INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Montebella Residential Project

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PROJECT INFORMATION

This document is the Initial Study for the potential environmental effects of the Montebella Residential Project (Project) proposed in the City of Dinuba (City). To accommodate this Project, the site (and three adjoining parcels) need to be annexed into the City, and the City will need to approve a prezone and Tentative Subdivision Map. The City of Dinuba 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 the Dinuba Public Works Department at 1088 E. Kamm Ave, Dinuba, CA 93618.

Project title

Montebella Residential Project

Lead agency name and address

City of Dinuba
1088 E Kamm Ave
Dinuba, CA 93618

Contact person and phone number

Karl Schoettler
City of Dinuba
(559) 591-5924
Email: karl@weplancities.com

Project location

The City of Dinuba lies in the Central San Joaquin Valley region, in the northwestern portion of Tulare County. The City is approximately eight miles northeast of State Route (SR) 99 and 5.5 miles west of SR 63. The proposed Project lies in the northwestern part of the City, west of Englehart Avenue/Rd 72 and east of N. Parkstone Avenue/Rd 70. The four parcels proposed to be annexed contain approximately 38.8 acres; the proposed 105-lot single-family residential subdivision will be located on approximately 25.39 acres of agricultural land, currently in orchard production, assigned Assessor's Parcel Number 012-272-013 (see Figure 1). The three additional parcels are already developed with single family homes and include Assessor Parcel Numbers 012-272-011, 012-272-012 and 012-272-014

Figure 1 – Location

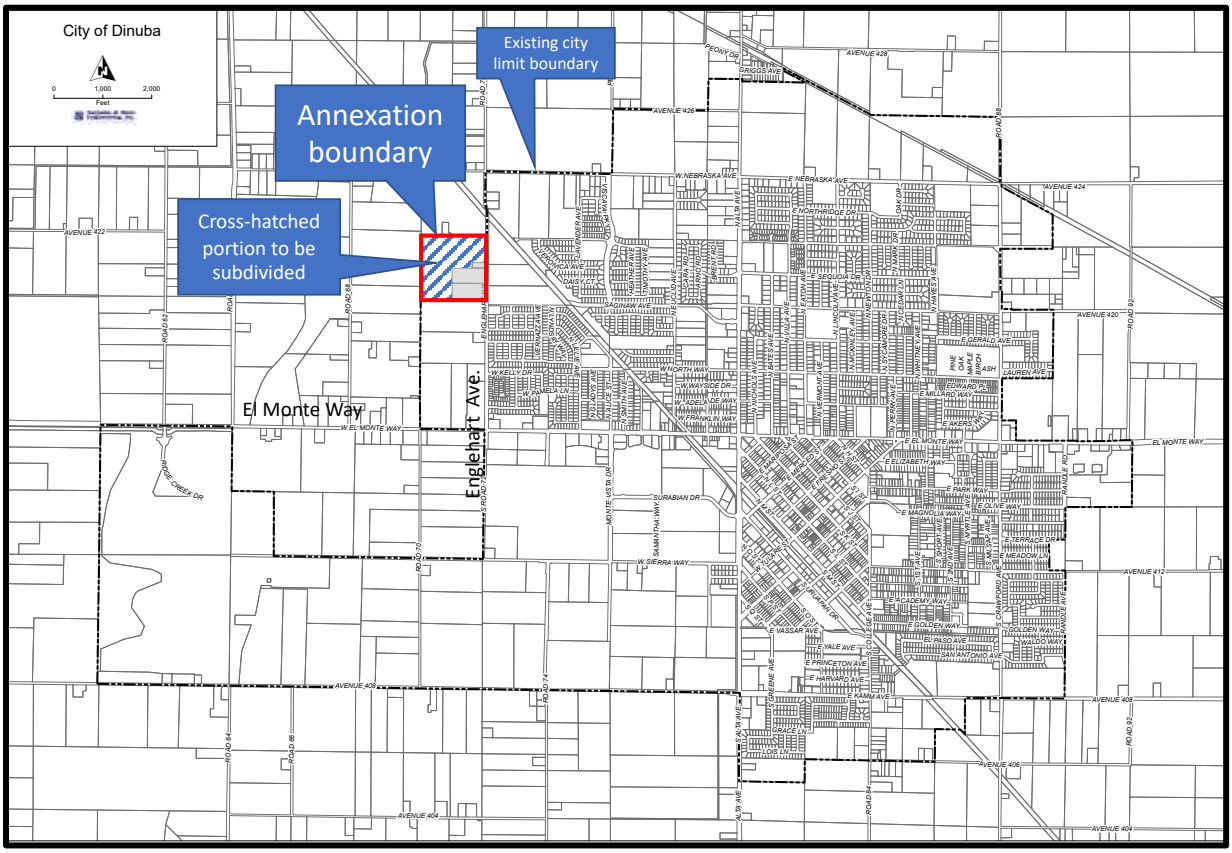


Figure 2 – Site Aerial

Montebella Residential Project,

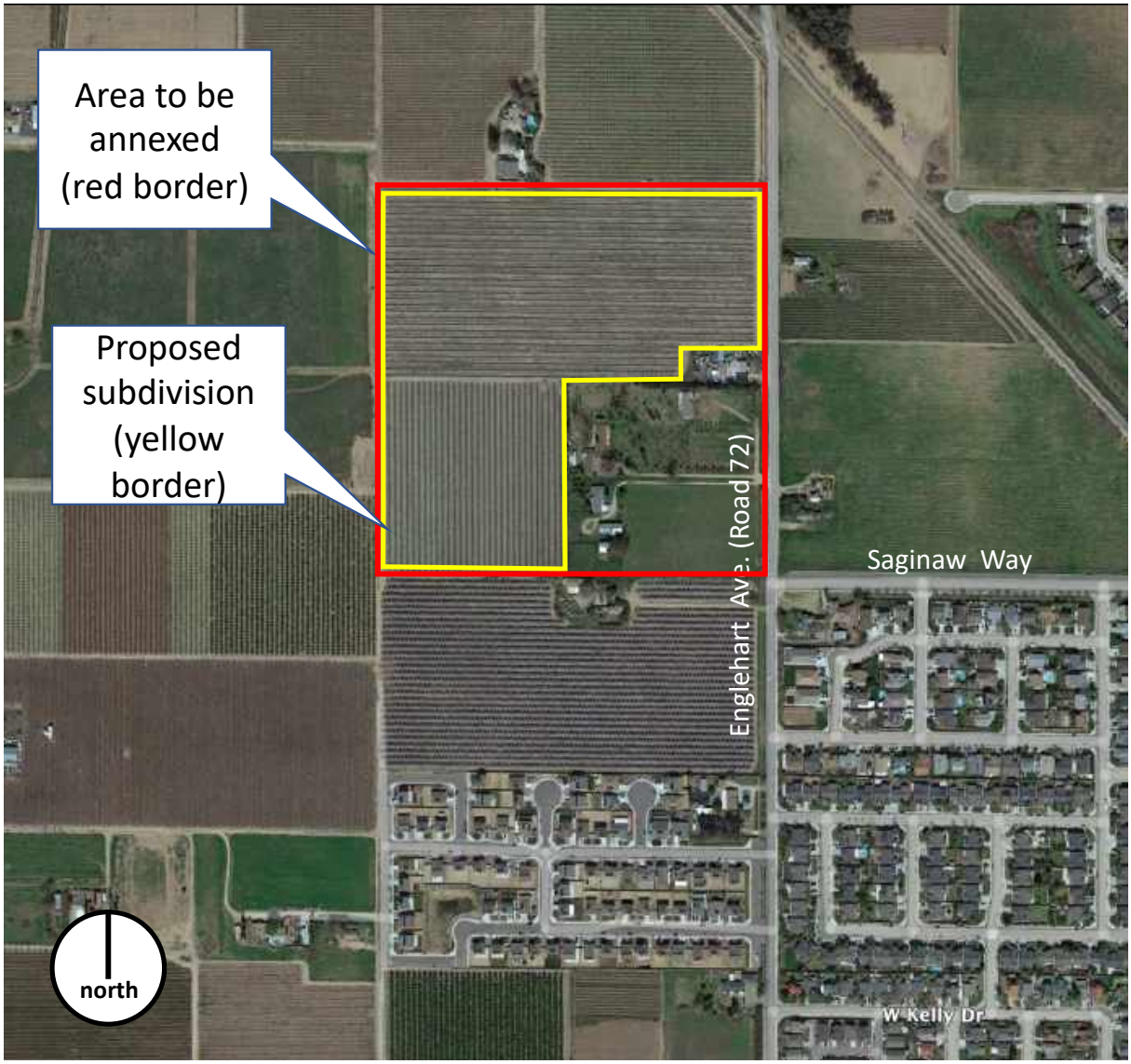
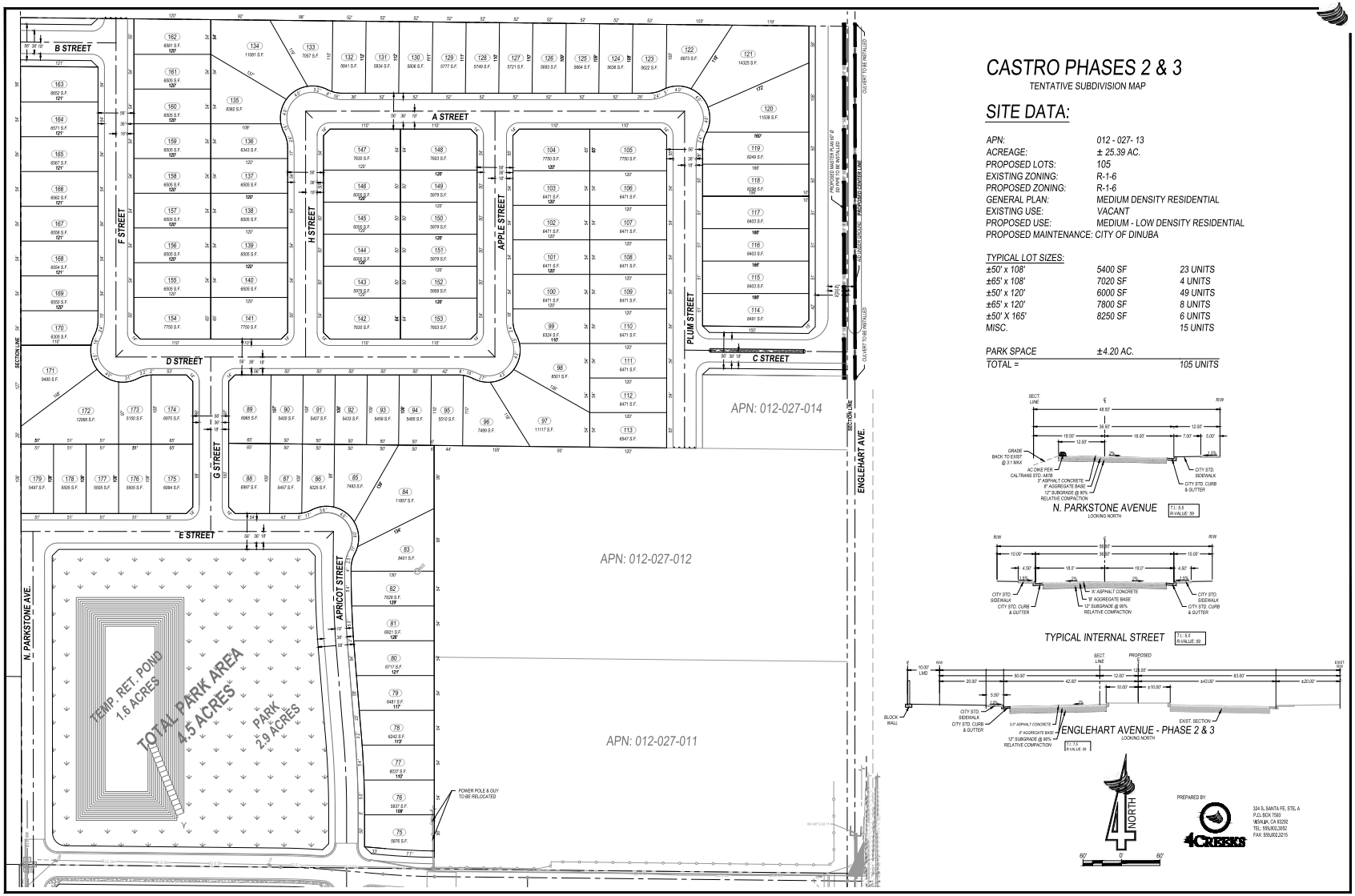


Figure 3 – Site Plan



Project sponsor's name/address

San Joaquin Valley Homes
5607 Ave de Las Robles
Visalia, CA 93291

General plan designation

Medium Density Residential and Park/Ponding

Zoning

AE-20 by Tulare County

Project Description

The Project consists of an annexation into the City of Dinuba of four parcels containing approximately 38.8 acres and approval from the City for a General Plan Amendment (GPA), prezone, and Tentative Subdivision Map to allow for the construction of a new 105-unit single-family residential development, neighborhood park and the associated improvements (see Figure 3).

