20.6	5.3	20.7
Green Ext Time (g_e), s		1.3	0.0	1.7		1.4	0.0	2.0
Prob of Phs Call (p_c)		1.00	0.36	1.00		1.00	0.79	1.00
Prob of Max Out (p_x)		0.00	1.00	0.00		0.02	1.00	0.02

Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		163	1641			593	1641	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1111		1688		472		1326
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		442		154		193		461
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			L+T+RL (Prot)				L+T+RL (Prot)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	365	25	0	0	384	86	0
Grp Sat Flow (s), veh/h/ln	0	1716	1641	0	0	1259	1641	0
Q Serve Time (g_s), s	0.0	0.0	1.0	0.0	0.0	7.6	3.3	0.0
Cycle Q Clear Time (g_c), s	0.0	10.9	1.0	0.0	0.0	18.6	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1215	0	0	0	1084	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	1691	0	0	0	1103	0	0
Perm LT Eff Green (g_p), s	0.0	22.9	0.0	0.0	0.0	22.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	4.3	0.0	0.0	0.0	12.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0
Time to First Blk (g_f), s	0.0	7.6	0.0	0.0	0.0	1.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	7.6	0.0	0.0	0.0	1.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.15	1.00	0.00	0.00	0.51	1.00	0.00
Lane Grp Cap (c), veh/h	0	674	70	0	0	532	139	0
V/C Ratio (X)	0.00	0.54	0.36	0.00	0.00	0.72	0.62	0.00
Avail Cap (c_a), veh/h	0	991	143	0	0	785	183	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	16.9	30.0	0.0	0.0	19.5	28.5	0.0
Incr Delay (d2), s/veh	0.0	0.7	3.1	0.0	0.0	1.9	4.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.6	33.0	0.0	0.0	21.3	32.9	0.0
1st-Term Q (Q1), veh/ln	0.0	3.5	0.3	0.0	0.0	4.3	1.1	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.3	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.6	0.4	0.0	0.0	4.5	1.3	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.03	0.00	0.00	0.11	0.11	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment				T+R				T+R
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	466	0	0	0	566
Grp Sat Flow (s), veh/h/ln	0	0	0	1843	0	0	0	1787
Q Serve Time (g_s), s	0.0	0.0	0.0	12.8	0.0	0.0	0.0	18.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.8	0.0	0.0	0.0	18.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.26	0.00	0.08	0.00	0.15	0.00	0.26
Lane Grp Cap (c), veh/h	0	0	0	766	0	0	0	668
V/C Ratio (X)	0.00	0.00	0.00	0.61	0.00	0.00	0.00	0.85
Avail Cap (c_a), veh/h	0	0	0	1122	0	0	0	1044
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.8	0.0	0.0	0.0	18.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	0.0	0.0	4.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	15.6	0.0	0.0	0.0	22.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.0	0.0	0.0	0.0	6.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	4.2	0.0	0.0	0.0	6.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		20.3						
HCM 6th LOS		C						

Intersection	
Intersection Delay, s/veh	113.4
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	763	639	56	20	44
Future Vol, veh/h	82	763	639	56	20	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	829	695	61	22	48
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	158.9	67.5	11.3
HCM LOS	F	F	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	0%	31%
Vol Thru, %	90%	92%	0%
Vol Right, %	0%	8%	69%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	845	695	64
LT Vol	82	0	20
Through Vol	763	639	0
RT Vol	0	56	44
Lane Flow Rate	918	755	70
Geometry Grp	1	1	1
Degree of Util (X)	1.291	1.039	0.129
Departure Headway (Hd)	5.059	5.285	7.206
Convergence, Y/N	Yes	Yes	Yes
Cap	716	695	501
Service Time	3.13	3.285	5.206
HCM Lane V/C Ratio	1.282	1.086	0.14
HCM Control Delay	158.9	67.5	11.3
HCM Lane LOS	F	F	B
HCM 95th-tile Q	35.2	18	0.4

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	630	21	24	505	21	18
Future Vol, veh/h	630	21	24	505	21	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	86	86	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	656	22	28	587	30	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	678	0	1310	667
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	643	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	914	-	175	459
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	523	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	914	-	170	459
Mov Cap-2 Maneuver	-	-	-	-	170	-
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	507	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	24.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	240	-	-	914	-
HCM Lane V/C Ratio	0.236	-	-	0.031	-
HCM Control Delay (s)	24.6	-	-	9.1	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	540	28	97	428	23	16	0	56	15	0	40
Future Vol, veh/h	63	540	28	97	428	23	16	0	56	15	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	587	30	105	465	25	17	0	61	22	0	58

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	490	0	0	617	0	0				1118	-	245
Stage 1	-	-	-	-	-	-				688	-	-
Stage 2	-	-	-	-	-	-				430	-	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	-	3.32
Pot Cap-1 Maneuver	1070	-	-	959	-	-				201	0	755
Stage 1	-	-	-	-	-	-				460	0	-
Stage 2	-	-	-	-	-	-				624	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1070	-	-	959	-	-				160	0	755
Mov Cap-2 Maneuver	-	-	-	-	-	-				160	0	-
Stage 1	-	-	-	-	-	-				431	0	-
Stage 2	-	-	-	-	-	-				530	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	1.6	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1070	-	-	959	-	-	375
HCM Lane V/C Ratio	0.064	-	-	0.11	-	-	0.213
HCM Control Delay (s)	8.6	-	-	9.2	-	-	17.2
HCM Lane LOS	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	0.4	-	-	0.8

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	518	69	58	556	0	97
Future Vol, veh/h	518	69	58	556	0	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	86	86	48	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	822	110	67	647	0	202

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	932	0	-	466
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	730	-	0	543
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	730	-	-	543
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	543	-	-	730	-
HCM Lane V/C Ratio	0.372	-	-	0.092	-
HCM Control Delay (s)	15.5	-	-	10.4	0.6
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	1.7	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	327	75	85	334	102	89	189	72	107	201	197
Future Volume (veh/h)	159	327	75	85	334	102	89	189	72	107	201	197
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	192	394	90	90	355	109	95	201	77	119	223	219
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	279	901	203	150	630	190	135	539	199	166	412	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.31	0.29	0.09	0.24	0.21	0.08	0.21	0.20	0.10	0.23	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.3	16.1	16.4	28.8	20.4	20.9	32.0	19.8	20.1	30.6	20.4	21.6
Ln Grp LOS	C	B	B	C	C	C	C	B	C	C	C	C
Approach Vol, veh/h		676			554			373			561	
Approach Delay, s/veh		18.8			21.9			23.0			23.0	
Approach LOS		B			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	2.0	4.0	2.0	4.0	2.0	4.0	4.0	2.0
Phs Duration (G+Y+Rc), s	9.8	16.2	9.2	21.9	8.7	17.3	17.5	13.7
Change Period (Y+Rc), s	4.6	4.6	5.3	5.3	4.6	4.6	5.3	5.3
Max Green (Gmax), s	8.4	33.7	15.2	42.9	8.3	33.8	33.4	24.7
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.1	4.1	4.2	4.1	4.1
Max Q Clear (g_c+I1), s	6.0	6.1	5.0	8.4	5.2	9.3	8.9	8.3
Green Ext Time (g_e), s	0.1	0.9	0.1	1.7	0.1	1.6	1.6	0.5
Prob of Phs Call (p_c)	0.85	1.00	0.76	1.00	0.78	1.00	1.00	0.95
Prob of Max Out (p_x)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1641		1641		1641			1641
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2524		2868		1777	2674	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		931		648		1552	808	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Prot)		L (Prot)		L (Prot)			L (Prot)

Lanes in Grp	1	0	1	0	1	0	0	1
Grp Vol (v), veh/h	119	0	90	0	95	0	0	192
Grp Sat Flow (s), veh/h/ln	1641	0	1641	0	1641	0	0	1641
Q Serve Time (g_s), s	4.0	0.0	3.0	0.0	3.2	0.0	0.0	6.3
Cycle Q Clear Time (g_c), s	4.0	0.0	3.0	0.0	3.2	0.0	0.0	6.3
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	166	0	150	0	135	0	0	279
V/C Ratio (X)	0.72	0.00	0.60	0.00	0.70	0.00	0.00	0.69
Avail Cap (c_a), veh/h	258	0	474	0	256	0	0	747
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.9	0.0	24.9	0.0	25.5	0.0	0.0	22.3
Incr Delay (d2), s/veh	5.8	0.0	3.8	0.0	6.5	0.0	0.0	3.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	30.6	0.0	28.8	0.0	32.0	0.0	0.0	25.3
1st-Term Q (Q1), veh/ln	1.3	0.0	1.0	0.0	1.1	0.0	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.2	0.0	0.2	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	1.6	0.0	1.1	0.0	1.3	0.0	0.0	2.2
%ile Storage Ratio (RQ%)	0.27	0.00	0.14	0.00	0.21	0.00	0.00	0.42
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	139	0	242	0	223	234	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	3.8	0.0	6.2	0.0	6.3	6.6	0.0
Cycle Q Clear Time (g_c), s	0.0	3.8	0.0	6.2	0.0	6.3	6.6	0.0
Lane Grp Cap (c), veh/h	0	379	0	558	0	412	419	0
V/C Ratio (X)	0.00	0.37	0.00	0.43	0.00	0.54	0.56	0.00
Avail Cap (c_a), veh/h	0	1067	0	1375	0	1070	1079	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	19.2	0.0	15.6	0.0	19.3	19.2	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.5	0.0	1.1	1.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.8	0.0	16.1	0.0	20.4	20.4	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	1.9	0.0	2.1	2.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.3	0.0	2.0	0.0	2.2	2.3	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.04	0.00	0.02	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		T+R		T+R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	139	0	242	0	219	230	0
Grp Sat Flow (s), veh/h/ln	0	1679	0	1739	0	1552	1705	0
Q Serve Time (g_s), s	0.0	4.1	0.0	6.4	0.0	7.3	6.9	0.0
Cycle Q Clear Time (g_c), s	0.0	4.1	0.0	6.4	0.0	7.3	6.9	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.55	0.00	0.37	0.00	1.00	0.47	0.00
Lane Grp Cap (c), veh/h	0	359	0	546	0	360	402	0
V/C Ratio (X)	0.00	0.39	0.00	0.44	0.00	0.61	0.57	0.00
Avail Cap (c_a), veh/h	0	1008	0	1346	0	935	1035	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	19.4	0.0	15.8	0.0	19.9	19.6	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.6	0.0	1.7	1.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.1	0.0	16.4	0.0	21.6	20.9	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	1.9	0.0	2.1	2.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	2.0	0.0	2.3	2.3	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.04	0.00	0.02	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	21.1
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	152	156	83	100	506
Future Vol, veh/h	85	152	156	83	100	506
Peak Hour Factor	0.82	0.82	0.86	0.86	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	104	185	181	97	109	550
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	13.7	15.1	26.9
HCM LOS	B	C	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	65%
Vol Thru, %	0%	0%	36%	35%
Vol Right, %	0%	100%	64%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	506	237	239
LT Vol	100	0	0	156
Through Vol	0	0	85	83
RT Vol	0	506	152	0
Lane Flow Rate	109	550	289	278
Geometry Grp	7	7	2	2
Degree of Util (X)	0.202	0.836	0.462	0.483
Departure Headway (Hd)	6.691	5.474	5.759	6.259
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	536	660	621	572
Service Time	4.444	3.226	3.827	4.328
HCM Lane V/C Ratio	0.203	0.833	0.465	0.486
HCM Control Delay	11.1	30	13.7	15.1
HCM Lane LOS	B	D	B	C
HCM 95th-tile Q	0.7	9.1	2.4	2.6

Intersection	
Int Delay, s/veh	4.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	188	373	106	127	110	5
Future Vol, veh/h	188	373	106	127	110	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	83	83	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	194	385	128	153	134	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	579	0	796	387
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	409	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	995	-	356	661
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	995	-	306	661
Mov Cap-2 Maneuver	-	-	-	-	306	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	576	-

Approach	EB		WB		NB	
HCM Control Delay, s	0		4.2		24.9	
HCM LOS					C	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	306	661	-	-	995	-
HCM Lane V/C Ratio	0.438	0.009	-	-	0.128	-
HCM Control Delay (s)	25.6	10.5	-	-	9.2	0
HCM Lane LOS	D	B	-	-	A	A
HCM 95th %tile Q(veh)	2.1	0	-	-	0.4	-

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	298	340	775
Demand Flow Rate, veh/h	304	347	791
Vehicles Circulating, veh/h	660	51	163
Vehicles Exiting, veh/h	294	913	235
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	11.3	5.1	12.8
Approach LOS	B	A	B