Project Components

- Annexation of APN 012-272-011, 012-272-012, 012-272-013, and 012-272-014 (38.8±acres)
- For APN 012-272-013 a General Plan Amendment to shift a "Park/Ponding Basin" designation to another location on the site, and Prezone to R-1-6 (Single Family Residential (6,000 square foot minimum lot size) and PUD Overlay zone (Planned Unit Development).
- For the three existing-developed parcels along Englehart Avenue prezoning to the R-1-10 zone.
- Construction of 105 single-family residential units on APN 012-272-013
- Development of a neighborhood park on APN 012-272-013
- Construction of internal roads and landscaping, per City Standards.
- Widening and improvement of Englehart Avenue along the site frontage, including piping of the existing Alta Irrigation canal (Horsman Ditch).
- Construction of curb, gutter and sidewalks, per City Standards.
- Connection to City utilities, including stormwater, sewer and water.

Site Circulation

The residential development will have three points of ingress/egress: two to the west at North Parkstone Ave and B Street, and one to the east, at C Street.

Surrounding Land Uses/Existing Conditions

The proposed Project site is currently in agricultural production (orchards) and the site is completely surrounded by agricultural land and rural residences.

Other Public Agencies Involved

- State of California Native American Heritage Commission
- San Joaquin Valley Air Pollution Control District
- Central Valley Regional Water Quality Control Board

Tribal Consultation

The City of Dinuba has not received any project-specific requests from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the City of Dinuba.

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

Karl Schoettler
Planning Consultant
City of Dinuba

8/22/22

Date

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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project site is located in northwestern Dinuba, in the northwestern portion of Tulare County in the central San Joaquin Valley region. The site resides in a residential and agricultural area, with single-family homes and agricultural fields dominating the visual landscape. The Project site is generally flat and is bounded to the west by N Parkstone Avenue/Rd 70, to the south by Saginaw Avenue, and to the east by Englehart Avenue/Rd 72. To the north, west, and south lie agricultural land uses. Rural residences are located to the north, south, and southeast of the site. There are no adopted scenic

resources or scenic vistas in the area. State Routes (SR) 201 is located approximately 3 miles south of the site and SR 63 is located approximately 7 miles east.

The existing visual character of the site consists of orchard trees. Views of the proposed Project site area visible from Englehart Avenue/Road 72, Saginaw Ave, and Road 70.

RESPONSES

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?

Less Than Significant Impact. A scenic vista is defined as a viewpoint that provides expansive views of highly valued landscape for the benefit of the general public. The City of Dinuba does not identify any scenic vistas within the Project area. Tulare County identifies El Monte Way/Avenue 416 as part of a system of County scenic routes located less than 0.5 mile to the south, according to Figure 7.1 of the Tulare County General Plan. However, views from this roadway would be unaffected by the development of the Project because of the nature of the Project, intervening land uses and distance.

There are no scenic vistas or other protected scenic resources on or near the site. Visual character of the site is addressed further in Response C. below.

There are no scenic highways near the proposed site.

Therefore, the Project has ***less than significant impact*** on scenic vistas or designated scenic resources or highways.

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. The proposed Project would alter the existing visual character of public views of the site from orchard trees to fully developed with single-family residences. Upon Annexation and pending approval, the Project design is subject to the City's Design Guidelines adopted for the City's General Plan which apply to site layout, building design, landscaping, interior street design, lighting, parking and signage. Per the City's Design Guidelines, detailed architectural plans, color palettes and building materials as well as landscaping plans will be submitted by the Project developer to the City of

Dinuba. The plans shall be required prior to issuance of any building permits. The review shall be substantially based on the building plans and elevations illustrated within this document.

The proposed Project will require removal of orchard trees. Landscaping, fences and an outlot for resident use are incorporated into the project design.

The improvements such as those proposed by the Project are typical of City urban areas and are generally expected from residents of the City. These improvements would not substantially degrade the visual character of the area and would not diminish the visual quality of the area, as they would be consistent with the existing visual setting. The proposed Project itself is not visually imposing against the scale of the existing adjacent residential buildings and nature of the surrounding area.

Therefore, the Project would have ***less than significant impacts*** on the visual character of the area.

Mitigation Measures: None are required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

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.

Current sources of light in the Project area are from adjacent uses, including streetlights from the rural residences to the north, southeast, and south and single-family residential development to the southeast. The Project would necessitate street 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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The City of Dinuba is located in Tulare County in the San Joaquin Valley, California. The proposed Project site is located in northwestern Dinuba and is considered *Farmland of Statewide Importance* by the State Farmland Mapping and Monitoring Program (FMMP). No *Prime Farmland, Unique Farmland* or *Farmland of Local Importance*, or land under Williamson Act contracts occur in the proposed Project area.

Agricultural uses less than one-quarter mile to the north, west, and south are the nearest agricultural areas.

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?

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?

No Impact. The proposed Project consists of an Annexation, GPA, prezone, and a TSM to allow for construction and operation of up to 105 single-family residential units and a neighborhood park on approximately 25.39 acres of land. Three adjacent developed parcels along Englehart Avenue will be annexed and prezoned. The 28.8-acre parcel to be developed is considered Farmland of Statewide Importance by the Farmland Monitoring and Mapping Program, however, there is no Williamson Act Contract in place. The 28.8-acre parcel to be devleoped is currently zoned AE-20 by Tulare County however it is within the Dinuba Urban Development Boundary and designated by the City of Dinuba General Plan as Medium Density Residential and Park/Ponding. As such, potential impacts resulting from the conversion of agricultural land was analyzed in the City of Dinuba General Plan EIR (SCH#2006091107) and a Statement of Overriding Conditions was adopted. The Project site is on the valley floor and as such, does not contain forest or timberland. As such, ***no new impacts*** resulting from the conversion of agricultural lands will result as a result of Project development.

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)?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The climate of the City of Dinuba and the San Joaquin Valley is characterized by long, hot summers and stagnant, foggy, winters. Precipitation is low and temperature inversions are common. These characteristics are conducive to the formation and retention of air pollutants and are in part influenced by the surrounding mountains which intercept precipitation and act as a barrier to the passage of cold air and air pollutants.

The proposed Project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all state and federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either

"attainment", "non-attainment", or "extreme non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal extreme non-attainment area for O_3, a State and Federal non-attainment area for $PM_{2.5}$, a State non-attainment area for PM_{10}, and Federal and State attainment area for CO, SO_2, NO_2, and Pb.

Standards and attainment status for listed pollutants in the Air District can be found in Table 1. Note that both state and federal standards are presented.

Table 1

Standards and Attainment Status for Listed Pollutants in the Air District

	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.07 ppm (8-hr avg) 0.09 ppm (1-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg)	0.30 ppm (annual avg) 0.18 ppm (1-hr avg)
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1hr avg)
Lead	1.5 µg/m³ (calendar quarter) 0.15 µg/m³ (rolling 3-month avg)	1.5 µg/m³ (30-day avg)
Particulate Matter (PM_{10})	150 µg/m³ (24-hr avg)	20 µg/m³ (annual avg) 50 µg/m³ (24-hr avg)
Particulate Matter ($PM_{2.5}$)	15 µg/m³ (annual avg)	35 µg/m³ (24-hr avg) 12 µg/m³ (annual avg)

µg/m³ = micrograms per cubic meter

Additional State regulations include:

CARB Portable Equipment Registration Program – This program was designed to allow owners and operators of portable engines and other common construction or farming equipment to register their equipment under a statewide program so they may operate it statewide without the need to obtain a permit from the local air district.

U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program – The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off- road mobile sources include most

construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NOX) and toxic particulate matter from diesel engines. CARB is currently developing a control measure to reduce diesel PM and NOX emissions from existing off-road diesel equipment throughout the state.

California Global Warming Solutions Act – Established in 2006, Assembly Bill 32 (AB 32) requires that California's GHG emissions be reduced to 1990 levels by the year 2020. This will be implemented through a statewide cap on GHG emissions, which will be phased in beginning in 2012. AB 32 requires CARB to develop regulations and a mandatory reporting system to monitor global warming emissions levels.

RESPONSES

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?

Less Than Significant Impact. The proposed Project lies within the San Joaquin Valley Air Basin (SJVAB). At the Federal level, the SJVAB is designated as extreme nonattainment for the 8-hour ozone standard, attainment for PM_{10} and CO, and nonattainment fort $PM_{2.5}$. At the State level, the SJVAB is designated as nonattainment for the 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards. Although the Federal 1-hour ozone standard was revoked in 2005, areas must still attain this standard, and the SJVAPCD recently requested an EPA finding that the SJVAB has attained the standard based on 2011-2013 data[1]. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- Extreme Ozone Attainment Demonstration Plan (EOADP) for attainment of the 1-hour ozone standard (2004);
- 2007 Ozone Plan for attainment of the 8-hour ozone standard;
- 2007 PM_{10} Maintenance Plan and Request for Redesignation; and

[1] San Joaquin Valley Air Pollution Control District. Guidance to Assessing and Mitigating Air Quality Impacts. February 19, 2015. Page 28. https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed March 2022.

- 2008 $PM_{2.5}$ Plan.

Because of the region's non-attainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (ROG or NOX), PM_{10}, or $PM_{2.5}$ were to exceed the SJVAPCD's significance thresholds, then the project uses would be considered to conflict with the attainment plans. In addition, if the project uses were to result in a change in land use and corresponding increases in vehicle miles traveled, they may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

The annual significance thresholds to be used for the Project for construction and operational emissions are as follows[2]:

- 10 tons per year ROG;
- 10 tons per year NOX;
- 15 tons per year PM_{10}; and
- 15 tons per year $PM_{2.5}$.

Project Emissions

Site preparation and Project construction would involve excavation, grading, hauling, and various activities needed to construct the Project. During construction, the Project could generate pollutants such as hydrocarbons, oxides of nitrogen, carbon monoxide, and suspended PM. A major source of PM would be windblown dust generated during construction activities. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Vehicles leaving the site could deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, the silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site. These emissions would be temporary and limited to the immediate area surrounding the construction site.

The proposed Project construction schedule would begin in late 2022 and would last through 2024. Emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0.

[2] San Joaquin Valley Air Control District – Air Quality Threshold of Significance – Criteria Pollutants. http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf. Accessed October 2021.

Construction related emissions are shown in Table 2. Refer to Appendix A – Air Emissions Output Table for the full emissions output estimates for construction and operational activities.

Table 2
Project Construction and Operational Emissions

	VOC (ROG) (in tons/yr)	NO_x (in tons/yr)	PM_{10} Total* (in tons/yr)	CO_2 (in MT/yr)
2022	0.22	2.1	0.54	320.21
2023	0.26	2.14	0.25	501.18
2024	1.92	1.16	0.13	282.73
Maximum Construction Emissions:	1.92	2.14	0.54	501.18
Total Annual Operational Emissions:	1.46	1.06	1.10	1261.08
Threshold of Significance	10	10	15	--
Exceed Threshold?	No	No	No	N/A

** Appendix A includes projected emissions from ozone, carbon monoxide, lead, particulate matter (less than 2.5 microns in diameter), but are not included in this table because there is no established threshold of significance for these emissions.*

As shown in Table 2, construction emissions would be below the SJVAPCD's threshold for annual construction emissions. However, the SJVAPCD has implemented Regulation VIII measures for dust control related to construction projects, which are applicable to the Project and will be enforced by the City and the City's contractor.

Long-Term (Operational) Emissions

The Project is being implemented in response to existing and planned growth in the area and the site is identified by the General Plan as "Medium Density Residential". A new single-family residential neighborhood would provide needed housing to the growing community of Dinuba. The Project will improve housing availability within the City, but would not generate additional vehicle trips in the area beyond what was already planned for and analyzed in the City's General Plan EIR. The Project is not therefore considered growth inducing. In addition, there are no stationary source emissions resulting from the Project.

As described above, construction/operational emissions would not exceed the SJVAPCD's significance thresholds for ROG, NOX, and PM_{10}. As a result, the Project uses would not conflict with emissions inventories contained in regional air quality attainment plans and would not result in a significant

contribution to the region's air quality non-attainment status[3]. Likewise, the Project would not result in a cumulatively considerable net increase of any criteria pollutant within the SJVAPCD jurisdiction. Finally, the Project would also not expose sensitive receptors to substantial pollutant concentrations. It will not cumulatively increase any criteria pollutant and will not result in substantial pollutant concentrations.

There are five sensitive receptors (rural residences) immediately adjacent to the proposed Project site. To reduce exposure to toxic air contaminants during construction activities, Mitigation Measure AIR-1 shall be implemented. As such, any impacts to air resources would be considered ***less than significant*** with mitigation incorporated.

Mitigation Measures:

AIR-1

Before a construction permit is issued for the proposed Project, the project applicant, project sponsor, or construction contractor shall submit construction emissions minimization plans to the City of Dinuba for review and approval. The construction emissions minimization plans shall provide reasonably detailed compliance with the following requirements:

Where portable diesel engines are used during construction, all off-road equipment with engines greater than 50 horsepower shall have engines that meet either EPA or CARB Tier 4 Final off-road emission standards except as otherwise specified herein. If engines that comply with 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 4 Interim) 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.

[3] San Joaquin Valley Air Pollution Control District. Guidance to Assessing and Mitigating Air Quality Impacts. February 19, 2015. Page 65. https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed March 2022.