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	304	347	791
Cap Entry Lane, veh/h	704	1310	1169
Entry HV Adj Factor	0.980	0.979	0.980
Flow Entry, veh/h	298	340	775
Cap Entry, veh/h	690	1283	1145
V/C Ratio	0.432	0.265	0.677
Control Delay, s/veh	11.3	5.1	12.8
LOS	B	A	B
95th %tile Queue, veh	2	1	6

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Approach	EB	NB	SB
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	861	837	363
Demand Flow Rate, veh/h	878	853	370
Vehicles Circulating, veh/h	245	201	224
Vehicles Exiting, veh/h	349	922	830
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.5	16.5	6.7
Approach LOS	A	C	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.229	0.771	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	201	677	853	370
Cap Entry Lane, veh/h	1136	1136	1124	1098
Entry HV Adj Factor	0.980	0.981	0.981	0.982
Flow Entry, veh/h	197	664	837	363
Cap Entry, veh/h	1114	1114	1103	1078
V/C Ratio	0.177	0.596	0.759	0.337
Control Delay, s/veh	4.8	10.9	16.5	6.7
LOS	A	B	C	A
95th %tile Queue, veh	1	4	8	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	185	222	158	238	94	176	350	95	75	467	101
Future Volume (veh/h)	62	185	222	158	238	94	176	350	95	75	467	101
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	206	247	174	262	103	202	402	109	81	502	109
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.87	0.87	0.87	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	127	361	299	249	489	401	257	744	613	119	600	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.19	0.19	0.14	0.26	0.26	0.14	0.40	0.40	0.07	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	39.0	30.3	18.4	36.3	26.0	23.4	40.0	18.8	5.2	42.7	28.7	19.8
Ln Grp LOS	D	C	B	D	C	C	D	B	A	D	C	B
Approach Vol, veh/h		522			539			713			692	
Approach Delay, s/veh		25.8			28.8			22.8			29.0	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	3	5	6	7	8
Case No	2.0	3.0	3.0	2.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	9.3	35.4	19.2	15.0	15.4	29.3	9.6	24.6
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green (Gmax), s	15.1	39.7	31.3	13.3	15.4	39.4	11.7	32.9
Max Allow Headway (MAH), s	4.1	4.1	4.2	4.1	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	5.5	15.0	9.9	9.4	10.6	21.7	5.0	11.5
Green Ext Time (g_e), s	0.1	1.9	1.7	0.2	0.3	2.2	0.1	1.2
Prob of Phs Call (p_c)	0.83	1.00	1.00	0.98	0.99	1.00	0.78	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	1.00	0.62	0.01	0.05	0.00

Left-Turn Movement Data								
Assigned Mvmt	1			3	5		7	
Mvmt Sat Flow, veh/h	1781			1781	1781		1781	

Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		1870	1870			1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		1541	1550			1538		1534

Left Lane Group Data								
Assigned Mvmt	1	0	0	3	5	0	7	0
Lane Assignment	L (Prot)			L (Prot)	L (Prot)		L (Prot)	

Lanes in Grp	1	0	0	1	1	0	1	0
Grp Vol (v), veh/h	81	0	0	174	202	0	69	0
Grp Sat Flow (s), veh/h/ln	1781	0	0	1781	1781	0	1781	0
Q Serve Time (g_s), s	3.5	0.0	0.0	7.4	8.6	0.0	3.0	0.0
Cycle Q Clear Time (g_c), s	3.5	0.0	0.0	7.4	8.6	0.0	3.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	119	0	0	249	257	0	127	0
V/C Ratio (X)	0.68	0.00	0.00	0.70	0.79	0.00	0.54	0.00
Avail Cap (c_a), veh/h	354	0	0	339	361	0	302	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	36.0	0.0	0.0	32.4	32.6	0.0	35.4	0.0
Incr Delay (d2), s/veh	6.6	0.0	0.0	3.9	7.4	0.0	3.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	42.7	0.0	0.0	36.3	40.0	0.0	39.0	0.0
1st-Term Q (Q1), veh/ln	1.4	0.0	0.0	2.9	3.4	0.0	1.2	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.3	0.5	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.6	0.0	0.0	3.1	3.9	0.0	1.3	0.0
%ile Storage Ratio (RQ%)	0.39	0.00	0.00	0.76	0.99	0.00	0.33	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	402	206	0	0	502	0	262
Grp Sat Flow (s), veh/h/ln	0	1870	1870	0	0	1870	0	1870
Q Serve Time (g_s), s	0.0	13.0	7.9	0.0	0.0	19.7	0.0	9.5
Cycle Q Clear Time (g_c), s	0.0	13.0	7.9	0.0	0.0	19.7	0.0	9.5
Lane Grp Cap (c), veh/h	0	744	361	0	0	600	0	489
V/C Ratio (X)	0.00	0.54	0.57	0.00	0.00	0.84	0.00	0.54
Avail Cap (c_a), veh/h	0	955	782	0	0	948	0	820
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.2	28.9	0.0	0.0	24.9	0.0	25.0
Incr Delay (d2), s/veh	0.0	0.6	1.4	0.0	0.0	3.8	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.8	30.3	0.0	0.0	28.7	0.0	26.0
1st-Term Q (Q1), veh/ln	0.0	4.7	3.2	0.0	0.0	7.5	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.6	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.8	3.3	0.0	0.0	8.1	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.05	0.02	0.00	0.00	0.05	0.00	0.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		R	R			R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	109	247	0	0	109	0	103
Grp Sat Flow (s), veh/h/ln	0	1541	1550	0	0	1538	0	1534
Q Serve Time (g_s), s	0.0	2.1	7.8	0.0	0.0	4.1	0.0	4.2
Cycle Q Clear Time (g_c), s	0.0	2.1	7.8	0.0	0.0	4.1	0.0	4.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	613	299	0	0	493	0	401
V/C Ratio (X)	0.00	0.18	0.83	0.00	0.00	0.22	0.00	0.26
Avail Cap (c_a), veh/h	0	787	648	0	0	779	0	672
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.1	12.6	0.0	0.0	19.6	0.0	23.1
Incr Delay (d2), s/veh	0.0	0.1	5.8	0.0	0.0	0.2	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.2	18.4	0.0	0.0	19.8	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	1.0	3.7	0.0	0.0	1.3	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.0	4.2	0.0	0.0	1.3	0.0	1.4
%ile Storage Ratio (RQ%)	0.00	0.17	1.94	0.00	0.00	0.32	0.00	0.33
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.5
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	91.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	142	5	7	39	10	127	7	646	67	167	780	147
Future Vol, veh/h	142	5	7	39	10	127	7	646	67	167	780	147
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.86	0.86	0.86	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	160	6	8	43	11	140	8	751	78	178	830	156
Number of Lanes	0	1	0	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	18.4	15.6	48.9	145.1
HCM LOS	C	C	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	92%	80%	0%	30%	0%
Vol Thru, %	98%	83%	3%	20%	0%	70%	73%
Vol Right, %	0%	17%	5%	0%	100%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	330	390	154	49	127	557	537
LT Vol	7	0	142	39	0	167	0
Through Vol	323	323	5	10	0	390	390
RT Vol	0	67	7	0	127	0	147
Lane Flow Rate	384	453	173	54	140	593	571
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.817	0.949	0.424	0.144	0.33	1.278	1.177
Departure Headway (Hd)	8.038	7.903	8.969	10.122	8.982	7.766	7.415
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	453	463	403	356	403	468	491
Service Time	5.738	5.603	6.969	7.822	6.682	5.544	5.193
HCM Lane V/C Ratio	0.848	0.978	0.429	0.152	0.347	1.267	1.163
HCM Control Delay	37.8	58.3	18.4	14.5	16	164.9	124.5
HCM Lane LOS	E	F	C	B	C	F	F
HCM 95th-tile Q	7.7	11.4	2.1	0.5	1.4	24.8	20.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	417	36	28	411	139	42	172	82	183	119	55
Future Volume (veh/h)	80	417	36	28	411	139	42	172	82	183	119	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	448	39	29	433	146	53	218	104	197	128	59
Peak Hour Factor	0.93	0.93	0.93	0.95	0.95	0.95	0.79	0.79	0.79	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	144	706	61	78	507	171	118	393	173	291	168	69
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.42	0.40	0.04	0.38	0.36	0.36	0.36	0.35	0.36	0.36	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	34.3	0.0	16.8	34.8	0.0	22.8	18.3	0.0	0.0	22.4	0.0	0.0
Ln Grp LOS	C	A	B	C	A	C	B	A	A	C	A	A
Approach Vol, veh/h		573			608			375			384	
Approach Delay, s/veh		19.4			23.4			18.3			22.4	
Approach LOS		B			C			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		8.0	2.0	4.0		8.0	2.0	4.0
Phs Duration (G+Y+Rc), s		29.0	7.0	32.5		29.0	9.5	30.0
Change Period (Y+Rc), s		4.9	5.3	5.3		4.9	5.3	5.3
Max Green (Gmax), s		51.1	5.3	48.1		51.1	8.9	44.5
Max Allow Headway (MAH), s		4.2	4.1	4.0		4.5	4.1	4.1
Max Q Clear (g_c+I1), s		13.9	3.1	16.4		22.3	5.2	22.4
Green Ext Time (g_e), s		1.5	0.0	1.9		1.8	0.1	2.3
Prob of Phs Call (p_c)		1.00	0.42	1.00		1.00	0.81	1.00
Prob of Max Out (p_x)		0.00	1.00	0.00		0.00	1.00	0.00

Left-Turn Movement Data	1	2	3	4	5	6	7	8
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		160	1781			579	1781	

Through Movement Data	1	2	3	4	5	6	7	8
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1077		1696		459		1338

Right-Turn Movement Data	1	2	3	4	5	6	7	8
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		475		148		189		451

Left Lane Group Data	1	2	3	4	5	6	7	8
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment		L+T+RL (Prot)				L+T+RL (Prot)		

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	375	29	0	0	384	86	0
Grp Sat Flow (s), veh/h/ln	0	1711	1781	0	0	1227	1781	0
Q Serve Time (g_s), s	0.0	0.0	1.1	0.0	0.0	8.4	3.2	0.0
Cycle Q Clear Time (g_c), s	0.0	11.9	1.1	0.0	0.0	20.3	3.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1215	0	0	0	1075	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	1685	0	0	0	1043	0	0
Perm LT Eff Green (g_p), s	0.0	25.0	0.0	0.0	0.0	25.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	4.7	0.0	0.0	0.0	13.1	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0
Time to First Blk (g_f), s	0.0	8.1	0.0	0.0	0.0	1.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	8.1	0.0	0.0	0.0	1.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.14	1.00	0.00	0.00	0.51	1.00	0.00
Lane Grp Cap (c), veh/h	0	684	78	0	0	527	144	0
V/C Ratio (X)	0.00	0.55	0.37	0.00	0.00	0.73	0.60	0.00
Avail Cap (c_a), veh/h	0	1338	172	0	0	1046	265	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	17.6	31.8	0.0	0.0	20.5	30.4	0.0
Incr Delay (d2), s/veh	0.0	0.7	2.9	0.0	0.0	1.9	3.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.3	34.8	0.0	0.0	22.4	34.3	0.0
1st-Term Q (Q1), veh/ln	0.0	3.9	0.4	0.0	0.0	4.7	1.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.3	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.0	0.5	0.0	0.0	4.9	1.4	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.04	0.00	0.00	0.12	0.11	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment				T+R				T+R
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	487	0	0	0	579
Grp Sat Flow (s), veh/h/ln	0	0	0	1844	0	0	0	1789
Q Serve Time (g_s), s	0.0	0.0	0.0	14.4	0.0	0.0	0.0	20.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	14.4	0.0	0.0	0.0	20.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.28	0.00	0.08	0.00	0.15	0.00	0.25
Lane Grp Cap (c), veh/h	0	0	0	768	0	0	0	679
V/C Ratio (X)	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.85
Avail Cap (c_a), veh/h	0	0	0	1330	0	0	0	1197
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	15.9	0.0	0.0	0.0	19.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	3.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	16.8	0.0	0.0	0.0	22.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.7	0.0	0.0	0.0	6.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	4.9	0.0	0.0	0.0	7.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	124.3
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	791	655	56	20	44
Future Vol, veh/h	82	791	655	56	20	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	860	712	61	22	48
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	172.6	75.2	11.3
HCM LOS	F	F	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	0%	31%
Vol Thru, %	91%	92%	0%
Vol Right, %	0%	8%	69%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	873	711	64
LT Vol	82	0	20
Through Vol	791	655	0
RT Vol	0	56	44
Lane Flow Rate	949	773	70
Geometry Grp	1	1	1
Degree of Util (X)	1.324	1.064	0.129
Departure Headway (Hd)	5.152	5.316	7.273
Convergence, Y/N	Yes	Yes	Yes
Cap	712	688	496
Service Time	3.152	3.316	5.273
HCM Lane V/C Ratio	1.333	1.124	0.141
HCM Control Delay	172.6	75.2	11.3
HCM Lane LOS	F	F	B
HCM 95th-tile Q	37.5	19.4	0.4