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

Less than Significant Impact. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roasters, asphalt batch plants, and rendering plants. The Project would not engage in any of these activities. Therefore, the Project would not be considered a generator of objectionable odors during operations.

During construction, the various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and would not likely be noticeable for extended periods of time beyond the Project's site boundaries. The potential for diesel odor impacts would therefore be less than significant. Any 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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed Project site is located in a portion of the central San Joaquin Valley that has, for decades, experienced intensive agricultural and urban disturbances. Current agricultural endeavors in the region include dairies, groves, and row crops.

Like most of California, the Central San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures usually exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely raise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation within the proposed Project site is about 10 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain and storm-water readily infiltrates the soils of the surrounding the sites.

Native plant and animal species once abundant in the region have become locally extirpated or have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region.

The site is currently in agricultural production (orchards). The Project site's surrounding lands consist primarily of agriculture and rural single-family residences.

The Horsman Ditch runs along the eastern site boundary and will be undergrounded (piped) as part of the Project. The Horsman Ditch is a man-made ditch managed by the Alta Irrigation District and is undergrounded south of the Project site. No aquatic or wetland features occur on the proposed Project site; therefore, waters that are regulated by the US Army Corps of Engineers, US Fish and Wildlife or the Central Valley Flood Protection Control District are considered absent from the site.

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. The site to be subdivided is currently fallow and regularly disked (plowed) for fire suppression. The site is in an area that is highly disturbed and lacking in substantial vegetation, such as trees, brush or shrubs. This factor suggests that the Project site is extremely unlikely to serve as nesting habitat for bird species or any animal or plant species. Additionally, according to the City of Dinuba General Plan Update Background Report, Special Status Species Figure 9-5, there is no potential for special status species to exist in the area. Any impacts to special status species are considered ***less than significant.***

Mitigation Measures: None are required.

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?

No Impact. The Horsman Ditch runs along the eastern boundary of the proposed Project site and as a part of this project, will be undergrounded. The site is heavily disturbed and the surrounding land is also heavily disturbed with active agricultural production. There are no sensitive riparian or natural habitats in the immediate proposed Project area and as such, there are no natural waterways or sensitive natural communities on the Project site or in the Project vicinity. As seen on the National Wetlands Inventory Map, no marshes, vernal pools, freshwater pond, or other types of wetlands occur on the proposed Project site. As such, there is ***no impact.***

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 with Mitigation. There are no natural waterways or natural vegetation on the subject site, and the site is not used for movement of wildlife species or for a migratory wildlife corridor, nor is the site used for native wildlife nursery sites. The parcel is currently planted with orchard trees. The site is highly disturbed; however, in the event that migratory and/or native avian species are nesting within or adjacent to the proposed Project area at the time of construction, construction activities could result in nest abandonment and/or direct mortality to individual birds. Project activities that injure or kill native birds or lead to nest abandonment would violate the California Fish and Game Code. The implementation of **BIO-1** would ensure that potential impacts remain ***less than significant.***

Mitigation Measures:

BIO-1

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, preconstruction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during Project implementation. A preconstruction 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 area for nests. 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?

No Impact. The proposed Project is consistent with the goals and policies of the City of Dinuba General Plan, and will be consistent with the goals and policies of the Tulare County General Plan. The Project will not conflict with the General Plan's policies related to "no-net-loss" of wetlands and preservation of riparian habitats because wetlands and riparian habitats are absent from the Project site. The Project will not result in significant loss of habitat for special status animal species and will therefore be consistent with General Plan policies related to wildlife habitat. Therefore, the proposed Project would have ***no impact.***

Mitigation Measures: None are required.

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?

No Impact. The proposed Project site is not within an area set aside for the conservation of habitat or sensitive plant or animal species pursuant to a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As such, 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?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

A record search of the project area and the environs within one half-mile was conducted at the Southern San Joaquin Archaeological Information Center. Information Center staff conducted the record search, RS# 22-090, on March 7, 2022. The record search revealed that there have been no cultural resource studies in the project area, with three studies conducted within on-half mile radius (TU-00165, 00210, 01533). There have been no recorded cultural resources or recorded resources within the project area, with 10 recorded resources within one-half mile radius (P-54-004626, 004899, 004900, 004907, 004919, 004942, 005018, 005021, 005022, 005023). These resources consist of historic era ditches, railroads, and single-family properties. The full report is included as Appendix B.

RESPONSES

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact. As discussed above, no cultural resources were identified within the proposed Project area. As such, there is ***no impact***.

Mitigation Measures: None are required.

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?

Less than Significant Impact with Mitigation. The project area is highly disturbed, consisting of an orchard. No cultural resources were identified. There are no known or visible cultural or archaeological resources, paleontological resources, or human remains that exist on the surface of the project area. Therefore, it is determined that the project has low potential to impact any sensitive resources and no further cultural resources work is required unless project plans change to include work not currently identified in the project description.

Although no significant cultural or archaeological resources, paleontological resources or human remains have been identified in the project area, the possibility exists that such resources or remains may be discovered during Project site preparation, excavation and/or grading activities. Mitigation Measures CUL – 1 and CUL – 2 will be implemented to ensure that Project will result in ***less than significant impacts with mitigation***.

Mitigation Measures:

CUL – 1

Should evidence of prehistoric archeological resources be discovered during construction, the contractor shall halt all work within 25 feet of the find and the resource shall be evaluated by a qualified archaeologist. If evidence of any archaeological, cultural, and/or historical deposits is found, hand excavation and/or mechanical excavation shall proceed to evaluate the deposits for determination of significance as defined by the CEQA guidelines. The archaeologist shall submit reports, to the satisfaction of the City of Dinuba, describing the testing program and

subsequent results. These reports shall identify any program mitigation that the project proponent shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources).

CUL – 2

In order to ensure that the proposed project does not impact buried human remains during construction, the project proponent shall be responsible for on-going monitoring of project construction. Prior to the issuance of any grading permit, the project proponent shall provide the City of Dinuba with documentation identifying construction personnel that will be responsible for on-site monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be halted until the Tulare County coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e) if any of the circumstances established by that provision become applicable.

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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

California's total energy consumption is second highest in the nation, but, in 2018, the state's per capita energy consumption ranked fourth-lowest, due in part to its mild climate and its energy efficiency programs. In 2018, California was the top-ranking producer of electricity from solar, geothermal, and biomass energy and ranked second in the nation in conventional hydroelectric power generation.[4]

Energy usage is typically quantified using the British thermal unit (BTU). As a point of reference, the approximately amounts of energy contained in common energy sources are as follows:

Energy Source	BTUs[5]
Motor Gasoline	120,286 per gallon
Natural Gas	1,037 per cubic foot
Electricity	3,412 per kilowatt-hour

[4] U.S. Energy Information Administration. Independent Statistics and Analysis. California Profile Overview. https://www.eia.gov/state/?sid=CA#tabs-1. Accessed March 2022.

[5] U.S. Energy Information Administration. Energy Units and Calculators Explained. https://www.eia.gov/energyexplained/units-and-calculators/british-thermal-units.php. Accessed March 2022.

California's energy consumption in 2019 was 7788.77 trillion BTU[6], as provided in Table 3.

Table 3

2019 Energy Consumption Estimates[7]

End User	BTU of energy consumed (in trillions)	Percentage of total consumption
Residential	1455.7	18.7
Commercial	1468.1	18.8
Industrial	1805.3	23.2
Transportation	3059.6	39.3
Total	7788.7	--

Total electrical consumption by California was approximately 279,510 GWh, while electrical consumption for Tulare County in 2020 was 4642.8 GWh.[8]

The California Department of Transportation (Caltrans) reports that approximately 36.4 million vehicles were registered in the state as of January 1, 2019. A total estimated 347.2 billion vehicles miles were traveled (VMT) on all public roads for the year 2018.[9]

Applicable Regulations

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations.

[6] U.S. Energy Information Administration. Independent Statistics and Analysis. California Profile Overview. https://www.eia.gov/state/?sid=CA#tabs-2 Accessed March 2022.
[7] Ibid.
[8] California Energy Commission. Electricity Consumption by County. https://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed March 2022.
[9] Caltrans. 2020. California Transportation Fact Booklet. https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/caltrans-fact-booklets/2020-cfb-v2-a11y.pdf. Accessed January 2022.

Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

California Green Building Standards Code (Title 24, Part II, CALGreen)

The California Building Standards Commission adopted the California Green Buildings Standards Code (CALGreen in Part 11 of the Title 24 Building Standards Code) for all new construction statewide on July 17, 2008. Originally a volunteer measure, the code became mandatory in 2010 and the most recent update (2019) went on January 1, 2020. CALGreen sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including eco-friendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development; water use; weather resistance and moisture management; construction waste reduction, disposal, and recycling; building maintenance and operation; pollutant control; indoor air quality; environmental comfort; and outdoor air quality. Mandatory measures for residential development pertain to green building; planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; environmental quality; and installer and special inspector qualifications.

Clean Energy and Pollution Reduction Act (SB 350)

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078, the state's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopt the RPS 20

percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

RESPONSES

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?

Less Than Significant Impact. The proposed Project includes construction and operation of 105 single-family residences, on approximately 25.39 acres. The Project would introduce energy usage on a site that is presently demanding minimal energy. The Project at build-out may consume high amounts of energy in the short-term during Project construction, and low amounts of energy in the long-term during Project operation.

During construction, the Project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass. Title 24 Building Energy Efficiency Standards provide guidance on construction techniques to maximize energy conservation and it is expected that contractors and owners have a strong financial incentive to use recycled materials and products originating from nearby sources in order to reduce materials costs. As such, it is anticipated that materials used in construction and construction vehicle fuel energy would not involve the wasteful, inefficient, or unnecessary consumption of energy.

Operational Project energy consumption would occur for multiple purposes, including but not limited to, building heating and cooling, refrigeration, lighting and electronics. Operational energy would also be consumed during each vehicle trip associated with the proposed use. CalEEMod version 2020.4.0 was utilized to generate the estimated energy demand of the proposed Project. Annual Project energy consumption is provided in Table 4 while model assumptions along with the output files are provided in Appendix A.

Table 4

Estimated Annual Project Energy Consumption

Land Use	Electricity Use in kWh/year	Natural Gas Use in kBTU/year
Single-Family Residential	833,590	2,495,120

The proposed Project would be required to comply with Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting.

Implementation of Title 24 standards significantly increases energy savings, and it is generally assumed that compliance with Title 24 ensures projects will not result in the inefficient, wasteful, or unnecessary consumption of energy.

As discussed in Impact XVII – Transportation/Traffic, at build-out the Project will generate a maximum of 1,055 average daily trips and is anticipated to have 78 a.m. peak hour trips and 104 p.m. peak hour trips. The length of these trips and the individual vehicle fuel efficiencies are not known; therefore, the resulting energy consumption cannot be accurately calculated. Adopted federal vehicle fuel standards have continually improved since their original adoption in 1975 and assists in avoiding the inefficient, wasteful, and unnecessary use of energy by vehicles.

As discussed previously, the proposed Project would be required to implement and be consistent with existing energy design standards at the local and state level. The Project would be subject to energy conservation requirements in the California Energy Code and CALGreen. Adherence to state code requirements would ensure that the Project would not result in wasteful and inefficient use of non-renewable resources due to building operation.

Therefore, any impacts are ***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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Dinuba is located near the eastern edge of the Central Valley, which is a nearly flat northwest-southeast trending basin approximately 450 miles long and approximately 75 miles wide. The City of Dinuba is located on soils characterized by a thick section of sedimentary rock overlying a granitic basement layer. The hazards due to ground-shaking are considered low due to the relative distance of the City from seismic faults. The nearest faults are the Sierra Nevada Fault Zone (approximately 60 miles east), the San Joaquin Fault (approximately 75 miles northwest), and the San Andreas Fault (approximately 75 miles to the southwest). The City of Dinuba is located in a Seismic Zone II, as defined by the California Uniform Building Code.

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.

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

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

a-iv) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Less than Significant Impact. The proposed project site is not located in an earthquake fault zone as delineated by the 1972 Alquist-Priolo Earthquake Fault Zoning Map Act. The nearest known potentially active fault is the Sierra Nevada Fault Zone, located approximately sixty miles east of the site. No active faults have been mapped within the project boundaries, so there is no potential for fault rupture. It is anticipated that the proposed Project site would be subject to some ground acceleration and ground shaking associated with seismic activity during its design life. The proposed Project site would be engineered and constructed in strict accordance with the earthquake resistant design requirements contained in the latest edition of the California Building Code (CBC) for seismic zone II, as well as Title 24 of the California Administrative Code, and therefore would avoid potential seismically induced hazards on planned structures.

The proposed Project site has a generally flat topography, which would preclude the likeliness of a landslide. The impact of seismic or landslide hazards on the project would be ***less than significant.***

Mitigation Measures: None are required.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. The proposed Project includes the construction of up to 105 single-family residential units on approximately 25.39 acres. The Project site has a generally flat topography and is surrounded by agricultural land. Construction activities associated with the Project involves ground preparation work for the new housing development and associated improvements. These activities could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the Project site. During construction, nuisance flow caused by minor rain could flow off-site. The City and/or contractor would be required to employ appropriate sediment and erosion control BMPs as part of a Stormwater Pollution Prevention Plan (SWPPP) that would be required in the California National Pollution Discharge Elimination System (NPDES). As such, any impacts would be considered ***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?

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 Section VI a. above. The site is not at significant risk from ground shaking, liquefaction, or landslide and is otherwise considered geologically stable. The City of Dinuba sits on top of a mix of different loam classifications; however the predominant soil in the proposed Project area is Delhi loamy sand.[10] This soil type is characterized as somewhat excessively drained with negligible to slow runoff and rapid permeability. This soil also has low shrink/swell potential, which is generally not conducive to liquefaction. Additionally, liquefaction typically occurs when there is shallow groundwater, low-density non-plastic soils, and high-intensity ground motion.

The City of Dinuba is on relatively flat terrain which precludes the occurrence of landslides. Subsidence is typically related to over-extraction of groundwater from certain types of geologic formations where the water is partly responsible for supporting the ground surface. The City of Dinuba is not recognized by the U.S. Geological Service as being in an area of subsidence.[11] Additionally, ongoing potential impacts of groundwater depletion and subsidence are constantly being monitored by USGS through a system of extensometers positioned throughout the San Joaquin valley. Continuous measurements and aquifer-system response analysis enables appropriate governing of parameters set to mitigate subsidence impacts in the region. Impacts are considered ***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 proposed Project does not include the construction, replacement, or disturbance of septic tanks or alternative wastewater disposal systems. The proposed subdivision will be required to tie into the existing City sewer system (See Utilities section for more details). Therefore, there is ***no impact.***

Mitigation Measures: None are required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

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[10] U.S. Department of Agriculture. Natural Resource Conservation Service. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx. Accessed March 2022.

[11] U.S. Geological Service. Areas of Land Subsidence in California. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html Accessed March 2022..

Less Than Significant Impact. As identified in the cultural studies performed for the Project site (see Appendix C), there are no known paleontological resources on or near the site. 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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Various gases in the earth's atmosphere play an important role in moderating the earth's surface temperature. Solar radiation enters earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs are transparent to solar radiation, but are effective in absorbing infrared radiation. Consequently, radiation that would otherwise escape back into space is retained, resulting in a warming of the earth's atmosphere. This phenomenon is known as the greenhouse effect.

Scientific research to date indicates that some of the observed climate change is a result of increased GHG emissions associated with human activity. Among the GHGs contributing to the greenhouse effect are water vapor, carbon dioxide (CO_2), methane (CH_4), ozone, Nitrous Oxide (NO_x), and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors.

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Global climate change is, indeed, a global issue. GHGs are global pollutants, unlike criteria pollutants and TACs (which are pollutants of regional and/or local concern). Global climate change, if it occurs, could potentially affect water resources in California. Rising temperatures could be anticipated to result in sea-level rise (as polar ice caps melt) and possibly change the timing and amount of precipitation, which could alter water quality. According to some, climate change could result in more extreme weather patterns; both heavier precipitation that could lead to flooding, as well as more extended drought

periods. There is uncertainty regarding the timing, magnitude, and nature of the potential changes to water resources as a result of climate change; however, several trends are evident.

Snowpack and snowmelt may also be affected by climate change. Much of California's precipitation falls as snow in the Sierra Nevada and southern Cascades, and snowpack represents approximately 35 percent of the state's useable annual water supply. The snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended. As air temperatures increase due to climate change, the water stored in California's snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt.

RESPONSES

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?

Less Than Significant Impact. The U.S. Environmental Protection Agency published a rule for the mandatory reporting of greenhouse gases from sources that in general emit 25,000 metric tons (MT) or more of carbon dioxide (CO_2) per year. As shown in the emissions modeling results (Appendix A), the Project will produce the following total CO_2:

2022 Project Construction	320.21 MT/yr
2023 Project Construction	501.18 MT/yr
2024 Project Construction	282.73 MT/yr
Total Project Construction Emissions	1104.12 MT/yr

Amortizing the total construction CO_2 emissions over a 30-year period results in 36.81 MT/yr. The total operational CO_2 emissions indicated in the emissions analysis for the proposed Project is 1261.08 MT/yr. Adding the amortized construction emissions to the total operational emissions results in 1297.89 MT/yr. This represents approximately 5.2% of the EPA reporting threshold. As such, any impacts resulting from conflicting a GHG plan, policy, or regulation, or significantly impacting the environment as a result of project development is considered ***less than significant***.

Mitigation Measures: None are 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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed Project site is located in the northwestern portion of the City of Dinuba. The parcel to be developed with the single family residential subdivision is currently planted with orchard trees. The area immediately surrounding the proposed Project consists of agricultural and residential uses. There are five rural residences adjacent to the proposed Project site.

RESPONSES

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?

Less than Significant Impact. The proposed Project includes the construction of up to 105 single- family residential homes and new internal access roads. Proposed 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 subdivision would occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. Upon Annexation and Prezone approval, the proposed Project will include 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

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. Roosevelt Elementary School is approximately 0.7 miles to the northeast of the proposed Project site, while Lincoln Elementary School is approximately 2 miles east. 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. There would a ***less than significant impact.***

Mitigation Measures: None are required.

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?

No Impact. A database search was conducted to identify recorded hazardous materials incidents in the Project area. The search included cleanup sites under Federal Superfund (National Priorities List), State Response, and other federal, state, and local agency lists. The proposed Project site is not located on a list

of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Geotracker[12] and DTSC Envirostor[13] databases). Envirostor lists a school investigation on a parcel west of the proposed Project site, with the current status as No Further Action (Envirostor ID #60000416). Additionally, there are no hazardous materials incidents or cleanup sites within 0.25 miles radius of the Project site. There is ***no impact.***

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?

Less than Significant Impact. There are no private or public airstrips in the Project vicinity. The Sequoia Field Airport is located approximately 9 miles to the southeast of the proposed Project site. Thus, any impacts are ***less than significant***.

Mitigation Measures: None are required.

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

No Impact. The Project will not interfere with any adopted emergency response or evacuation plan. There is ***no 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.

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[12] California State Water Resources Control Board, Geotracker Database. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=sanger. Accessed March 2022.

[13] California Department of Toxic Control Substances. EnviroStor Database. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Search. Accessed March 2022.

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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The City of Dinuba is located in the Tulare Lake hydrologic region, specifically within the Kings sub-basin of the San Joaquin Valley groundwater basin[14]. Groundwater levels in this area are considered plentiful and have shown an increase since droughts recorded in 1976-77 and 1987-92. California's Groundwater Bulletin 118 estimates that the Kings sub-basin totals approximately 1,530 square miles and contains nearly 90 million acre-feet of groundwater. Dinuba has a groundwater depth of approximately 50 feet below the surface.

The City of Dinuba will provide water to the Project site and the Project will be required to tie into the City's existing water service infrastructure.

RESPONSES

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. The proposed subdivision site is 25.39 acres in size. Grading, excavation and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects

[14] City of Dinuba, General Plan Update Draft Environmental Impact Report, December 2006. Page 3 – 74.

that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

Three general sources of potential short-term construction-related stormwater pollution associated with the proposed project are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment. Generally, routine safety precautions for handling and storing construction materials may effectively mitigate the potential pollution of stormwater by these materials. These same types of common sense, "good housekeeping" procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. In addition, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These Best Management Practices (BMPs) would be required in theStormwater Pollution Prevention Plan (SWPPP) to be prepared prior to commencement of Project construction. When properly designed and implemented, these "good-housekeeping" practices are expected to reduce short-term construction-related impacts to less than significant.

In accordance with the National Pollution Discharge Elimination System (NPDES) Stormwater Program, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the Regional Water Quality Control Board (RWQCB) has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement.

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 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. Therefore, any impacts will be ***less than significant***.

Mitigation Measures: None are required.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. Site development will result in an increased demand for water. Dinuba's main water supply comes from seven active underground water wells located throughout the City, totaling a maximum production efficiency of approximately 11.0 million gallons per day (MGD).[15] This equates to approximately 7,600 gallons per minute (GPM). The maximum capacity of the groundwater supply system is approximately 11.0 MGD, the maximum daily demand is approximately 7.3 MGD and the daily average demand is 4.2 MGD. The supply system pumps transport groundwater to the surface, maintain system pressure with the help of the City's two water towers, and treats the water with chlorine at each well site. At some sites the water is filtered and checked for elevated levels of DBCP, a contaminant found in some areas. The water is then transported for use throughout the City via a distribution system with approximately 4,575 connections. The City's water supply system is reported to be operating at approximately 66% capacity, which indicates there is adequate capacity in the City's water system and groundwater supply to accommodate the proposed Project.

Additionally, compliance with existing State regulations will ensure that impacts to groundwater supply will 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 proposed Project includes minor changes to the existing stormwater drainage pattern of the area through the installation of asphalt, residences, driveways, landscaping, curb, gutter and sidewalks. Standard construction practices and compliance with state and federal regulations, City ordinance and regulations, *The Uniform Building Code*, and adherence to profession engineering

[15] City of Dinuba General Plan Update Background Report, October 2006. Page 7- 1.

design approved by the City of Dinuba will reduce or eliminate drainage impacts from the Project. There are no streams or rivers near the site. Any impacts would be ***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) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. The Project is not within a regulatory floodway or within a base floodplain (100 year) elevation, as identified by the Federal Emergency Management Agency (Map Number 06107C0320E, effective 6/16/09). In addition, the Project does not include any housing or structures that would be subject to flooding either from a watercourse or from dam inundation. There are no bodies of water near the site that would create a potential risk of hazards from seiche, tsunami or mudflow. The Project will not conflict with any water quality control plans or sustainable groundwater management plan. However, as mentioned in Section c., all new development within the City of Dinuba Planning Area must conform to standards and plans contained in the Dinuba Stormwater Drainage Master Plan. By conforming to all standards and policies as outlined, there will be ***no impacts*** associated with the Project.

Mitigation Measures: None are required.

XI. 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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project site is in the northwestern portion of the City of Dinuba. The site lies to the west of Englehart Avenue/Road 72, north of Saginaw Avenue, and east of Road 70. The vicinity is heavily disturbed with agricultural and residential uses. The portion of the site to be developed is currently in agricultural production with orchards, see Figure 2 – Vicinity Map, while the remaining three parcels being annexed are developed with single family homes and associated improvements. The subdivision site is currently zoned AE-20 (Exclusive Agriculture – 20 Acres minimum) by Tulare County, but designated as Medium Density Residential and Park/Pond by the City of Dinuba General Plan. The proposed Project includes Annexation, General Plan Amendment, prezone, and TSM to accommodate the construction and operation of a new 105-unit single-family residential development and associated improvements.

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?

Less Than Significant Impact. The immediate vicinity of the proposed Project site is comprised of vacant land to the east, agricultural land uses to the north, west, and south, with rural residences to the north,

south, southeast, and east. The proposed Project will not divide an existing community; rather, it will extend an existing one. The Project will include construction of internal roads, accessed from Englehart Avenue/Road 72, Saginaw Avenue, and Road 70.

The parcel proposed for subdivision is currently zoned AE-20 by Tulare County however it is within the Dinuba Urban Development Boundary and designated by the City of Dinuba General Plan as Medium Density Residential and Park/Pond. As such, has been planned for development. As part of the Project, the site will be prezoned R-1-6. Project development and subsequent land use and zoning changes will not conflict with any land use plan, policy, regulation adopted for the purpose of avoiding or mitigating an environmental effect. The remaining three parcels being annexed are also zoned AE-20 but are designated "Medium Density Residential" by the Dinuba General Plan.

Based upon Project approval, compliance with the goals, objectives and policies referenced below, the proposed Project is determined to be consistent with the Dinuba General Plan goals and objectives related to land use and the urban form:

Policy 1.1: Develop design review standards for structures, landscaping and related development to facilitate compatibility with surrounding uses and the overall character of the community.

The site plan and all design features will be reviewed by the City and all appropriate entities for approval prior to construction.

Objective: Designate and allow for the development of a wide range of residential housing types in the City to meet the needs of all the City's citizens.

The Project is intended for single-family occupancy, with a 5,400 square-foot lot minimum. The Project will incorporate parks and pedestrian spaces into the site design for the enjoyment of all future residents.

Objective A: Promote stable high quality residential neighborhoods.
Objective B: Encourage new residential neighborhoods that have the desirable characteristics of traditional small-town neighborhoods.

The Project will connect with the existing single-family residential neighborhood, located southeast of the site across Saginaw Avenue. The Project will be entirely consistent with neighboring residential land uses.

The proposed Project will not divide an existing community and it will not conflict with an established land use plan. Any impacts are ***less than significant.***

Mitigation Measures: None are required.

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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Tulare County commercially extracts important minerals such as sand, gravel, crushed rock and natural gas.[16] Other minerals have been mined in the county to a smaller extent, including tungsten, chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone and silica. Aggregate resources are considered the County's most valuable extractive mineral. No mineral resource locations are within the vicinity of the City of Dinuba.[17]

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. There are no known mineral resources in the proposed Project area and the site is not included in a State classified mineral resource zones. Therefore, there is ***no impact***.