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	658	21	24	521	21	18
Future Vol, veh/h	658	21	24	521	21	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	86	86	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	685	22	28	606	30	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	707	0	1358	696
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	662	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	891	-	164	442
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	513	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	891	-	159	442
Mov Cap-2 Maneuver	-	-	-	-	159	-
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	497	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	26.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	226	-	-	891	-
HCM Lane V/C Ratio	0.25	-	-	0.031	-
HCM Control Delay (s)	26.2	-	-	9.2	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	540	56	191	428	23	32	0	112	15	0	40
Future Vol, veh/h	63	540	56	191	428	23	32	0	112	15	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	587	61	208	465	25	35	0	122	22	0	58

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	490	0	0	648	0	0				1324	-	245
Stage 1	-	-	-	-	-	-				894	-	-
Stage 2	-	-	-	-	-	-				430	-	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	-	3.32
Pot Cap-1 Maneuver	1070	-	-	934	-	-				147	0	755
Stage 1	-	-	-	-	-	-				360	0	-
Stage 2	-	-	-	-	-	-				624	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1070	-	-	934	-	-				95	0	755
Mov Cap-2 Maneuver	-	-	-	-	-	-				95	0	-
Stage 1	-	-	-	-	-	-				337	0	-
Stage 2	-	-	-	-	-	-				432	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	3	24.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1070	-	-	934	-	-	261
HCM Lane V/C Ratio	0.064	-	-	0.222	-	-	0.305
HCM Control Delay (s)	8.6	-	-	10	-	-	24.7
HCM Lane LOS	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	0.8	-	-	1.2

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	574	69	58	650	0	97
Future Vol, veh/h	574	69	58	650	0	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	86	86	48	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	911	110	67	756	0	202

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1021	0	-	511
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	675	-	0	508
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	675	-	-	508
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	16.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	508	-	-	675	-
HCM Lane V/C Ratio	0.398	-	-	0.1	-
HCM Control Delay (s)	16.7	-	-	10.9	0.8
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	1.9	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	337	75	85	351	102	89	189	72	107	201	274
Future Volume (veh/h)	205	337	75	85	351	102	89	189	72	107	201	274
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	247	406	90	90	373	109	95	201	77	119	223	304
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	336	955	210	151	614	177	138	640	236	167	479	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.19	0.33	0.31	0.08	0.23	0.21	0.08	0.25	0.24	0.09	0.27	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.9	18.0	18.3	33.5	24.8	25.3	36.3	20.8	21.0	37.6	21.2	25.0
Ln Grp LOS	C	B	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		743			572			373			646	
Approach Delay, s/veh		21.7			26.3			24.8			26.0	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	6	5	8	7
Case No	2.0	4.0	2.0	4.0	4.0	2.0	4.0	2.0
Phs Duration (G+Y+Rc), s	10.3	21.1	9.7	26.3	22.2	9.2	19.3	16.7
Change Period (Y+Rc), s	4.6	4.6	5.3	5.3	4.6	4.6	5.3	5.3
Max Green (Gmax), s	7.4	33.7	12.4	46.7	33.7	7.4	33.4	25.7
Max Allow Headway (MAH), s	4.1	4.1	4.1	4.1	4.2	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	6.4	6.6	5.3	9.5	14.0	5.5	10.5	10.8
Green Ext Time (g_e), s	0.0	0.9	0.1	1.8	1.9	0.0	1.7	0.7
Prob of Phs Call (p_c)	0.89	1.00	0.81	1.00	1.00	0.83	1.00	0.99
Prob of Max Out (p_x)	1.00	0.00	0.05	0.00	0.00	1.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3			5		7
Mvmt Sat Flow, veh/h	1781		1781			1781		1781
Through Movement Data								
Assigned Mvmt		2		4	6		8	
Mvmt Sat Flow, veh/h		2525		2886	1777		2707	
Right-Turn Movement Data								
Assigned Mvmt		12		14	16		18	
Mvmt Sat Flow, veh/h		932		633	1554		780	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	0	5	0	7
Lane Assignment	L (Prot)		L (Prot)			L (Prot)		L (Prot)

Lanes in Grp	1	0	1	0	0	1	0	1
Grp Vol (v), veh/h	119	0	90	0	0	95	0	247
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	0	1781	0	1781
Q Serve Time (g_s), s	4.4	0.0	3.3	0.0	0.0	3.5	0.0	8.8
Cycle Q Clear Time (g_c), s	4.4	0.0	3.3	0.0	0.0	3.5	0.0	8.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	167	0	151	0	0	138	0	336
V/C Ratio (X)	0.71	0.00	0.60	0.00	0.00	0.69	0.00	0.74
Avail Cap (c_a), veh/h	212	0	362	0	0	212	0	714
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	29.6	0.0	29.7	0.0	0.0	30.3	0.0	25.7
Incr Delay (d2), s/veh	7.9	0.0	3.8	0.0	0.0	6.0	0.0	3.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.6	0.0	33.5	0.0	0.0	36.3	0.0	28.9
1st-Term Q (Q1), veh/ln	1.6	0.0	1.2	0.0	0.0	1.3	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.2	0.0	0.0	0.2	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	2.0	0.0	1.4	0.0	0.0	1.6	0.0	3.5
%ile Storage Ratio (RQ%)	0.34	0.00	0.17	0.00	0.00	0.26	0.00	0.66
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	6	0	8	0
Lane Assignment		T		T	T		T	
Lanes in Grp	0	1	0	1	1	0	1	0
Grp Vol (v), veh/h	0	139	0	248	223	0	243	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	1777	0	1777	0
Q Serve Time (g_s), s	0.0	4.3	0.0	7.3	7.1	0.0	8.2	0.0
Cycle Q Clear Time (g_c), s	0.0	4.3	0.0	7.3	7.1	0.0	8.2	0.0
Lane Grp Cap (c), veh/h	0	450	0	588	479	0	403	0
V/C Ratio (X)	0.00	0.31	0.00	0.42	0.47	0.00	0.60	0.00
Avail Cap (c_a), veh/h	0	905	0	1266	905	0	916	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	20.4	0.0	17.5	20.5	0.0	23.3	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.5	0.7	0.0	1.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.8	0.0	18.0	21.2	0.0	24.8	0.0
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	2.4	2.5	0.0	2.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	2.5	2.5	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.05	0.03	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	16	0	18	0
Lane Assignment		T+R		T+R	T+R		T+R	
Lanes in Grp	0	1	0	1	1	0	1	0
Grp Vol (v), veh/h	0	139	0	248	304	0	239	0
Grp Sat Flow (s), veh/h/ln	0	1680	0	1743	1554	0	1710	0
Q Serve Time (g_s), s	0.0	4.6	0.0	7.5	12.0	0.0	8.5	0.0
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	7.5	12.0	0.0	8.5	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.55	0.00	0.36	1.00	0.00	0.46	0.00
Lane Grp Cap (c), veh/h	0	426	0	577	419	0	388	0
V/C Ratio (X)	0.00	0.33	0.00	0.43	0.73	0.00	0.62	0.00
Avail Cap (c_a), veh/h	0	856	0	1242	792	0	881	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	20.6	0.0	17.8	22.6	0.0	23.7	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.5	2.4	0.0	1.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.0	0.0	18.3	25.0	0.0	25.3	0.0
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	2.5	3.7	0.0	2.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.3	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	2.6	4.0	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.05	0.04	0.00	0.01	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		24.5
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	5	7	38	10	127	7	626	66	167	747	147
Future Volume (veh/h)	142	5	7	38	10	127	7	626	66	167	747	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	160	6	8	42	11	140	8	728	77	178	795	156
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.86	0.86	0.86	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	234	7	9	290	70	259	39	2353	247	326	1427	289
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.75	0.75	0.75	0.75	0.75	0.75
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.1	0.0	0.0	42.0	0.0	47.1	5.5	0.0	5.7	12.0	0.0	8.1
Ln Grp LOS	E	A	A	D	A	D	A	A	A	B	A	A
Approach Vol, veh/h		174			193			813			1129	
Approach Delay, s/veh		58.1			45.7			5.6			9.8	
Approach LOS		E			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		8.0		8.0		8.0		7.0
Phs Duration (G+Y+Rc), s		94.2		25.8		94.2		25.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		89.5		21.5		89.5		21.5
Max Allow Headway (MAH), s		4.1		4.3		4.5		4.2
Max Q Clear (g_c+I1), s		11.2		21.3		34.6		12.5
Green Ext Time (g_e), s		3.2		0.0		6.6		0.4
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		0.04
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		11		996		381		1332
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3147		37		1909		395
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		330		50		387		1460
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L+T		L+T+R		L+T		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	430	0	174	0	470	0	53
Grp Sat Flow (s), veh/h/ln	0	1846	0	1083	0	1044	0	1726
Q Serve Time (g_s), s	0.0	0.0	0.0	16.2	0.0	23.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.1	0.0	19.3	0.0	32.6	0.0	3.0
Perm LT Sat Flow (s_l), veh/h/ln	0	599	0	1256	0	687	0	1422
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	1749
Perm LT Eff Green (g_p), s	0.0	89.7	0.0	21.3	0.0	89.7	0.0	21.3
Perm LT Serve Time (g_u), s	0.0	69.2	0.0	18.3	0.0	80.5	0.0	2.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	16.2	0.0	23.4	0.0	0.0
Time to First Blk (g_f), s	0.0	60.1	0.0	0.0	0.0	1.8	0.0	0.5
Serve Time pre Blk (g_fs), s	0.0	9.1	0.0	0.0	0.0	1.8	0.0	0.5
Prop LT Inside Lane (P_L)	0.00	0.02	0.00	0.92	0.00	0.38	0.00	0.79
Lane Grp Cap (c), veh/h	0	1411	0	250	0	821	0	360
V/C Ratio (X)	0.00	0.30	0.00	0.70	0.00	0.57	0.00	0.15
Avail Cap (c_a), veh/h	0	1411	0	252	0	821	0	363
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	50.0	0.0	9.2	0.0	41.8
Incr Delay (d2), s/veh	0.0	0.6	0.0	8.0	0.0	2.9	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	58.1	0.0	12.0	0.0	42.0
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	4.9	0.0	5.0	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.6	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	5.4	0.0	5.6	0.0	1.3
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.12	0.00	0.04	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		R
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	383	0	0	0	659	0	140
Grp Sat Flow (s), veh/h/ln	0	1643	0	0	0	1632	0	1460
Q Serve Time (g_s), s	0.0	9.2	0.0	0.0	0.0	20.5	0.0	10.5
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	0.0	0.0	20.5	0.0	10.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	0.05	0.00	0.24	0.00	1.00
Lane Grp Cap (c), veh/h	0	1228	0	0	0	1220	0	259
V/C Ratio (X)	0.00	0.31	0.00	0.00	0.00	0.54	0.00	0.54
Avail Cap (c_a), veh/h	0	1228	0	0	0	1220	0	262
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	0.0	0.0	6.4	0.0	44.9
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	1.7	0.0	2.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.7	0.0	0.0	0.0	8.1	0.0	47.1
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.0	0.0	4.9	0.0	3.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.6	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.0	0.0	5.5	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.04	0.00	1.92
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	82	775	646	56	20	44
Future Volume (veh/h)	82	775	646	56	20	44
Number	7	4	8	18	1	16
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	842	702	61	22	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	110	896	998	87	172	375
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Prop Arrive On Green	0.59	0.59	1.00	1.00	0.34	0.34
Unsig. Movement Delay						
Ln Grp Delay, s/veh	32.2	0.0	0.0	0.9	28.0	0.0
Ln Grp LOS	C	A	A	A	C	A
Approach Vol, veh/h		931	763		71	
Approach Delay, s/veh		32.2	0.9		28.0	
Approach LOS		C	A		C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	6			4				8
Case No	12.0			8.0				8.0
Phs Duration (G+Y+Rc), s	44.9			75.1				75.1
Change Period (Y+Rc), s	4.5			4.5				4.5
Max Green (Gmax), s	18.5			92.5				92.5
Max Allow Headway (MAH), s	4.3			4.2				4.0
Max Q Clear (g_c+I1), s	5.6			65.3				2.0
Green Ext Time (g_e), s	0.1			5.3				3.5
Prob of Phs Call (p_c)	1.00			1.00				1.00
Prob of Max Out (p_x)	0.00			0.02				0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7				3
Mvmt Sat Flow, veh/h	510			131				0