Mitigation Measures: None are required.

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[16] Tulare County General Plan Background Report, February 2010. Page 10-17.

[17] City of Dinuba General Plan Update Background Report, October 2006. Page 9-12.

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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Noise is often described as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. The City of Dinuba is impacted by a multitude of noise sources. Principal noise sources include traffic on roadways, agricultural noise and industrial noise. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities, and they are predominant sources of noise in the City. The Project site is located in an area with a mix of uses. The predominant noise sources in the Project area include traffic on local roadways, residential noise (lawn movers, audio equipment, voices, etc.) and potential noise from the nearby agricultural land uses. Sensitive receptors in the area include rural residential housing immediately north, east, and southeast of the Project site.

RESPONSES

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?

Less than Significant Impact.

Short-term (Construction) Noise Impacts

Proposed Project construction related activities will involve temporary noise sources. Typical construction related equipment include graders, trenchers, small tractors and excavators. During the proposed Project construction, noise from construction related activities will contribute to the noise environment in the immediate vicinity. Activities involved in construction will generate maximum noise levels, as indicated in Table 5, ranging from 79 to 91 dBA at a distance of 50 feet, without feasible noise control (e.g., mufflers) and ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise controls.

Table 5
Typical Construction Noise Levels

Type of Equipment	dBA at 50 ft	
	Without Feasible Noise Control	With Feasible Noise Control
Dozer or Tractor	80	75
Excavator	88	80
Scraper	88	80
Front End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of

construction activities that are to be expected from time to time in urban environments. Most residents of urban areas recognize this reality and expect to hear construction activities on occasion.

Long-term (Operational) Noise Impacts

The primary source of on-going noise from the Project will be from vehicles traveling on internal access roads and from traffic traveling along Englehart Avenue/Road 72, Saginaw Avenue, and Road 70. The Project will result in an increase in traffic on some roadways in the Project area. However, the relatively low number of new trips associated with the Project is not likely to increase the ambient noise levels by a significant amount. Given the amount of existing vehicular activity in the Project area, the moderate increase in traffic associated with the new residential development (1,055 daily trips maximum), is not expected to increase ambient noise levels significantly. The area is active with vehicles, residential housing and agricultural land uses, so the proposed Project will not introduce a new significant source of noise that isn't already occurring in the area. Therefore, the impact is considered ***less than significant.***

Mitigation Measures: None are required.

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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Dinuba's population has exhibited major growth since 2000. The population in 2000 was 16,844[18], while the current population is 26,517.[19] This represents an approximate increase of 57%. Estimates for 2021 shows the City has 7,118 housing units with an average of 3.812 people per household. The City of Dinuba's primary industry is agriculture, but there is sufficient labor force in the area to support many other types of industries.

The proposed Project site is currently planted with orchard trees. New housing associated with the Project includes 105 single-family homes.

The Project site is located in an area dominated by residential and agricultural uses. The nearest rural residences are adjacent to the Project site to the north, southeast, and south.

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)?

[18] City of Dinuba General Plan Update Background Report, October 2006. Page 4-1.

[19] State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State –2011- 2021 with 2010 Census Benchmark, May 2021. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ Accessed March 2022.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Less than Significant. There are 105 new homes associated with the proposed Project and there are no residential structures currently on-site. The proposed Project would provide housing to a community that the 2021 Census shows major recent population growth. The average household size was 3.81 persons per dwelling, for 2021 estimates. Using this ratio, the project will accommodate approximately 401 persons. This is a relatively small population and is not expected to affect any regional population, housing or employment projections anticipated by City documents. Additionally, the site is designated as "Medium Density Residential" by the Dinuba General Plan and as such, the increase in population has been planned for. The proposed Project will alleviate some overcrowding in the regional population by contributing reliable housing, and will additionally provide temporary construction jobs to the local work force. In conclusion, the Project implementation will not displace substantial numbers of people and instead provide needed housing. Any impacts are considered ***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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project site is located in the northwestern portion of the City of Dinuba. The immediate vicinity is comprised of single-family tract homes to the west, a commercial shopping center to the southeast, and agricultural land uses and rural residences to the west and south of the site. The existing Project area is protected by the City of Dinuba Police Department, which is headquartered at 680 S. Alta Avenue. The Dinuba Fire Department is located at 496 East Tulare Street in downtown Dinuba. There are no public parks or schools in the immediate vicinity of the proposed Project site.

RESPONSES

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?

Less than Significant Impact. The Dinuba Fire Department offers a full range of services including fire/rescue, emergency medical treatment and transport, fire prevention, and hazardous materials first response within the Dinuba City Limits.

The proposed Project would be served by the Dinuba Fire Department, which is located at 496 East Tulare Street, Dinuba, approximately two miles southeast of the Project site.

The proposed subdivision would be required to comply with all applicable fire and building safety codes (California Building Code and Uniform Fire Code) to ensure fire safety elements are incorporated into final Project design, including the providing designated fire lanes marked as such. Proposed interior streets will be required to provide appropriate widths and turning radii to safely accommodate emergency response and the transport of emergency/public safety vehicles. The Project will also be designed to meet Fire Department requirements regarding water flow, water storage requirements, hydrant spacing, infrastructure sizing, and emergency access. As a result, appropriate fire safety considerations will be included as part of the final design of the Project. As such, any impacts are ***less than significant***.

Police Protection?

Less than Significant Impact. Protection services would be provided to the proposed Project site from the existing Dinuba Police Department, which is approximately two miles southeast of the Project site at 680 South Alta Avenue, Dinuba. The Dinuba Police Department provides a full range of police services. The Project site is located in an area currently served by the Dinuba Police Department; the Department would not need to expand its existing service area or construct a new facility to serve the Project site. Impacts are ***less than significant.***

Schools?

Less than Significant Impact. Educational services for the proposed Project will be provided by the Dinuba Unified School District (KUSD). Dinuba Unified School District operates eleven schools within

the planning area; six elementary schools, two high schools, as well as an adult school, Ronald Reagan Academy, and Washington Intermediate School.

Since the proposed project includes the addition of 105 residential units, the number of students in the school district will increase. New development projects are required by state law to pay development impact fees to the school districts at the time of building permit issuance. These impact fees are used by the school districts to maintain existing and develop new facilities, as needed.

While development of 105 residential units alone is not expected to require the alteration of existing or construction of new school facilities, the development will contribute to the cumulative need for increased school facilities. The timing of when new school facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts to a potential future facility would be speculative. As the future new school facilities are further planned and developed, they would be subject to their own separate CEQA review in order to identify and mitigate any potential environmental impacts. Therefore, the impact is ***less than significant.***

Parks?

Less than Significant Impact. The proposed Project includes the development of an approximately 4.5-acre park, including approximately 2.2 acres for a ponding basin, within the site design. However, the Project will be required to pay City Park facility impact fees to compensate for any service demand increase on existing parks within the Dinuba area. Impacts are ***less than significant.***

Other public facilities?

Less than Significant Impact. The proposed Project is within the land use and growth projections identified in the City's General Plan and other infrastructure studies. The Project, therefore, would not result in increased demand for, or impacts on, other public facilities such as library services. 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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

There are twelve parks within the City of Dinuba; Alice Park, Centennial Park, Felix Delgado Park, Gregory Park, K/C Vista Park, Nebraska Park, Pamela Park/Basin, Rose Ann Vuich Park, Roosevelt Park/Dinuba Community Center, Entertainment Plaza, Peachwood Park and Ponding Basin, and Rotary Park. These parks are managed by the City of Dinuba's Parks and Community Services Department. This department also supervises and coordinates a wide variety of community programs and activities.

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?

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 an approximately 4.2-acre park, including approximately 2.2 acres for a ponding basin, within the Project site plan. However, the increase of 401 persons resulting from the Project would have a relatively small impact on existing recreational facilities. In order to implement the goals and objectives of the City's General Plan, and to

mitigate the impacts caused by future development in the City, park facilities must be constructed. The City Council has determined that a Park Facilities Fee is needed in order to finance these public facilities and to pay for each development's fair share of the construction and acquisition costs. The Project Applicant will be required to pay development impact fees as determined by the City of Park Facilities Fees. The Project will still be required to pay City park facility impact fees, as required. Therefore, impacts are considered ***less than significant impacts***.

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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed project is bounded by Englehart Avenue to the east and located north of Saginaw Ave in the City of Dinuba, Tulare County, California. The proposed 105-lot single-family residential subdivision will be located on approximately 25.39 acres of agricultural land planted with orchard trees, assigned Assessor's Parcel Number 012-272-013. The City of Dinuba is two miles north of SR 201, five miles west of SR 63 and eight miles northeast of the Golden State Highway/SR 99. The Fresno-Yosemite International Airport is the closest regional airport, approximately 22 miles northwest. There are six main arterials that divide the City.

Important roadways serving the Project are discussed below.

Alta Avenue is a north-south arterial that extends throughout the City of Dinuba. In the vicinity of the Project it exists as a four-lane roadway with curb and gutter and provides access to commercial, residential, and agricultural land uses.

El Monte Way is an east-west arterial that extends west from Road 72 through the City of Orosi. In the vicinity of the Project it exists as four-lane roadway with curb and gutter. El Monte Way provides access to commercial, residential, and agricultural land uses.

Englehart Avenue (Road 72) is a north-south arterial that extends north from Sierra Way. In the Project vicinity, it exists as a two-lane roadway and provides access to commercial, residential, and agricultural land uses.

Monte Vista Drive is a north-south local roadway that extends from Sierra Way to El Monte Way. North of El Monte Way, Monte Vista Drive is named Alice Avenue. In the vicinity of the project it exists as a four-lane roadway with curb and gutter and provides access to commercial, residential, and agricultural land uses.

A Traffic Study was prepared for the Project by Ruettgers & Schuler Civil Engineers on May 2022 (See Appendix C) and is the basis of analysis for the following transportation analysis.

RESPONSES

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Significant Impact with Mitigation.

Trip Generation Analysis

At build-out, the Project will generate a maximum of 1,055 daily trips and is anticipated to have 78 a.m. peak hour trips and 104 p.m. peak hour trips (See Table 6 below).

Table 6
Proposed 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	105 Dwelling Units	eq	1055	eq	26% 20	74% 58	eq	63% 66	37% 38

**calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition*

Level of Service Analysis

Level of service (LOS) criteria for unsignalized and signalized intersections, as defined in HCM 2010, are presented in the tables below. The Tulare County Regional Transportation Plan designates LOS D as the minimum acceptable intersection peak hour level of service.

A total of four intersections are included in the study:

- Englehart Ave & Saginaw Ave (stop controlled)
- Englehart Ave & El Monte Way (signal)
- Monte Vista Dr & El Monte Way (signal)
- Alta Ave & El Monte Way (signal)

The scope is based on a threshold of 50 project trips as defined in the Caltrans *Guide for the Preparation of Traffic Impact Studies*. Additionally, intersections were studied that were directly related to or adjacent to the Project.

All four intersections operate at or above a LOS D prior to, and with the addition of project traffic in existing and future scenarios.

Three roadway segments were analyzed:

- Englehart Ave: Saginaw Ave – El Monte Way
- El Monte Way: Englehart Ave – Monte Vista Dr
- El Monte Way: Monte Vista Dr – Alta Ave

All three road segments operate at a LOS C currently and with Project generated traffic.

As such, the proposed Project is in compliance with the General Plan and its associated policies relating to LOS. Additionally, the Project includes sidewalks which will increase internal and external walkability. Any impacts to this resource area are ***less than significant.***

Mitigation Measures: None are required.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Baseline VMT (Vehicle Miles Traveled) was determined utilizing data from the California Statewide Travel Demand Model (CSTDM). The proposed residential project is located in Traffic Analysis Zone (TAZ) 2775, which has an average VMT/capita of 19.27 miles. The proposed 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 it 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.

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 11.95 or 0.1195. The resulting VMT/capita after mitigation is 11.83 which is below the average VMT/capita in the TAZ which the Project is located.

With implementation of the mitigation measures identified for VMT, and show below, the Project will have a ***less than significant impact with mitigation*** incorporation.

Mitigation Measures:

TRA-1

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, there were existing curb returns which do not meet current ADA requirements for ramps. The identified improvements include the following:

- East side of Adelaide Way & Englehart Avenue (2 ramps)

- East side of Kelly Drive & Englehart Avenue (2 ramps)
- South side of Kelly Drive & Morningside Drive (2 ramps)
- North side of Kelly Drive & Morningside Drive (2 ramps)

Total project cost is estimated at approximately $24,000 with a 20 percent contingency. The guidelines include a minimum cost for mitigation of $20 per daily trip generated by the project. The project is anticipated to generate 1055 daily trips, which equates to a target value of improvements of $21,100. At the time of construction should prices fluctuate, an adjustment in the scope of improvements may need to be made.

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 Dinuba. 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 the east, south, and west boundaries of the development 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.