Through Movement Data								
Assigned Mvmt	6			4				8
Mvmt Sat Flow, veh/h	23			1523				1696

Right-Turn Movement Data								
Assigned Mvmt	16			14				18
Mvmt Sat Flow, veh/h	1112			0				147

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	0	0	0	3
Lane Assignment	L+T+R			L+T				

Lanes in Grp	1	0	0	1	0	0	0	0
Grp Vol (v), veh/h	71	0	0	931	0	0	0	0
Grp Sat Flow (s), veh/h/ln	1645	0	0	1654	0	0	0	0
Q Serve Time (g_s), s	3.6	0.0	0.0	52.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	3.6	0.0	0.0	63.3	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	715	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	70.6	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	70.6	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	52.4	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	10.8	0.0	0.0	0.0	70.6
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	10.8	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.31	0.00	0.00	0.10	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	554	0	0	1005	0	0	0	0
V/C Ratio (X)	0.13	0.00	0.00	0.93	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	554	0	0	1300	0	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	27.6	0.0	0.0	22.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	9.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	28.0	0.0	0.0	32.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	0.0	20.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	1.4	0.0	0.0	23.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.22	0.00	0.00	0.71	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	6	0	0	4	0	0	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	16	0	0	14	0	0	0	18
Lane Assignment								T+R
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	763
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1844
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.08
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	1084
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1421
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	642	21	24	512	21	18
Future Volume (veh/h)	642	21	24	512	21	18
Number	4	14	3	8	5	12
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1723	1723	1870	1723	1723
Adj Flow Rate, veh/h	669	22	28	595	30	26
Peak Hour Factor	0.96	0.96	0.86	0.86	0.69	0.69
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence			Yes		Yes	
Cap, veh/h	724	24	136	752	428	371
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.80	0.80	0.40	0.40	0.52	0.52
Unsig. Movement Delay						
Ln Grp Delay, s/veh	0.0	13.6	50.3	33.4	14.3	0.0
Ln Grp LOS	A	B	D	C	B	A
Approach Vol, veh/h	691			623	57	
Approach Delay, s/veh	13.6			34.2	14.3	
Approach LOS	B			C	B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Case No		12.0		8.0				6.0
Phs Duration (G+Y+Rc), s		69.3		50.7				50.7
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green (Gmax), s		21.5		89.5				89.5
Max Allow Headway (MAH), s		4.2		4.0				4.1
Max Q Clear (g_c+I1), s		4.2		36.0				41.6
Green Ext Time (g_e), s		0.1		3.0				2.7
Prob of Phs Call (p_c)		1.00		1.00				1.00
Prob of Max Out (p_x)		0.00		0.00				0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7				3
Mvmt Sat Flow, veh/h		818		0				693
Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		27		1800				1870
Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		709		59				0
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	0	0	3
Lane Assignment		L+T+R						L

Lanes in Grp	0	1	0	0	0	0	0	1
Grp Vol (v), veh/h	0	57	0	0	0	0	0	28
Grp Sat Flow (s), veh/h/ln	0	1554	0	0	0	0	0	693
Q Serve Time (g_s), s	0.0	2.2	0.0	0.0	0.0	0.0	0.0	4.5
Cycle Q Clear Time (g_c), s	0.0	2.2	0.0	0.0	0.0	0.0	0.0	39.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	693
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.2
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5
Time to First Blk (g_f), s	0.0	0.0	0.0	48.2	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.53	0.00	0.00	0.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	813	0	0	0	0	0	136
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.21
Avail Cap (c_a), veh/h	0	813	0	0	0	0	0	374
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.2	0.0	0.0	0.0	0.0	0.0	49.6
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	0.0	0.0	0.0	0.0	50.3
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.8
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.20
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment								T
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	595
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.5
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	752
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1395
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment				T+R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	691	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1860	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.46	0.00	0.03	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	747	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.92	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1387	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	13.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		23.0						
HCM 6th LOS		C						

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Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

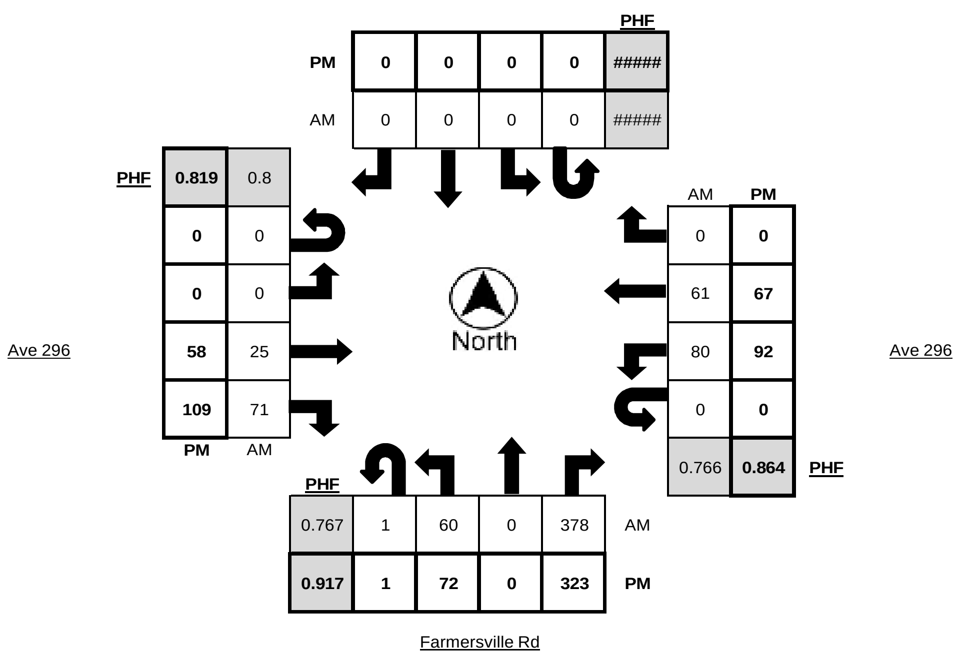
LOCATION Farmersville Rd @ Ave 296
LATITUDE 36.3281
COUNTY Tulare
LONGITUDE -119.2092
COLLECTION DATE Tuesday, March 29, 2022
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
6:00 AM - 6:15 AM	0	9	0	42	1	0	0	0	0	0	0	0	7	16	1	0	6	11	0	0
6:15 AM - 6:30 AM	0	18	0	79	3	0	0	0	0	0	0	0	8	21	4	0	7	6	0	0
6:30 AM - 6:45 AM	0	5	0	101	3	0	0	0	0	0	0	0	8	20	2	0	23	9	0	1
6:45 AM - 7:00 AM	0	19	0	72	7	0	0	0	0	0	0	0	10	17	1	0	19	5	0	0
7:00 AM - 7:15 AM	0	7	0	61	0	0	0	0	0	0	0	0	4	19	4	0	20	10	0	5
7:15 AM - 7:30 AM	0	11	0	97	3	0	0	0	0	0	0	0	7	23	1	0	19	15	0	5
7:30 AM - 7:45 AM	0	22	0	98	4	0	0	0	0	0	0	0	8	19	0	0	17	14	0	2
7:45 AM - 8:00 AM	1	20	0	122	3	0	0	0	0	0	0	0	6	10	1	0	24	22	0	3
TOTAL	**1**	**111**	**0**	**672**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**58**	**145**	**14**	**0**	**135**	**92**	**0**	**16**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	25	0	83	4	0	0	0	0	0	0	0	13	31	0	0	19	15	0	1
4:15 PM - 4:30 PM	0	18	0	79	3	0	0	0	0	0	0	0	16	16	2	0	28	18	0	1
4:30 PM - 4:45 PM	1	15	0	80	3	0	0	0	0	0	0	0	18	33	1	0	26	10	0	2
4:45 PM - 5:00 PM	0	16	0	79	2	0	0	0	0	0	0	0	11	24	1	0	20	20	0	1
5:00 PM - 5:15 PM	0	23	0	85	6	0	0	0	0	0	0	0	13	36	1	0	18	19	0	0
5:15 PM - 5:30 PM	0	25	0	73	2	0	0	0	0	0	0	0	17	21	0	0	17	12	0	0
5:30 PM - 5:45 PM	0	24	0	80	2	0	0	0	0	0	0	0	11	8	0	0	14	15	0	1
5:45 PM - 6:00 PM	0	14	0	62	0	0	0	0	0	0	0	0	12	27	1	0	19	5	0	0
TOTAL	**1**	**160**	**0**	**621**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**111**	**196**	**6**	**0**	**161**	**114**	**0**	**6**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 8:00 AM	1	60	0	378	10	0	0	0	0	0	0	0	25	71	6	0	80	61	0	15
4:15 PM - 5:15 PM	1	72	0	323	14	0	0	0	0	0	0	0	58	109	5	0	92	67	0	4

	PHF	Trucks
AM	0.824	4.6%
PM	0.930	3.2%



Metro Traffic Data Inc.
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Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

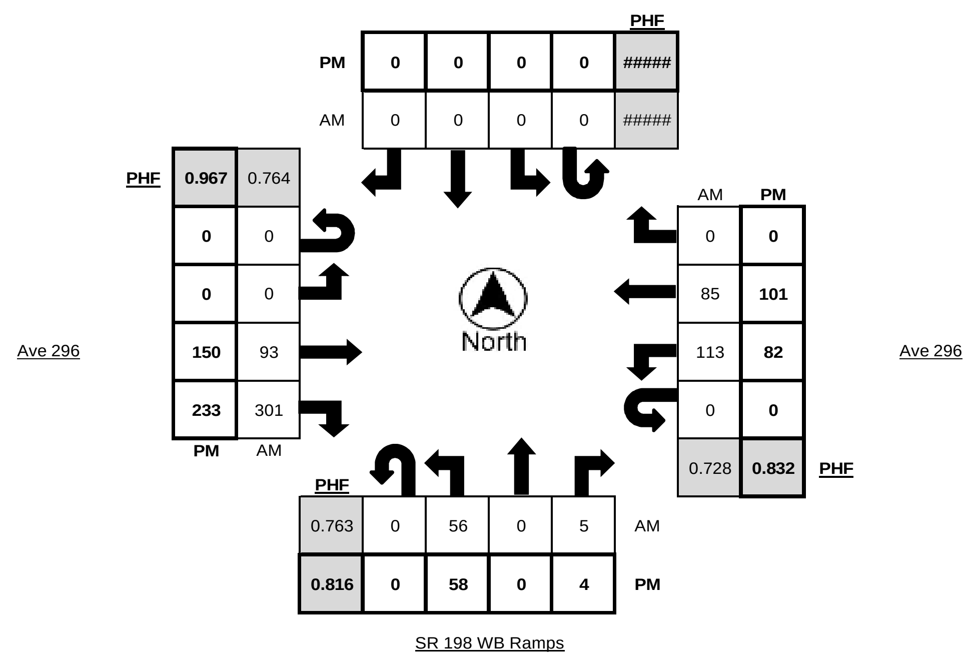
LOCATION	SR 198 WB Ramps @ Ave 296	**LATITUDE**	36.3280
COUNTY	Tulare	**LONGITUDE**	-119.2082
COLLECTION DATE	Tuesday, March 29, 2022	**WEATHER**	Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	5	0	0	0	0	0	0	0	0	0	0	27	23	1	0	10	9	0	0
6:15 AM - 6:30 AM	0	7	0	0	0	0	0	0	0	0	0	0	45	40	3	0	8	8	0	0
6:30 AM - 6:45 AM	0	14	0	1	0	0	0	0	0	0	0	0	61	49	2	0	14	17	0	0
6:45 AM - 7:00 AM	0	7	0	3	0	0	0	0	0	0	0	0	41	41	3	0	19	19	0	0
7:00 AM - 7:15 AM	0	20	0	0	0	0	0	0	0	0	0	0	18	45	1	0	20	9	0	1
7:15 AM - 7:30 AM	0	14	0	0	0	0	0	0	0	0	0	0	25	75	1	0	30	20	0	3
7:30 AM - 7:45 AM	0	10	0	2	0	0	0	0	0	0	0	0	24	78	2	0	31	20	0	1
7:45 AM - 8:00 AM	0	12	0	3	0	0	0	0	0	0	0	0	26	103	3	0	32	36	0	1
TOTAL	**0**	**89**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**267**	**454**	**16**	**0**	**164**	**138**	**0**	**6**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	10	0	0	0	0	0	0	0	0	0	0	44	53	4	0	17	27	0	4
4:15 PM - 4:30 PM	0	18	0	1	0	0	0	0	0	0	0	0	39	58	3	0	28	27	0	2
4:30 PM - 4:45 PM	0	18	0	1	0	0	0	0	0	0	0	0	36	60	3	0	12	17	0	0
4:45 PM - 5:00 PM	0	14	0	2	0	0	0	0	0	0	0	0	35	56	4	0	25	27	0	3
5:00 PM - 5:15 PM	0	8	0	0	0	0	0	0	0	0	0	0	40	59	7	0	17	30	0	2
5:15 PM - 5:30 PM	0	11	0	0	0	0	0	0	0	0	0	0	42	46	2	0	20	17	0	1
5:30 PM - 5:45 PM	0	9	0	0	0	0	0	0	0	0	0	0	36	54	2	0	19	19	0	1
5:45 PM - 6:00 PM	0	5	0	1	0	0	0	0	0	0	0	0	37	39	0	0	8	19	0	1
TOTAL	**0**	**93**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**309**	**425**	**25**	**0**	**146**	**183**	**0**	**14**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	56	0	5	0	0	0	0	0	0	0	0	93	301	7	0	113	85	0	6
4:15 PM - 5:15 PM	0	58	0	4	0	0	0	0	0	0	0	0	150	233	17	0	82	101	0	7

	PHF	Trucks
AM	0.770	2.0%
PM	0.918	3.8%



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Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

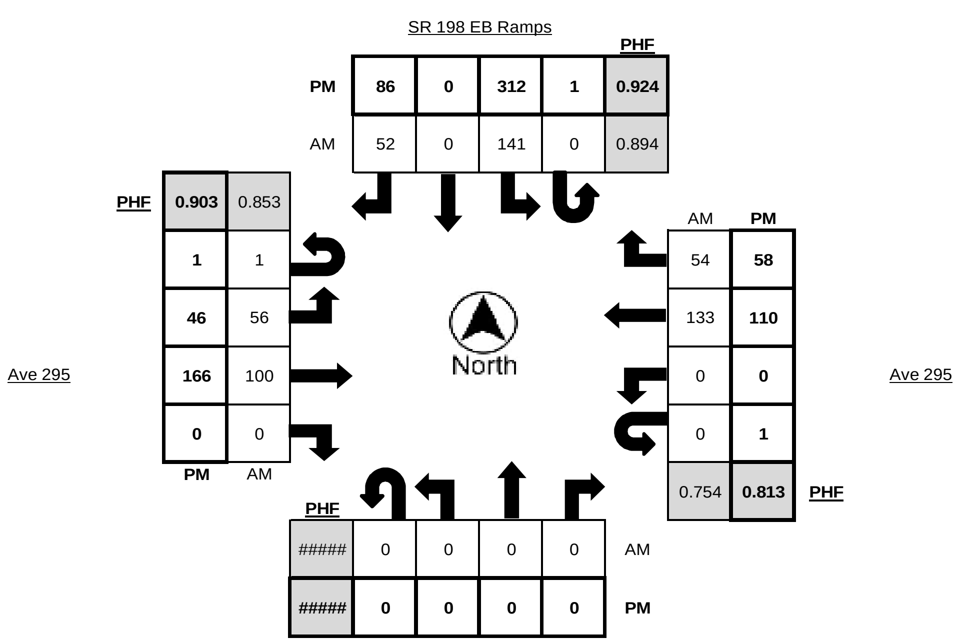
LOCATION	SR 198 EB Ramps @ Ave 295	**LATITUDE**	36.3254
COUNTY	Tulare	**LONGITUDE**	-119.2088
COLLECTION DATE	Tuesday, March 29, 2022	**WEATHER**	Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	0	0	0	0	0	16	0	6	1	0	3	7	0	0	0	0	11	11	1
6:15 AM - 6:30 AM	0	0	0	0	0	0	25	0	7	0	1	6	10	0	0	0	0	13	22	2
6:30 AM - 6:45 AM	0	0	0	0	0	0	29	0	7	3	0	6	14	0	0	0	0	19	23	4
6:45 AM - 7:00 AM	0	0	0	0	0	0	26	0	10	4	0	7	21	0	0	0	0	28	17	2
7:00 AM - 7:15 AM	0	0	0	0	0	0	33	0	11	1	0	15	19	0	2	0	0	33	13	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	36	0	14	1	1	12	24	0	0	0	0	25	7	2
7:30 AM - 7:45 AM	0	0	0	0	0	0	43	0	11	1	0	15	25	0	1	0	0	37	25	4
7:45 AM - 8:00 AM	0	0	0	0	0	0	29	0	16	1	0	14	32	0	1	0	0	38	9	4
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**237**	**0**	**82**	**12**	**2**	**78**	**152**	**0**	**4**	**0**	**0**	**204**	**127**	**19**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	0	0	0	0	0	72	0	23	1	0	12	51	0	1	1	0	25	18	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	61	0	25	1	0	9	40	0	0	1	0	19	12	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	79	0	20	1	0	6	40	0	1	0	0	35	17	1
4:45 PM - 5:00 PM	0	0	0	0	0	0	86	0	22	1	0	9	46	0	0	1	0	19	13	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	70	0	17	0	1	16	36	0	0	0	0	33	16	1
5:15 PM - 5:30 PM	0	0	0	0	0	1	77	0	27	1	0	15	44	0	0	0	0	23	12	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	62	0	22	2	0	9	37	0	0	0	0	19	12	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	66	0	24	0	0	9	35	0	0	1	0	23	16	1
TOTAL	**0**	**0**	**0**	**0**	**0**	**1**	**573**	**0**	**180**	**7**	**1**	**85**	**329**	**0**	**2**	**4**	**0**	**196**	**116**	**3**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	0	0	0	0	0	141	0	52	4	1	56	100	0	4	0	0	133	54	10
4:30 PM - 5:30 PM	0	0	0	0	0	1	312	0	86	3	1	46	166	0	1	1	0	110	58	2

	PHF	Trucks
AM	0.861	3.4%
PM	0.981	0.8%



Turning Movement Report

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Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

LOCATION	Farmersville Rd @ Ave 295	**LATITUDE**	36.3256
COUNTY	Tulare	**LONGITUDE**	-119.2079
COLLECTION DATE	Tuesday, March 29, 2022	**WEATHER**	Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	8	48	0	2	0	0	9	14	2	0	4	0	18	1	0	0	0	0	0
6:15 AM - 6:30 AM	0	14	79	0	5	0	0	12	17	4	1	14	0	19	0	0	0	0	0	0
6:30 AM - 6:45 AM	1	18	98	0	4	0	0	19	21	5	0	18	0	26	3	0	0	0	0	0
6:45 AM - 7:00 AM	0	19	59	0	7	0	0	11	22	1	1	24	0	22	2	0	0	0	0	0
7:00 AM - 7:15 AM	2	20	61	0	0	0	0	15	25	5	0	16	0	33	1	0	0	0	0	0
7:15 AM - 7:30 AM	0	12	79	0	3	0	0	22	20	5	0	21	0	41	1	0	0	0	0	0
7:30 AM - 7:45 AM	0	35	108	0	8	0	0	9	26	1	1	22	0	42	1	0	0	0	0	0
7:45 AM - 8:00 AM	0	26	113	0	7	0	0	16	18	2	0	30	0	29	2	0	0	0	0	0
TOTAL	**3**	**152**	**645**	**0**	**36**	**0**	**0**	**113**	**163**	**25**	**3**	**149**	**0**	**230**	**11**	**0**	**0**	**0**	**0**	**0**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	1	27	70	0	3	1	0	35	14	0	4	37	0	83	2	0	0	0	0	0
4:15 PM - 4:30 PM	0	12	65	0	1	0	0	28	17	2	0	31	0	70	1	0	0	0	0	0
4:30 PM - 4:45 PM	0	25	65	0	3	0	0	33	27	2	1	33	0	83	3	0	0	0	0	0
4:45 PM - 5:00 PM	2	12	67	0	1	0	0	24	17	1	1	35	0	97	1	0	0	0	0	0
5:00 PM - 5:15 PM	2	27	83	0	7	0	0	37	18	1	1	30	0	71	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	17	62	0	2	0	0	22	16	0	0	37	0	86	1	0	0	0	0	0
5:30 PM - 5:45 PM	0	20	70	0	0	0	0	13	9	0	0	32	0	69	3	0	0	0	0	0
5:45 PM - 6:00 PM	1	22	56	0	0	0	0	30	19	1	0	26	0	76	0	0	0	0	0	0
TOTAL	**6**	**162**	**538**	**0**	**17**	**1**	**0**	**222**	**137**	**7**	**7**	**261**	**0**	**635**	**11**	**0**	**0**	**0**	**0**	**0**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	2	93	361	0	18	0	0	62	89	13	1	89	0	145	5	0	0	0	0	0
4:30 PM - 5:30 PM	4	81	277	0	13	0	0	116	78	4	3	135	0	337	5	0	0	0	0	0

	PHF	Trucks
AM	0.866	4.3%
PM	0.958	2.1%

Farmersville Rd

					PHF
PM	**78**	**116**	**0**	**0**	**0.808**
AM	89	62	0	0	0.899

Ave 295

PHF	**0.893**	0.904
	3	1
	135	89
	0	0
	337	145
	PM	AM

North

AM	PM
0	**0**
0	**0**
0	**0**
0	**0**
#####	**#####**

PHF

PHF					
0.797	2	93	361	0	AM
0.808	**4**	**81**	**277**	**0**	**PM**

Farmersville Rd

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Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

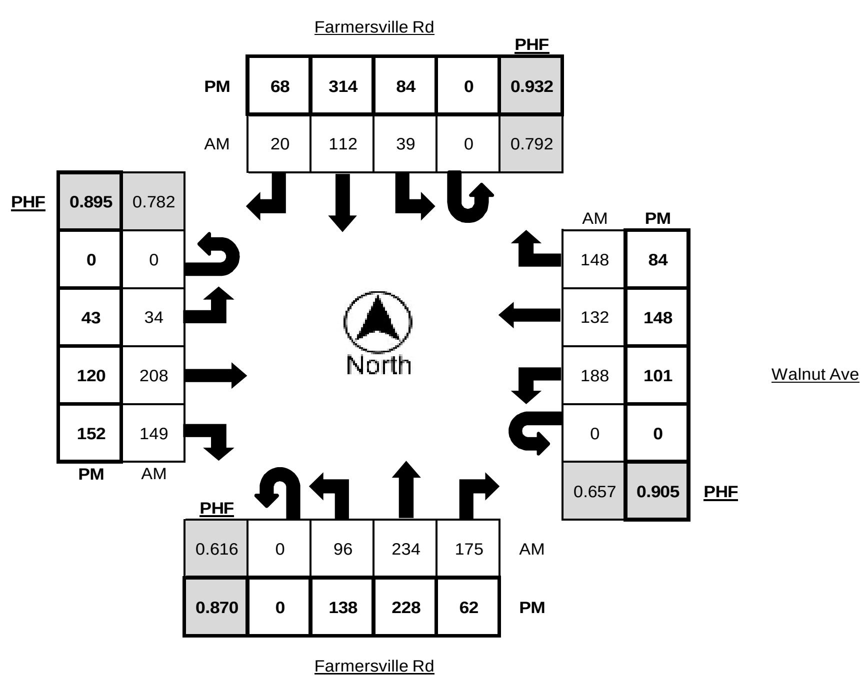
LOCATION Farmersville Rd @ Walnut Ave
LATITUDE 36.3123
COUNTY Tulare
LONGITUDE -119.2070
COLLECTION DATE Tuesday, March 29, 2022
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
6:00 AM - 6:15 AM	0	12	42	2	0	0	3	10	2	3	0	10	11	10	0	0	1	10	8	0
6:15 AM - 6:30 AM	0	10	74	5	4	0	4	18	7	1	0	12	14	12	1	0	2	6	14	1
6:30 AM - 6:45 AM	0	12	71	6	2	0	4	30	5	3	0	24	28	21	3	0	3	3	22	0
6:45 AM - 7:00 AM	0	15	60	10	4	0	4	18	3	2	0	5	27	22	3	0	10	9	15	3
7:00 AM - 7:15 AM	0	16	40	10	2	0	3	25	2	3	0	6	28	20	1	0	8	15	23	5
7:15 AM - 7:30 AM	0	21	52	18	3	0	10	27	4	4	0	4	47	41	1	0	30	26	31	4
7:30 AM - 7:45 AM	0	20	76	47	2	0	11	30	5	2	0	9	70	41	3	0	62	43	52	3
7:45 AM - 8:00 AM	0	39	66	100	0	0	15	30	9	2	0	15	63	47	3	0	88	48	42	2
TOTAL	**0**	**145**	**481**	**198**	**17**	**0**	**54**	**188**	**37**	**20**	**0**	**85**	**288**	**214**	**15**	**0**	**204**	**160**	**207**	**18**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	35	62	13	1	0	17	100	26	1	0	16	20	29	1	0	21	38	21	2
4:15 PM - 4:30 PM	0	26	54	13	1	0	13	82	20	2	0	7	28	27	0	0	15	31	14	2
4:30 PM - 4:45 PM	0	33	52	12	3	0	13	79	17	0	0	9	31	38	0	0	23	45	20	2
4:45 PM - 5:00 PM	0	38	48	18	0	0	21	79	18	1	0	9	31	42	1	0	28	31	19	2
5:00 PM - 5:15 PM	0	35	69	19	0	0	29	78	18	0	0	13	29	25	1	0	24	44	24	3
5:15 PM - 5:30 PM	0	32	59	13	2	0	21	78	15	0	0	12	29	47	0	0	26	28	21	1
5:30 PM - 5:45 PM	0	34	60	19	0	1	8	60	11	1	0	7	37	38	1	0	23	37	15	0
5:45 PM - 6:00 PM	0	35	57	19	0	0	16	78	13	0	0	5	25	37	0	0	18	30	21	1
TOTAL	**0**	**268**	**461**	**126**	**7**	**1**	**138**	**634**	**138**	**5**	**0**	**78**	**230**	**283**	**4**	**0**	**178**	**284**	**155**	**13**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 8:00 AM	0	96	234	175	7	0	39	112	20	11	0	34	208	149	8	0	188	132	148	14
4:30 PM - 5:30 PM	0	138	228	62	5	0	84	314	68	1	0	43	120	152	2	0	101	148	84	8