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) Would the project 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 Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant Impact. In accordance with Assembly Bill (AB) 52 and Senate Bill (SB) 18, potentially affected Tribes were formally notified of this Project and were given the opportunity to request consultation on the Project. The City contacted the Native American Heritage Commission, requesting a contact list of applicable Native American Tribes, which was provided to the City. The City provided letters to the listed Tribes on March 19, 2020, notifying them of the Project and requesting consultation, if desired. The City did not receive any responses from the tribes contacted. Therefore, there is a ***less than significant impact***.

Mitigation Measures: None are required.

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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project will be required to connect to water, sewer, stormwater and wastewater services provided by the City of Dinuba and may be subject to water use fees and/or development fees to be provided such service. In addition, the Project will require solid waste disposal services.

The City of Dinuba contracts with Pena's Disposal Services for solid waste collection.

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. Development of the proposed subdivision would include up to 105 single-family residential units on the Project site. The Project site is located within the service territory of the City of Dinuba. Operational discharge flows treated at the City's wastewater treatment facility would be required to comply with applicable water discharge requirements issued by the Central Valley Regional Water Quality Control Board (RWQCB). Compliance with conditions or permit requirements established by the City as well as water discharge requirements outlined by the Central Valley RWQCB would ensure that wastewater discharges coming from the proposed Project site and treated by the WWTF system would not exceed applicable Central Valley RWQCB wastewater treatment requirements.

As discussed in Section X, Hydrology and Water Quality, with an increase in the area of impervious surfaces on the Project site, an increase in the amount of storm water runoff is anticipated. The site will be designed so that storm water is collected and deposited in the City's existing storm drain system. The storm water collection system design will be subject to review and approval by the City Public Works Department. Storm water during construction will be managed as part of the Storm Water Pollution Prevention Plan (SWPPP). A copy of the SWPPP is retained on-site during construction. Thus, the proposed Project would have a ***less than significant impact.***

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. Water service would be provided to the Project by the City of Dinuba. The City's main water supply comes from seven active underground water wells distributed throughout the City. The water is treated and delivered to the community by the City of Dinuba water system. The City's

maximum capacity is 11.0 million gallons per day (MGD) and the maximum daily demand is 7.3 MGD. The City's water system is operating in an excess capacity and will have sufficient water supplies available to serve the Project and the City. The Project developer will be required to pay the City of Dinuba's water system impact fees. Funds accrued under this fee are used to make capital improvements to the City's water system, including conservation improvements. Impacts are ***less than significant impact.***

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 proposed Project will result in wastewater from newly-constructed 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. Therefore, assuming compliance with applicable standards and payment of required fees and connection charges, the Project would not result in a significant impact related to construction or expansions of existing wastewater treatment facilities. The impact of the Project on wastewater treatment is ***less than significant***.

Mitigation Measures: None are required.

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 statutes and regulations related to solid waste?

Less than Significant Impact. 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. The Project is not expected to generate an excess of solid waste beyond what is considered typical of residential land uses. The proposed Project will comply with all federal, state and local statutes and regulations related to solid waste. 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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The City of Dinuba's planning area is composed of urbanized portions of land and the surrounding agricultural fields. The Project site has ensured fire protection by the Dinuba Fire Department, located at 496 East Tulare Street approximately two miles southeast of the site. Given the location of the nearest fire station, response time is expected to be extremely quick in the rare event of a fire event.

The proposed Project site's elevation is approximately 340 feet above sea level in an area of intense urban and agricultural development. The Project site is bounded to the west by N. Parkstone Avenue/Rd 70, to

the north, south and southeast by agricultural land and rural residences, and to the east by Englehart Avenue/Rd 72.

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 agricultural and residential 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. The proposed Project does not require the installation or maintenance of associated infrastructure that would increase wildfire risk or result in impacts to the environment.

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) 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?

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 a substantial impact on the environment or on any resources identified in the Initial Study. Mitigation measures have been incorporated in the Project 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 to reduce all potentially significant impacts to ***less than significant***.

LIST OF PREPARERS

Crawford & Bowen Planning, Inc.

- Emily Bowen, LEED AP, Principal Environmental Planner
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City of Dinuba

- Karl Schoettler

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- Jeremy E. David

Dinuba Castro Residential Project - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Dinuba Castro Residential Project

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	105.00	Dwelling Unit	21.20	189,000.00	401
City Park	4.20	Acre	4.20	182,952.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	7			**Operational Year**	2024
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project includes Single Family housing and one park.
City - Dinuba

Land Use - Lot Acreage and Population adjusted to account for the Project specifics.

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	34.09	21.20
tblLandUse	Population	333.00	401.00
tblWoodstoves	NumberCatalytic	21.20	0.00
tblWoodstoves	NumberNoncatalytic	21.20	0.00

2.0 Emissions Summary

Dinuba Castro Residential Project - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2160	2.0916	1.7367	3.6300e-003	0.4433	0.0947	0.5379	0.1939	0.0878	0.2817	0.0000	320.2037	320.2037	0.0811	4.2200e-003	323.4895
2023	0.2573	2.1371	2.5560	5.6200e-003	0.1549	0.0931	0.2480	0.0420	0.0876	0.1296	0.0000	501.1711	501.1711	0.0751	0.0182	508.4828
2024	1.9118	1.1562	1.5126	3.1700e-003	0.0798	0.0487	0.1284	0.0216	0.0457	0.0673	0.0000	282.7291	282.7291	0.0475	8.6600e-003	286.4953
Maximum	**1.9118**	**2.1371**	**2.5560**	**5.6200e-003**	**0.4433**	**0.0947**	**0.5379**	**0.1939**	**0.0878**	**0.2817**	**0.0000**	**501.1711**	**501.1711**	**0.0811**	**0.0182**	**508.4828**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2160	2.0916	1.7367	3.6300e-003	0.4433	0.0947	0.5379	0.1939	0.0878	0.2817	0.0000	320.2034	320.2034	0.0811	4.2200e-003	323.4892
2023	0.2573	2.1371	2.5560	5.6200e-003	0.1549	0.0931	0.2480	0.0420	0.0876	0.1296	0.0000	501.1707	501.1707	0.0751	0.0182	508.4824
2024	1.9118	1.1562	1.5126	3.1700e-003	0.0798	0.0487	0.1284	0.0216	0.0457	0.0673	0.0000	282.7289	282.7289	0.0475	8.6600e-003	286.4950
Maximum	**1.9118**	**2.1371**	**2.5560**	**5.6200e-003**	**0.4433**	**0.0947**	**0.5379**	**0.1939**	**0.0878**	**0.2817**	**0.0000**	**501.1707**	**501.1707**	**0.0811**	**0.0182**	**508.4824**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-6-2022**	**9-5-2022**	1.1352	1.1352
2	**9-6-2022**	**12-5-2022**	0.9724	0.9724
3	**12-6-2022**	**3-5-2023**	0.6124	0.6124
4	**3-6-2023**	**6-5-2023**	0.6050	0.6050
5	**6-6-2023**	**9-5-2023**	0.6039	0.6039
6	**9-6-2023**	**12-5-2023**	0.6001	0.6001
7	**12-6-2023**	**3-5-2024**	0.5755	0.5755
8	**3-6-2024**	**6-5-2024**	0.5688	0.5688
9	**6-6-2024**	**9-5-2024**	1.2761	1.2761
10	**9-6-2024**	**9-30-2024**	0.8084	0.8084
		Highest	1.2761	1.2761

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9453	0.0483	0.7961	2.9000e-004		7.5000e-003	7.5000e-003		7.5000e-003	7.5000e-003	0.0000	46.7604	46.7604	2.0900e-003	8.3000e-004	47.0612
Energy	0.0135	0.1150	0.0489	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.1490	133.1490	2.5500e-003	2.4400e-003	133.9402
Mobile	0.4974	0.8888	4.6854	0.0112	1.0689	0.0100	1.0789	0.2861	9.4000e-003	0.2955	0.0000	1,048.2905	1,048.2905	0.0550	0.0585	1,067.1000
Waste						0.0000	0.0000		0.0000	0.0000	30.7004	0.0000	30.7004	1.8143	0.0000	76.0588
Water						0.0000	0.0000		0.0000	0.0000	2.1704	0.0000	2.1704	0.2229	5.2600e-003	9.3119
Total	**1.4561**	**1.0520**	**5.5303**	**0.0122**	**1.0689**	**0.0268**	**1.0957**	**0.2861**	**0.0262**	**0.3123**	**32.8707**	**1,228.1999**	**1,261.0706**	**2.0969**	**0.0670**	**1,333.4722**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9453	0.0483	0.7961	2.9000e-004		7.5000e-003	7.5000e-003		7.5000e-003	7.5000e-003	0.0000	46.7604	46.7604	2.0900e-003	8.3000e-004	47.0612
Energy	0.0135	0.1150	0.0489	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.1490	133.1490	2.5500e-003	2.4400e-003	133.9402
Mobile	0.4974	0.8888	4.6854	0.0112	1.0689	0.0100	1.0789	0.2861	9.4000e-003	0.2955	0.0000	1,048.2905	1,048.2905	0.0550	0.0585	1,067.1000
Waste						0.0000	0.0000		0.0000	0.0000	30.7004	0.0000	30.7004	1.8143	0.0000	76.0588
Water						0.0000	0.0000		0.0000	0.0000	2.1704	0.0000	2.1704	0.2229	5.2600e-003	9.3119
Total	**1.4561**	**1.0520**	**5.5303**	**0.0122**	**1.0689**	**0.0268**	**1.0957**	**0.2861**	**0.0262**	**0.3123**	**32.8707**	**1,228.1999**	**1,261.0706**	**2.0969**	**0.0670**	**1,333.4722**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/6/2022	7/15/2022	5	30	
2	Site Preparation	Site Preparation	7/16/2022	8/12/2022	5	20	
3	Grading	Grading	8/13/2022	10/14/2022	5	45	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	10/15/2022	6/21/2024	5	440	
5	Paving	Paving	6/22/2024	8/9/2024	5	35	
6	Architectural Coating	Architectural Coating	8/10/2024	9/27/2024	5	35	

Acres of Grading (Site Preparation Phase): 30

Acres of Grading (Grading Phase): 135

Acres of Paving: 0

Residential Indoor: 382,725; Residential Outdoor: 127,575; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	115.00	41.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3434
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**		**0.0186**	**0.0186**		**0.0173**	**0.0173**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3434**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.4000e-004	6.1400e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4960	1.4960	5.0000e-005	5.0000e-005	1.5110
Total	**7.7000e-004**	**5.4000e-004**	**6.1400e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4960**	**1.4960**	**5.0000e-005**	**5.0000e-005**	**1.5110**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3433
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**		**0.0186**	**0.0186**		**0.0173**	**0.0173**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3433**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.4000e-004	6.1400e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4960	1.4960	5.0000e-005	5.0000e-005	1.5110
Total	**7.7000e-004**	**5.4000e-004**	**6.1400e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4960**	**1.4960**	**5.0000e-005**	**5.0000e-005**	**1.5110**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3308	0.1970	3.8000e-004		0.0161	0.0161		0.0148	0.0148	0.0000	33.4394	33.4394	0.0108	0.0000	33.7098
Total	**0.0317**	**0.3308**	**0.1970**	**3.8000e-004**	**0.1966**	**0.0161**	**0.2127**	**0.1010**	**0.0148**	**0.1159**	**0.0000**	**33.4394**	**33.4394**	**0.0108**	**0.0000**	**33.7098**