	PHF	Trucks
AM	0.683	2.6%
PM	0.947	1.0%



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Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

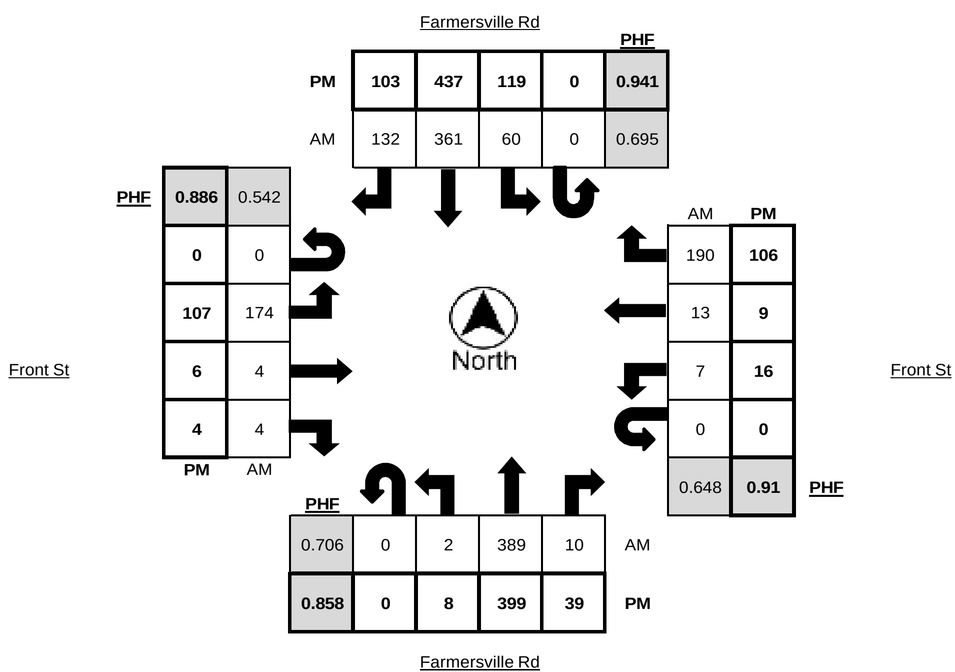
LOCATION	Farmersville Rd @ Front St	**LATITUDE**	36.3047
COUNTY	Tulare	**LONGITUDE**	-119.2071
COLLECTION DATE	Tuesday, March 29, 2022	**WEATHER**	Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
6:00 AM - 6:15 AM	0	0	37	2	0	0	2	34	5	1	0	11	0	1	1	0	2	3	14	0
6:15 AM - 6:30 AM	0	0	46	0	1	0	5	34	5	0	0	15	0	1	0	0	4	0	21	0
6:30 AM - 6:45 AM	0	1	50	0	2	0	6	51	6	2	0	17	0	0	0	0	2	0	22	0
6:45 AM - 7:00 AM	0	0	52	1	3	0	5	46	5	0	0	9	0	1	0	0	0	1	30	1
7:00 AM - 7:15 AM	0	0	44	4	1	0	6	38	11	1	0	13	0	0	0	0	1	0	24	1
7:15 AM - 7:30 AM	0	1	78	1	3	0	15	78	22	7	0	23	1	1	0	0	2	2	30	0
7:30 AM - 7:45 AM	0	1	128	2	1	0	17	119	48	2	0	57	1	2	1	0	1	4	65	0
7:45 AM - 8:00 AM	0	0	139	3	1	0	22	126	51	1	0	81	2	1	0	0	3	7	71	0
TOTAL	**0**	**3**	**574**	**13**	**12**	**0**	**78**	**526**	**153**	**14**	**0**	**226**	**4**	**7**	**2**	**0**	**15**	**17**	**277**	**2**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	1	109	12	4	0	31	111	30	1	0	34	1	1	0	0	4	0	24	0
4:15 PM - 4:30 PM	0	0	87	7	0	0	27	105	20	1	0	22	1	1	0	0	10	2	19	0
4:30 PM - 4:45 PM	0	1	94	14	2	0	29	108	23	2	0	22	2	2	1	0	5	0	25	0
4:45 PM - 5:00 PM	0	3	86	8	0	0	29	117	29	1	0	28	0	1	0	0	4	5	25	0
5:00 PM - 5:15 PM	0	3	114	13	1	0	32	109	24	1	0	29	3	1	0	0	6	1	29	0
5:15 PM - 5:30 PM	0	1	105	4	2	0	29	103	27	0	0	28	1	0	0	0	1	3	27	0
5:30 PM - 5:45 PM	0	2	91	9	1	0	23	93	20	1	0	29	3	0	0	0	2	2	20	0
5:45 PM - 6:00 PM	0	0	96	4	0	0	17	102	22	1	0	18	3	0	0	0	6	0	27	0
TOTAL	**0**	**11**	**782**	**71**	**10**	**0**	**217**	**848**	**195**	**8**	**0**	**210**	**14**	**6**	**1**	**0**	**38**	**13**	**196**	**0**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 8:00 AM	0	2	389	10	6	0	60	361	132	11	0	174	4	4	1	0	7	13	190	1
4:30 PM - 5:30 PM	0	8	399	39	5	0	119	437	103	4	0	107	6	4	1	0	16	9	106	0

	PHF	Trucks
AM	0.665	1.4%
PM	0.929	0.7%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
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Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

LOCATION Visalia Rd @ Rd 156 (Mariposa) **LATITUDE** 36.2979

COUNTY Tulare **LONGITUDE** -119.2249

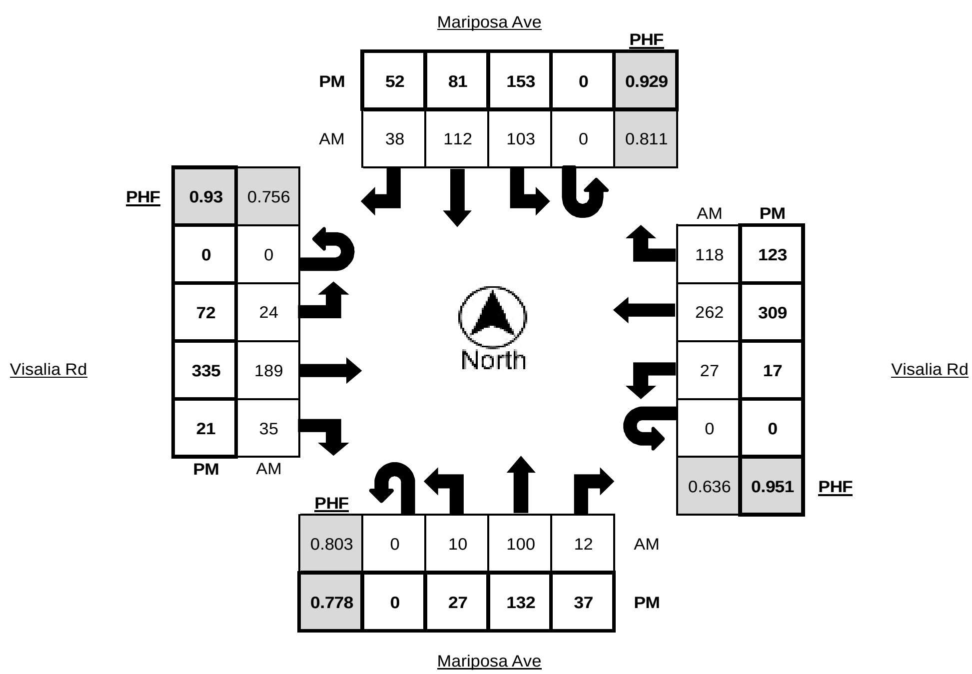
COLLECTION DATE Tuesday, March 29, 2022 **WEATHER** Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
6:00 AM - 6:15 AM	0	3	11	1	1	0	11	17	2	0	0	5	13	6	1	0	4	23	24	0
6:15 AM - 6:30 AM	0	3	9	0	0	0	10	21	6	1	0	7	22	2	2	0	6	28	14	1
6:30 AM - 6:45 AM	0	0	18	4	0	0	17	36	8	0	0	5	17	8	2	0	7	46	27	1
6:45 AM - 7:00 AM	0	5	18	2	0	0	12	22	10	4	0	7	36	11	5	0	11	42	26	0
7:00 AM - 7:15 AM	0	3	18	1	1	0	15	24	9	1	0	2	30	6	3	0	5	34	17	1
7:15 AM - 7:30 AM	0	1	18	5	0	0	18	26	6	4	0	4	47	10	5	0	4	56	18	1
7:30 AM - 7:45 AM	0	2	33	3	0	0	37	32	9	3	0	11	59	12	3	0	6	70	37	0
7:45 AM - 8:00 AM	0	4	31	3	0	0	33	30	14	2	0	7	53	7	0	0	12	102	46	3
TOTAL	**0**	**21**	**156**	**19**	**2**	**0**	**153**	**208**	**64**	**15**	**0**	**48**	**277**	**62**	**21**	**0**	**55**	**401**	**209**	**7**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	5	28	15	1	0	41	21	6	0	0	14	71	7	4	0	4	74	33	2
4:15 PM - 4:30 PM	0	7	28	11	3	0	31	29	10	2	0	18	69	7	1	0	3	79	20	2
4:30 PM - 4:45 PM	0	9	46	8	4	0	32	25	15	2	0	14	76	10	0	0	7	72	29	4
4:45 PM - 5:00 PM	0	9	21	13	0	0	43	21	13	0	0	18	87	5	1	0	2	86	30	0
5:00 PM - 5:15 PM	0	5	29	9	0	0	38	10	15	0	0	21	79	3	1	0	4	76	38	1
5:15 PM - 5:30 PM	0	4	36	7	0	0	40	25	9	0	0	19	93	3	0	0	4	75	26	1
5:30 PM - 5:45 PM	0	3	16	7	0	0	38	13	16	4	0	21	99	1	0	0	2	77	18	0
5:45 PM - 6:00 PM	0	5	20	5	0	0	41	19	10	1	0	9	85	3	1	0	2	63	28	2
TOTAL	**0**	**47**	**224**	**75**	**8**	**0**	**304**	**163**	**94**	**9**	**0**	**134**	**659**	**39**	**8**	**0**	**28**	**602**	**222**	**12**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 8:00 AM	0	10	100	12	1	0	103	112	38	10	0	24	189	35	11	0	27	262	118	5
4:30 PM - 5:30 PM	0	27	132	37	4	0	153	81	52	2	0	72	335	21	2	0	17	309	123	6

	PHF	Trucks
AM	0.753	2.6%
PM	0.976	1.0%



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Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

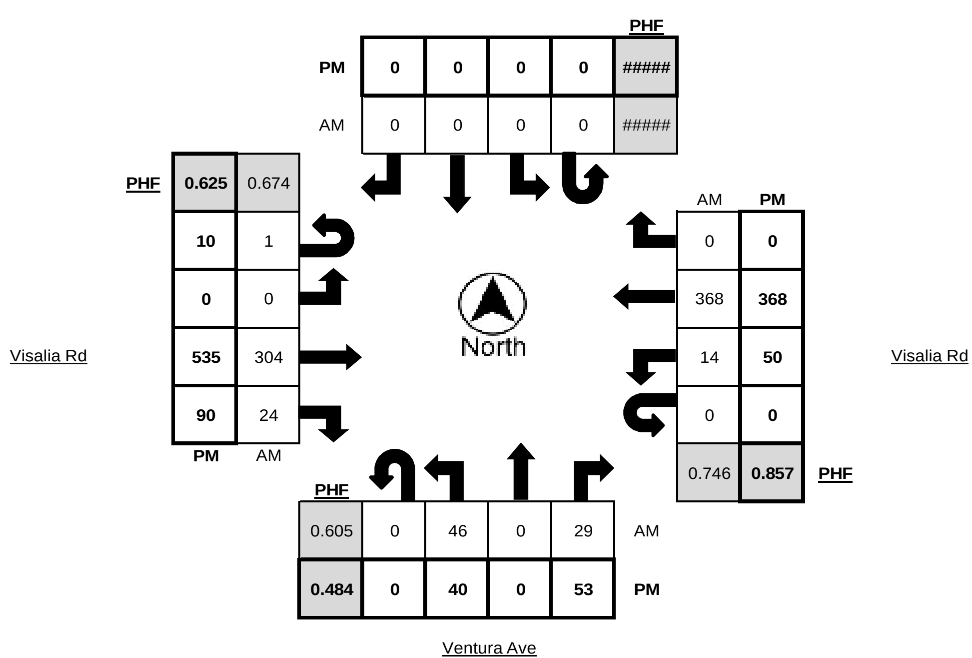
LOCATION Visalia Rd @ Ventura Ave
COUNTY Tulare
COLLECTION DATE Tuesday, March 29, 2022
LATITUDE 36.2978
LONGITUDE -119.2117
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	6	0	2	0	0	0	0	0	0	0	0	25	4	1	0	1	31	0	0
6:15 AM - 6:30 AM	0	3	0	5	0	0	0	0	0	0	0	0	29	4	1	0	1	40	0	1
6:30 AM - 6:45 AM	0	9	0	5	0	0	0	0	0	0	0	0	45	5	0	0	3	53	0	2
6:45 AM - 7:00 AM	0	2	0	4	0	0	0	0	0	0	0	0	43	5	1	0	1	61	0	2
7:00 AM - 7:15 AM	0	5	0	3	1	0	0	0	0	0	1	0	37	5	3	0	2	53	0	0
7:15 AM - 7:30 AM	0	8	0	3	0	0	0	0	0	0	0	0	60	4	3	0	2	72	0	2
7:30 AM - 7:45 AM	0	14	0	11	1	0	0	0	0	0	0	0	96	4	2	0	6	122	0	1
7:45 AM - 8:00 AM	0	19	0	12	2	0	0	0	0	0	0	0	111	11	1	0	4	121	0	1
TOTAL	**0**	**66**	**0**	**45**	**4**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**446**	**42**	**12**	**0**	**20**	**553**	**0**	**9**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	8	0	18	0	0	0	0	0	0	3	0	105	10	2	0	10	98	0	2
4:15 PM - 4:30 PM	0	6	0	13	0	0	0	0	0	0	1	0	93	17	1	0	10	103	0	1
4:30 PM - 4:45 PM	0	4	0	8	0	0	0	0	0	0	0	0	103	9	0	0	7	93	0	4
4:45 PM - 5:00 PM	0	9	0	6	0	0	0	0	0	0	0	0	97	18	0	0	18	104	0	0
5:00 PM - 5:15 PM	0	15	0	33	0	0	0	0	0	0	10	0	210	34	1	0	14	85	0	1
5:15 PM - 5:30 PM	0	7	0	7	0	0	0	0	0	0	0	0	126	15	0	0	11	98	0	1
5:30 PM - 5:45 PM	0	9	0	7	0	0	0	0	0	0	0	0	102	23	0	0	7	81	0	0
5:45 PM - 6:00 PM	0	9	0	5	0	0	0	0	0	0	0	0	116	6	1	0	5	81	0	3
TOTAL	**0**	**67**	**0**	**97**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**952**	**132**	**5**	**0**	**82**	**743**	**0**	**12**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	46	0	29	4	0	0	0	0	0	1	0	304	24	9	0	14	368	0	4
4:45 PM - 5:45 PM	0	40	0	53	0	0	0	0	0	0	10	0	535	90	1	0	50	368	0	2

	PHF	**Trucks**
AM	0.707	2.2%
PM	0.714	0.3%



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Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

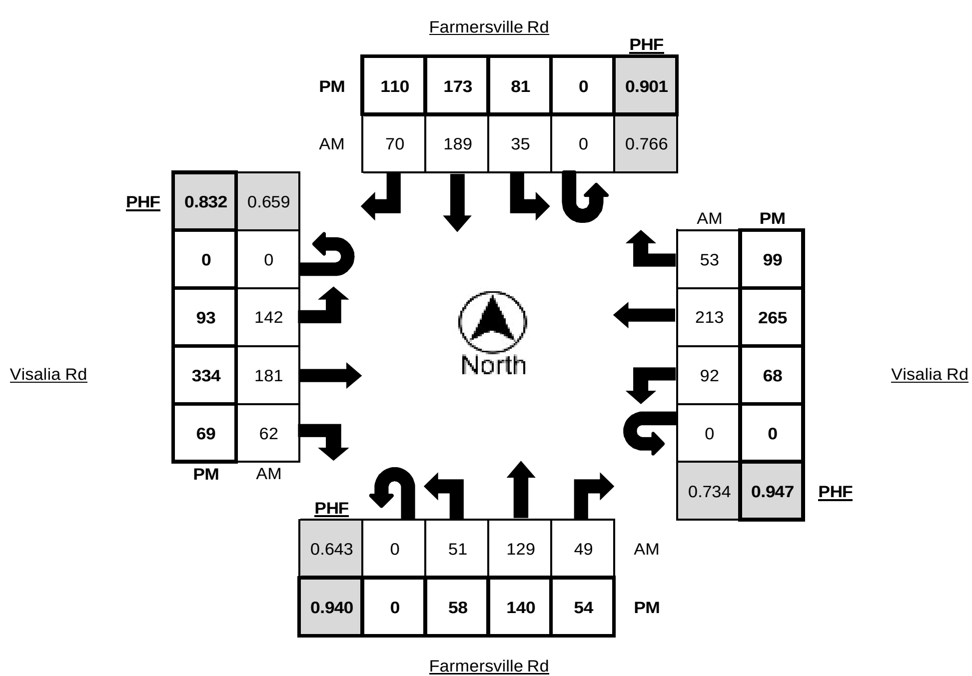
LOCATION	Visalia Rd @ Farmersville Rd	**LATITUDE**	36.2978
COUNTY	Tulare	**LONGITUDE**	-119.2072
COLLECTION DATE	Tuesday, March 29, 2022	**WEATHER**	Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
6:00 AM - 6:15 AM	0	5	16	5	0	0	1	28	5	0	0	7	12	5	1	0	7	11	7	1
6:15 AM - 6:30 AM	0	4	16	7	2	0	6	32	3	0	0	12	19	7	1	0	15	20	4	0
6:30 AM - 6:45 AM	0	9	22	10	2	0	16	32	9	1	0	8	25	22	0	0	14	35	10	2
6:45 AM - 7:00 AM	0	3	21	10	0	0	11	28	11	1	0	6	42	13	1	0	10	39	4	2
7:00 AM - 7:15 AM	0	4	20	8	0	0	4	19	17	0	0	10	20	8	3	0	12	30	12	1
7:15 AM - 7:30 AM	0	13	20	6	2	0	9	45	16	2	0	30	36	13	3	0	16	39	11	4
7:30 AM - 7:45 AM	0	19	49	21	3	0	17	65	14	2	0	48	54	20	1	0	31	72	19	3
7:45 AM - 8:00 AM	0	15	40	14	0	0	5	60	23	1	0	54	71	21	3	0	33	72	11	1
TOTAL	**0**	**72**	**204**	**81**	**9**	**0**	**69**	**309**	**98**	**7**	**0**	**175**	**279**	**109**	**13**	**0**	**138**	**318**	**78**	**14**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	24	45	18	1	0	24	41	24	1	0	28	57	15	2	0	19	59	29	3
4:15 PM - 4:30 PM	0	15	41	17	2	0	21	31	37	3	0	22	65	14	1	0	18	72	13	0
4:30 PM - 4:45 PM	0	16	39	11	0	0	20	43	28	2	0	17	75	20	0	0	16	66	32	6
4:45 PM - 5:00 PM	0	19	33	14	1	0	23	50	28	1	0	17	76	11	1	0	15	63	18	0
5:00 PM - 5:15 PM	0	13	25	15	1	0	17	42	26	1	0	36	99	14	1	0	20	59	30	1
5:15 PM - 5:30 PM	0	10	43	14	2	0	21	38	28	0	0	23	84	24	0	0	17	77	19	2
5:30 PM - 5:45 PM	0	16	41	16	1	0	18	43	18	2	0	24	67	17	0	0	14	67	15	1
5:45 PM - 6:00 PM	0	14	32	19	0	0	14	32	17	0	0	21	70	15	3	0	16	52	15	3
TOTAL	**0**	**127**	**299**	**124**	**8**	**0**	**158**	**320**	**206**	**10**	**0**	**188**	**593**	**130**	**8**	**0**	**135**	**515**	**171**	**16**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 8:00 AM	0	51	129	49	5	0	35	189	70	5	0	142	181	62	10	0	92	213	53	9
4:30 PM - 5:30 PM	0	58	140	54	4	0	81	173	110	4	0	93	334	69	2	0	68	265	99	9

	PHF	Trucks
AM	0.738	2.3%
PM	0.970	1.2%



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Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