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3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	4.3000e-004	4.9100e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1968	1.1968	4.0000e-005	4.0000e-005	1.2088
Total	**6.2000e-004**	**4.3000e-004**	**4.9100e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1968**	**1.1968**	**4.0000e-005**	**4.0000e-005**	**1.2088**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3308	0.1970	3.8000e-004		0.0161	0.0161		0.0148	0.0148	0.0000	33.4394	33.4394	0.0108	0.0000	33.7097
Total	**0.0317**	**0.3308**	**0.1970**	**3.8000e-004**	**0.1966**	**0.0161**	**0.2127**	**0.1010**	**0.0148**	**0.1159**	**0.0000**	**33.4394**	**33.4394**	**0.0108**	**0.0000**	**33.7097**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	4.3000e-004	4.9100e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1968	1.1968	4.0000e-005	4.0000e-005	1.2088
Total	**6.2000e-004**	**4.3000e-004**	**4.9100e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1968**	**1.1968**	**4.0000e-005**	**4.0000e-005**	**1.2088**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2071	0.0000	0.2071	0.0822	0.0000	0.0822	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0816	0.8740	0.6534	1.4000e-003		0.0368	0.0368		0.0338	0.0338	0.0000	122.7029	122.7029	0.0397	0.0000	123.6950
Total	**0.0816**	**0.8740**	**0.6534**	**1.4000e-003**	**0.2071**	**0.0368**	**0.2439**	**0.0822**	**0.0338**	**0.1161**	**0.0000**	**122.7029**	**122.7029**	**0.0397**	**0.0000**	**123.6950**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5400e-003	1.0900e-003	0.0123	3.0000e-005	3.6000e-003	2.0000e-005	3.6200e-003	9.6000e-004	2.0000e-005	9.7000e-004	0.0000	2.9919	2.9919	1.0000e-004	9.0000e-005	3.0220
Total	**1.5400e-003**	**1.0900e-003**	**0.0123**	**3.0000e-005**	**3.6000e-003**	**2.0000e-005**	**3.6200e-003**	**9.6000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.9919**	**2.9919**	**1.0000e-004**	**9.0000e-005**	**3.0220**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2071	0.0000	0.2071	0.0822	0.0000	0.0822	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0816	0.8740	0.6534	1.4000e-003		0.0368	0.0368		0.0338	0.0338	0.0000	122.7027	122.7027	0.0397	0.0000	123.6948
Total	**0.0816**	**0.8740**	**0.6534**	**1.4000e-003**	**0.2071**	**0.0368**	**0.2439**	**0.0822**	**0.0338**	**0.1161**	**0.0000**	**122.7027**	**122.7027**	**0.0397**	**0.0000**	**123.6948**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5400e-003	1.0900e-003	0.0123	3.0000e-005	3.6000e-003	2.0000e-005	3.6200e-003	9.6000e-004	2.0000e-005	9.7000e-004	0.0000	2.9919	2.9919	1.0000e-004	9.0000e-005	3.0220
Total	**1.5400e-003**	**1.0900e-003**	**0.0123**	**3.0000e-005**	**3.6000e-003**	**2.0000e-005**	**3.6200e-003**	**9.6000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.9919**	**2.9919**	**1.0000e-004**	**9.0000e-005**	**3.0220**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0469	0.4294	0.4500	7.4000e-004		0.0223	0.0223		0.0209	0.0209	0.0000	63.7244	63.7244	0.0153	0.0000	64.1061
Total	**0.0469**	**0.4294**	**0.4500**	**7.4000e-004**		**0.0223**	**0.0223**		**0.0209**	**0.0209**	**0.0000**	**63.7244**	**63.7244**	**0.0153**	**0.0000**	**64.1061**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4400e-003	0.0619	0.0178	2.4000e-004	7.4800e-003	6.9000e-004	8.1600e-003	2.1600e-003	6.6000e-004	2.8200e-003	0.0000	22.6406	22.6406	1.5000e-004	3.3900e-003	23.6557
Worker	0.0108	7.6300e-003	0.0862	2.3000e-004	0.0253	1.4000e-004	0.0254	6.7200e-003	1.3000e-004	6.8500e-003	0.0000	21.0265	21.0265	7.1000e-004	6.5000e-004	21.2378
Total	**0.0133**	**0.0695**	**0.1040**	**4.7000e-004**	**0.0328**	**8.3000e-004**	**0.0336**	**8.8800e-003**	**7.9000e-004**	**9.6700e-003**	**0.0000**	**43.6671**	**43.6671**	**8.6000e-004**	**4.0400e-003**	**44.8935**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0469	0.4294	0.4500	7.4000e-004		0.0223	0.0223		0.0209	0.0209	0.0000	63.7244	63.7244	0.0153	0.0000	64.1060
Total	**0.0469**	**0.4294**	**0.4500**	**7.4000e-004**		**0.0223**	**0.0223**		**0.0209**	**0.0209**	**0.0000**	**63.7244**	**63.7244**	**0.0153**	**0.0000**	**64.1060**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4400e-003	0.0619	0.0178	2.4000e-004	7.4800e-003	6.9000e-004	8.1600e-003	2.1600e-003	6.6000e-004	2.8200e-003	0.0000	22.6406	22.6406	1.5000e-004	3.3900e-003	23.6557
Worker	0.0108	7.6300e-003	0.0862	2.3000e-004	0.0253	1.4000e-004	0.0254	6.7200e-003	1.3000e-004	6.8500e-003	0.0000	21.0265	21.0265	7.1000e-004	6.5000e-004	21.2378
Total	**0.0133**	**0.0695**	**0.1040**	**4.7000e-004**	**0.0328**	**8.3000e-004**	**0.0336**	**8.8800e-003**	**7.9000e-004**	**9.6700e-003**	**0.0000**	**43.6671**	**43.6671**	**8.6000e-004**	**4.0400e-003**	**44.8935**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.8800e-003	0.2356	0.0722	1.0700e-003	0.0353	1.5200e-003	0.0369	0.0102	1.4600e-003	0.0117	0.0000	103.0378	103.0378	4.4000e-004	0.0154	107.6429
Worker	0.0469	0.0315	0.3721	1.0400e-003	0.1195	6.3000e-004	0.1202	0.0318	5.8000e-004	0.0324	0.0000	96.7871	96.7871	3.0100e-003	2.8200e-003	97.7016
Total	**0.0528**	**0.2671**	**0.4442**	**2.1100e-003**	**0.1549**	**2.1500e-003**	**0.1570**	**0.0420**	**2.0400e-003**	**0.0440**	**0.0000**	**199.8249**	**199.8249**	**3.4500e-003**	**0.0182**	**205.3445**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.8800e-003	0.2356	0.0722	1.0700e-003	0.0353	1.5200e-003	0.0369	0.0102	1.4600e-003	0.0117	0.0000	103.0378	103.0378	4.4000e-004	0.0154	107.6429
Worker	0.0469	0.0315	0.3721	1.0400e-003	0.1195	6.3000e-004	0.1202	0.0318	5.8000e-004	0.0324	0.0000	96.7871	96.7871	3.0100e-003	2.8200e-003	97.7016
Total	**0.0528**	**0.2671**	**0.4442**	**2.1100e-003**	**0.1549**	**2.1500e-003**	**0.1570**	**0.0420**	**2.0400e-003**	**0.0440**	**0.0000**	**199.8249**	**199.8249**	**3.4500e-003**	**0.0182**	**205.3445**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0920	0.8402	1.0104	1.6800e-003		0.0383	0.0383		0.0361	0.0361	0.0000	144.9057	144.9057	0.0343	0.0000	145.7623
Total	**0.0920**	**0.8402**	**1.0104**	**1.6800e-003**		**0.0383**	**0.0383**		**0.0361**	**0.0361**	**0.0000**	**144.9057**	**144.9057**	**0.0343**	**0.0000**	**145.7623**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7500e-003	0.1134	0.0339	5.1000e-004	0.0170	7.4000e-004	0.0177	4.9100e-003	7.1000e-004	5.6200e-003	0.0000	48.7459	48.7459	2.0000e-004	7.2900e-003	50.9232
Worker	0.0208	0.0133	0.1654	4.8000e-004	0.0575	2.9000e-004	0.0578	0.0153	2.7000e-004	0.0155	0.0000	45.3656	45.3656	1.3000e-003	1.2500e-003	45.7706
Total	**0.0236**	**0.1267**	**0.1992**	**9.9000e-004**	**0.0745**	**1.0300e-003**	**0.0755**	**0.0202**	**9.8000e-004**	**0.0212**	**0.0000**	**94.1115**	**94.1115**	**1.5000e-003**	**8.5400e-003**	**96.6939**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0920	0.8402	1.0104	1.6800e-003		0.0383	0.0383		0.0361	0.0361	0.0000	144.9055	144.9055	0.0343	0.0000	145.7622
Total	**0.0920**	**0.8402**	**1.0104**	**1.6800e-003**		**0.0383**	**0.0383**		**0.0361**	**0.0361**	**0.0000**	**144.9055**	**144.9055**	**0.0343**	**0.0000**	**145.7622**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7500e-003	0.1134	0.0339	5.1000e-004	0.0170	7.4000e-004	0.0177	4.9100e-003	7.1000e-004	5.6200e-003	0.0000	48.7459	48.7459	2.0000e-004	7.2900e-003	50.9232
Worker	0.0208	0.0133	0.1654	4.8000e-004	0.0575	2.9000e-004	0.0578	0.0153	2.7000e-004	0.0155	0.0000	45.3656	45.3656	1.3000e-003	1.2500e-003	45.7706
Total	**0.0236**	**0.1267**	**0.1992**	**9.9000e-004**	**0.0745**	**1.0300e-003**	**0.0755**	**0.0202**	**9.8000e-004**	**0.0212**	**0.0000**	**94.1115**	**94.1115**	**1.5000e-003**	**8.5400e-003**	**96.6939**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0173	0.1667	0.2560	4.0000e-004		8.2000e-003	8.2000e-003		7.5400e-003	7.5400e-003	0.0000	35.0464	35.0464	0.0113	0.0000	35.3298
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0173**	**0.1667**	**0.2560**	**4.0000e-004**		**8.2000e-003**	**8.2000e-003**		**7.5400e-003**	**7.5400e-003**	**0.0000**	**35.0464**	**35.0464**	**0.0113**	**0.0000**	**35.3298**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6000e-004	4.9000e-004	6.0400e-003	2.0000e-005	2.1000e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.6568	1.6568	5.0000e-005	5.0000e-005	1.6716
Total	**7.6000e-004**	**4.9000e-004**	**6.0400e-003**	**2.0000e-005**	**2.1000e-003**	**1.0000e-005**	**2.1100e-003**	**5.6000e-004**	**1.0000e-005**	**5.7000e-004**	**0.0000**	**1.6568**	**1.6568**	**5.0000e-005**	**5.0000e-005**	**1.6716**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0173	0.1667	0.2560	4.0000e-004		8.2000e-003	8.2000e-003		7.5400e-003	7.5400e-003	0.0000	35.0464	35.0464	0.0113	0.0000	35.3298
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0173**	**0.1667**	**0.2560**	**4.0000e-004**		**8.2000e-003**	**8.2000e-003**		**7.5400e-003**	**7.5400e-003**	**0.0000**	**35.0464**	**35.0464**	**0.0113**	**0.0000**	**35.3298**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6000e-004	4.9000e-004	6.0400e-003	2.0000e-005	2.1000e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.6568	1.6568	5.0000e-005	5.0000e-005	1.6716
Total	**7.6000e-004**	**4.9000e-004**	**6.0400e-003**	**2.0000e-005**	**2.1000e-003**	**1.0000e-005**	**2.1100e-003**	**5.6000e-004**	**1.0000e-005**	**5.7000e-004**	**0.0000**	**1.6568**	**1.6568**	**5.0000e-005**	**5.0000e-005**	**1.6716**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.7739					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**1.7771**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	7.5000e-004	9.2600e-003	3.0000e-005	3.2200e-003	2.0000e-005	3.2300e-003	8.6000e-004	1.0000e-005	8.7000e-004	0.0000	2.5405	2.5405	7.0000e-005	7.0000e-005	2.5632
Total	**1.1700e-003**	**7.5000e-004**	**9.2600e-003**	**3.0000e-005**	**3.2200e-003**	**2.0000e-005**	**3.2300e-003**	**8.6000e-004**	**1.0000e-005**	**8.7000e-004**	**0.0000**	**2.5405**	**2.5405**	**7.0000e-005**	**7.0000e-005**	**2.5632**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.7739					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**1.7771**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	7.5000e-004	9.2600e-003	3.0000e-005	3.2200e-003	2.0000e-005	3.2300e-003	8.6000e-004	1.0000e-005	8.7000e-004	0.0000	2.5405	2.5405	7.0000e-005	7.0000e-005	2.5632
Total	**1.1700e-003**	**7.5000e-004**	**9.2600e-003**	**3.0000e-005**	**3.2200e-003**	**2.0000e-005**	**3.2300e-003**	**8.6000e-004**	**1.0000e-005**	**8.7000e-004**	**0.0000**	**2.5405**	**2.5405**	**7.0000e-005**	**7.0000e-005**	**2.5632**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Dinuba Castro Residential Project - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4974	0.8888	4.6854	0.0112	1.0689	0.0100	1.0789	0.2861	9.4000e-003	0.2955	0.0000	1,048.2905	1,048.2905	0.0550	0.0585	1,067.1000
Unmitigated	0.4974	0.8888	4.6854	0.0112	1.0689	0.0100	1.0789	0.2861	9.4000e-003	0.2955	0.0000	1,048.2905	1,048.2905	0.0550	0.0585	1,067.1000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	3.28	8.23	9.20	10,311	10,311
Single Family Housing	991.20	1,001.70	897.75	2,837,977	2,837,977
Total	994.48	1,009.93	906.95	2,848,288	2,848,288

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Single Family Housing	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

5.0 Energy Detail

Dinuba Castro Residential Project - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0135	0.1150	0.0489	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.1490	133.1490	2.5500e-003	2.4400e-003	133.9402
NaturalGas Unmitigated	0.0135	0.1150	0.0489	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.1490	133.1490	2.5500e-003	2.4400e-003	133.9402

Dinuba Castro Residential Project - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.49512e+006	0.0135	0.1150	0.0489	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.1490	133.1490	2.5500e-003	2.4400e-003	133.9402
Total		**0.0135**	**0.1150**	**0.0489**	**7.3000e-004**		**9.3000e-003**	**9.3000e-003**		**9.3000e-003**	**9.3000e-003**	**0.0000**	**133.1490**	**133.1490**	**2.5500e-003**	**2.4400e-003**	**133.9402**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.49512e+006	0.0135	0.1150	0.0489	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.1490	133.1490	2.5500e-003	2.4400e-003	133.9402
Total		**0.0135**	**0.1150**	**0.0489**	**7.3000e-004**		**9.3000e-003**	**9.3000e-003**		**9.3000e-003**	**9.3000e-003**	**0.0000**	**133.1490**	**133.1490**	**2.5500e-003**	**2.4400e-003**	**133.9402**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	833590	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	833590	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