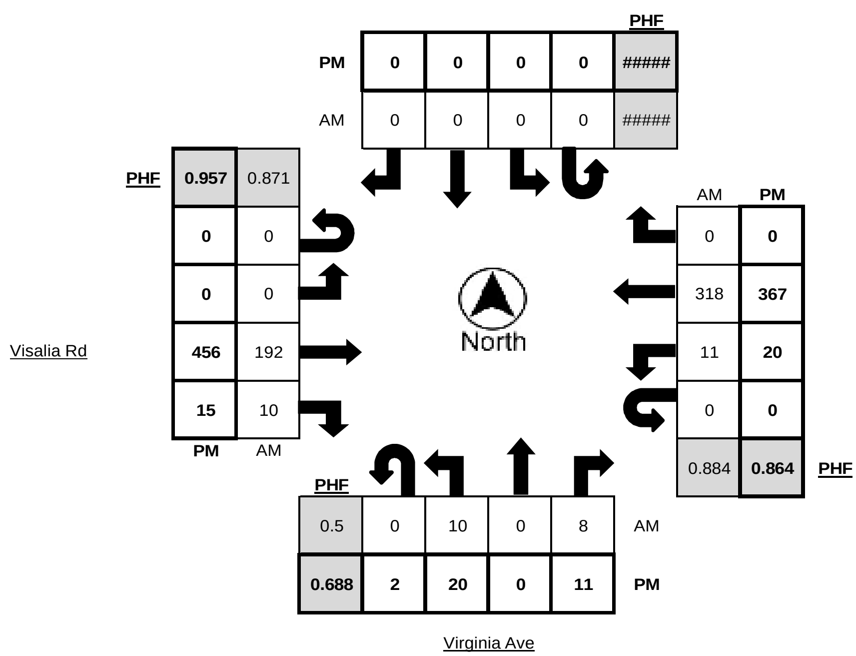
LOCATION	Visalia Rd @ Virginia Ave	**LATITUDE**	36.2978
COUNTY	Tulare	**LONGITUDE**	-119.2159
COLLECTION DATE	Tuesday, June 14, 2022	**WEATHER**	Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
6:00 AM - 6:15 AM	0	3	0	2	0	0	0	0	0	0	0	0	21	0	1	0	2	36	0	0
6:15 AM - 6:30 AM	0	1	0	5	0	0	0	0	0	0	0	0	14	2	0	0	2	43	0	1
6:30 AM - 6:45 AM	0	1	0	5	0	0	0	0	0	0	0	0	34	3	1	0	2	72	0	1
6:45 AM - 7:00 AM	1	5	0	0	0	0	0	0	0	0	0	0	37	2	2	0	3	68	0	1
7:00 AM - 7:15 AM	0	3	0	0	0	0	0	0	0	0	0	0	41	1	5	0	2	57	0	2
7:15 AM - 7:30 AM	0	5	0	4	0	0	0	0	0	0	0	0	53	2	0	0	2	87	0	1
7:30 AM - 7:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	46	1	2	0	2	91	0	3
7:45 AM - 8:00 AM	0	2	0	3	0	0	0	0	0	0	0	0	52	6	4	0	5	83	0	2
TOTAL	**1**	**20**	**0**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**298**	**17**	**15**	**0**	**20**	**537**	**0**	**11**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	1	0	5	0	0	0	0	0	0	0	0	98	4	2	0	6	85	0	1
4:15 PM - 4:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	121	2	0	0	4	87	0	4
4:30 PM - 4:45 PM	0	3	0	3	1	0	0	0	0	0	0	0	120	2	4	0	4	83	0	1
4:45 PM - 5:00 PM	2	4	0	0	0	0	0	0	0	0	0	0	91	7	2	0	2	77	0	1
5:00 PM - 5:15 PM	0	9	0	3	0	0	0	0	0	0	0	0	118	5	1	0	3	109	0	1
5:15 PM - 5:30 PM	1	3	0	1	0	0	0	0	0	0	0	0	113	3	0	0	8	71	0	1
5:30 PM - 5:45 PM	1	5	0	4	0	0	0	0	0	0	0	0	114	4	1	0	6	101	0	0
5:45 PM - 6:00 PM	0	3	0	3	0	0	0	0	0	0	0	0	111	3	0	0	3	86	0	0
TOTAL	**4**	**31**	**0**	**22**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**886**	**30**	**10**	**0**	**36**	**699**	**0**	**9**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 8:00 AM	0	10	0	8	0	0	0	0	0	0	0	0	192	10	11	0	11	318	0	8
5:00 PM - 6:00 PM	2	20	0	11	0	0	0	0	0	0	0	0	456	15	2	0	20	367	0	2

	PHF	Trucks
AM	0.897	3.5%
PM	0.902	0.4%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

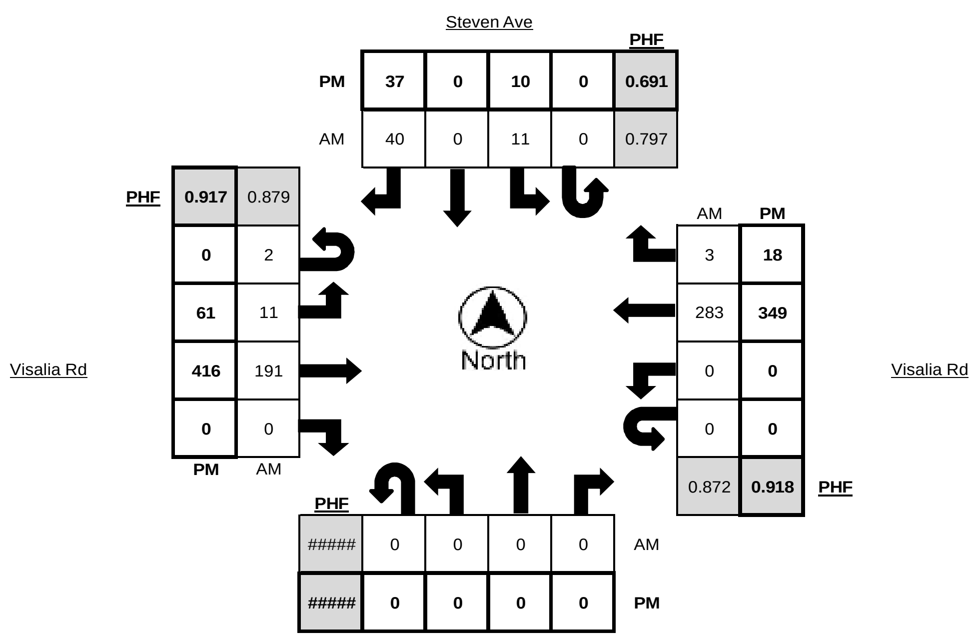
LOCATION Visalia Rd @ Steven Ave
LATITUDE 36.2978
COUNTY Tulare
LONGITUDE -119.2134
COLLECTION DATE Tuesday, June 14, 2022
WEATHER Clear

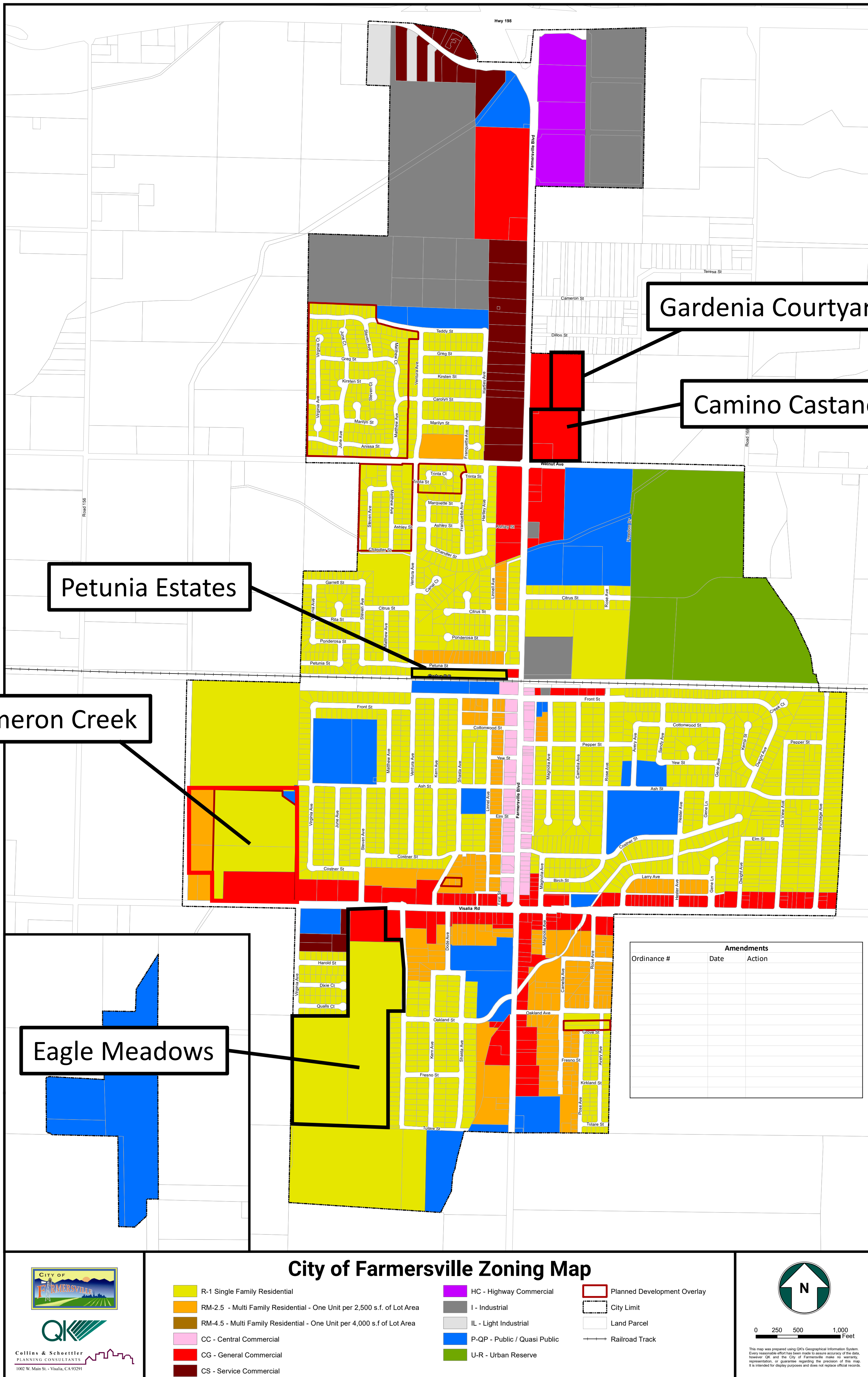
	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
6:00 AM - 6:15 AM	0	0	0	0	0	0	6	0	6	0	0	2	22	0	1	0	0	30	1	0
6:15 AM - 6:30 AM	0	0	0	0	0	0	3	0	7	0	0	0	20	0	0	0	0	31	0	1
6:30 AM - 6:45 AM	0	0	0	0	0	0	4	0	11	0	0	3	34	0	1	0	0	64	2	0
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	0	13	0	0	1	35	0	3	0	0	58	1	0
7:00 AM - 7:15 AM	0	0	0	0	0	0	3	0	7	0	1	0	43	0	6	0	0	51	0	1
7:15 AM - 7:30 AM	0	0	0	0	0	0	3	0	9	0	1	5	52	0	0	0	0	77	1	1
7:30 AM - 7:45 AM	0	0	0	0	0	0	2	0	11	0	0	3	46	0	1	0	0	81	1	2
7:45 AM - 8:00 AM	0	0	0	0	0	0	3	0	13	0	0	3	50	0	3	0	0	74	1	2
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**	**77**	**0**	**2**	**17**	**302**	**0**	**15**	**0**	**0**	**466**	**7**	**7**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	0	0	0	0	0	3	0	8	0	0	8	95	0	2	1	0	83	4	1
4:15 PM - 4:30 PM	0	0	0	0	0	0	1	0	8	0	0	11	116	0	0	0	0	82	4	3
4:30 PM - 4:45 PM	0	0	0	0	0	0	2	0	6	0	0	13	108	0	3	0	0	80	5	2
4:45 PM - 5:00 PM	0	0	0	0	0	0	5	0	8	0	0	15	82	0	1	1	0	73	4	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	3	0	11	0	0	18	112	0	3	0	0	97	3	1
5:15 PM - 5:30 PM	0	0	0	0	0	0	4	0	3	0	0	15	105	0	0	0	0	78	7	1
5:30 PM - 5:45 PM	0	0	0	0	0	0	2	0	15	0	0	15	102	0	2	0	0	95	5	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	1	0	8	0	0	13	97	0	1	0	0	79	3	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**67**	**0**	**0**	**108**	**817**	**0**	**12**	**2**	**0**	**667**	**35**	**8**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 8:00 AM	0	0	0	0	0	0	11	0	40	0	2	11	191	0	10	0	0	283	3	6
5:00 PM - 6:00 PM	0	0	0	0	0	0	10	0	37	0	0	61	416	0	6	0	0	349	18	2

	PHF	Trucks
AM	0.914	3.0%
PM	0.913	0.9%





Gardenia Courtyards
Camino Castaneda
Petunia Estates
Cameron Creek
Eagle Meadows
Amendments
Ordinance #
Date
Action
City of Farmersville Zoning Map
R-1 Single Family Residential
RM-2.5 - Multi Family Residential - One Unit per 2,500 s.f. of Lot Area
RM-4.5 - Multi Family Residential - One Unit per 4,000 s.f of Lot Area
CC - Central Commercial
CG - General Commercial
CS - Service Commercial
HC - Highway Commercial
I - Industrial
IL - Light Industrial
P-QP - Public / Quasi Public
U-R - Urban Reserve
Planned Development Overlay
City Limit
Land Parcel
Railroad Track
N
0
250
500
1,000
Feet
Version: 3.0
Date: 12/16/2019

CUMULATIVE PROJECTS TRIP GENERATION

7/11/2023

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
210	Single-Family detached Housing	18 Dwelling Units	eq	208	eq	25% 4	75% 12	eq	63% 12	37% 8
220	Multifamily Housing (Low Rise)	168 Dwelling Units	eq	1152	eq	24% 18	76% 57	eq	62% 58	38% 35
821	Shopping Plaza (40-150k)	87.12 1000 sq ft GLA	eq	8118	eq	62% 191	38% 117	eq	48% 378	52% 409
822	Strip Retail Plaza (<40k)	25.7 1000 sq ft GLA	eq	1314	eq	60% 32	40% 22	eq	50% 76	50% 76
sub-total				10,793		288	335		524	528
djustments										
Capture[1]		5%		540		11	7		23	24
Pass-by[2]		15%		2,532		61	40		133	137
Total				7,721		216	288		368	367