Dinuba Castro Residential Project - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9453	0.0483	0.7961	2.9000e-004		7.5000e-003	7.5000e-003		7.5000e-003	7.5000e-003	0.0000	46.7604	46.7604	2.0900e-003	8.3000e-004	47.0612
Unmitigated	0.9453	0.0483	0.7961	2.9000e-004		7.5000e-003	7.5000e-003		7.5000e-003	7.5000e-003	0.0000	46.7604	46.7604	2.0900e-003	8.3000e-004	47.0612

Dinuba Castro Residential Project - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1774					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7399					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.6000e-003	0.0393	0.0167	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003	0.0000	45.4868	45.4868	8.7000e-004	8.3000e-004	45.7571
Landscaping	0.0234	8.9800e-003	0.7794	4.0000e-005		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	1.2736	1.2736	1.2200e-003	0.0000	1.3042
Total	**0.9453**	**0.0483**	**0.7961**	**2.9000e-004**		**7.5000e-003**	**7.5000e-003**		**7.5000e-003**	**7.5000e-003**	**0.0000**	**46.7604**	**46.7604**	**2.0900e-003**	**8.3000e-004**	**47.0612**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1774					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7399					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.6000e-003	0.0393	0.0167	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003	0.0000	45.4868	45.4868	8.7000e-004	8.3000e-004	45.7571
Landscaping	0.0234	8.9800e-003	0.7794	4.0000e-005		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	1.2736	1.2736	1.2200e-003	0.0000	1.3042
Total	**0.9453**	**0.0483**	**0.7961**	**2.9000e-004**		**7.5000e-003**	**7.5000e-003**		**7.5000e-003**	**7.5000e-003**	**0.0000**	**46.7604**	**46.7604**	**2.0900e-003**	**8.3000e-004**	**47.0612**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1704	0.2229	5.2600e-003	9.3119
Unmitigated	2.1704	0.2229	5.2600e-003	9.3119

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.00422	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6.84117 / 4.31291	2.1704	0.2229	5.2600e-003	9.3119
Total		**2.1704**	**0.2229**	**5.2600e-003**	**9.3119**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.00422	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6.84117 / 4.31291	2.1704	0.2229	5.2600e-003	9.3119
Total		**2.1704**	**0.2229**	**5.2600e-003**	**9.3119**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	30.7004	1.8143	0.0000	76.0588
Unmitigated	30.7004	1.8143	0.0000	76.0588

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.36	0.0731	4.3200e-003	0.0000	0.1810
Single Family Housing	150.88	30.6273	1.8100	0.0000	75.8778
Total		**30.7004**	**1.8143**	**0.0000**	**76.0588**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.36	0.0731	4.3200e-003	0.0000	0.1810
Single Family Housing	150.88	30.6273	1.8100	0.0000	75.8778
Total		**30.7004**	**1.8143**	**0.0000**	**76.0588**

9.0 Operational Offroad

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

To: Emily Bowen
Crawford & Bowen Planning, Inc.
113 N. Church Street, Suite 302
Visalia, CA 93291

Record Search 22-090

Date: March 7, 2022

Re: City of Dinuba Castro Residential Development Project

County: Tulare

Map(s): Reedley 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, the OHP Built Environment Resources Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the OHP are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-QUARTER MILE RADIUS

According to the information in our files, there has been no previous cultural resource studies in the project area. There have been three studies conducted within the one-half mile radius: TU-00165, 00210, 01533.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-QUARTER MILE RADIUS

There are no recorded resources within the project area. There are 10 recorded resources within the one-half mile radius: P-54-004626, 004899, 004900, 004907, 004919, 004942, 005018, 005021, 005022, & 005023. These resources consist of historic era ditches, railroads, and single-family properties.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project intends to develop 100 single-family residential units and 4.2-acre parking space. Further, we understand the current land use is vacant with minimal vegetation. Because none of the project area has been previously studied for cultural resources, it is unknown if any are present. As such, prior to ground disturbance activities, we recommend a qualified, professional consultant conduct a field survey of the project area to determine if cultural resources are present. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:

Jeremy E David, Assistant Coordinator **Date**: March 7, 2022

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Project No: 524-21

TRAFFIC STUDY

CASTRO RESIDENTIAL SUBDIVISION

LOCATED WEST OF ENGLEHART AVENUE & NORTH OF EL MONTE WAY

DINUBA, CA

Prepared for:

CRAWFORD & BOWEN PLANNING, INC.

May 2022

Prepared by:

RUETTGERS & SCHULER CIVIL ENGINEERS

1800 30TH STREET, SUITE 260
BAKERSFIELD, CA 93301

Ian J. Parks, RCE 51825

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INTRODUCTION

The purpose of this study is to evaluate the potential traffic impacts of a proposed single-family residential development. The project includes 105 single-family units.

The proposed project is bounded by Englehart Avenue to the east and located north of El Monte Way. A vicinity map and location map are presented in Figures 1 and 2, respectively.

A. Land Use, Site and Study Area Boundaries

The existing zoning is R-1-6 (One-Family Residential) and the existing land use is MR (Residential – Medium). No changes to the land use or zoning are planned.

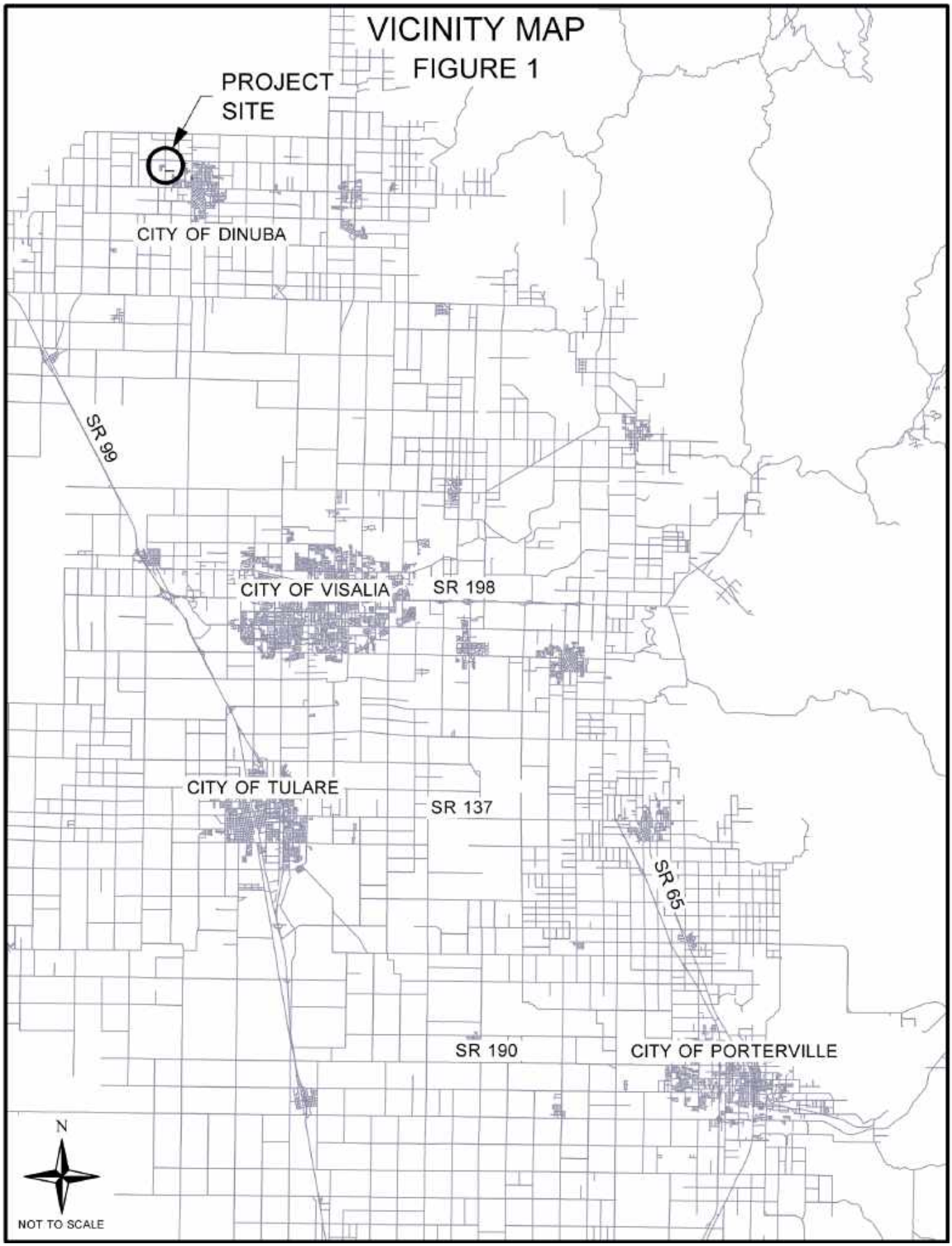
A total of four intersections are included in the study; three of which are stop-controlled and one which is signalized. The scope is based on a threshold of 50 project trips as defined in the Caltrans *Guide for the Preparation of Traffic Impact Studies*. Additionally, intersections were studied that were directly related to or adjacent to the project. The scope of intersections was approved by the City of Dinuba consultant engineering firm, Yamabe & Horn Engineering, Inc.

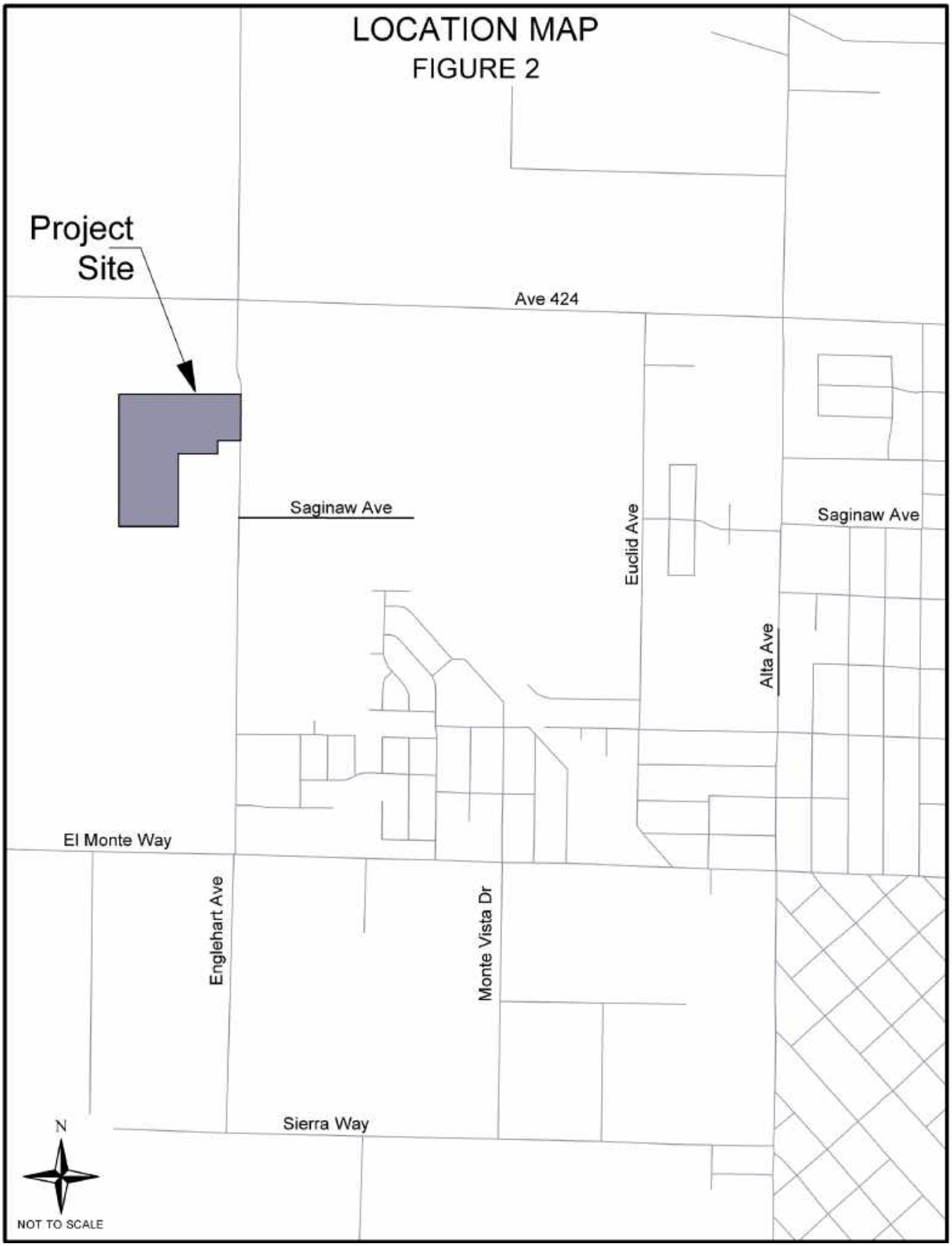
B. Existing Site Uses and Site Access

The site is currently vacant land. As currently planned, access to the proposed development would be provided along Saginaw Avenue and Englehart Avenue. A conceptual site plan is shown in Figure 3.

C. Existing Uses in Vicinity of the Site

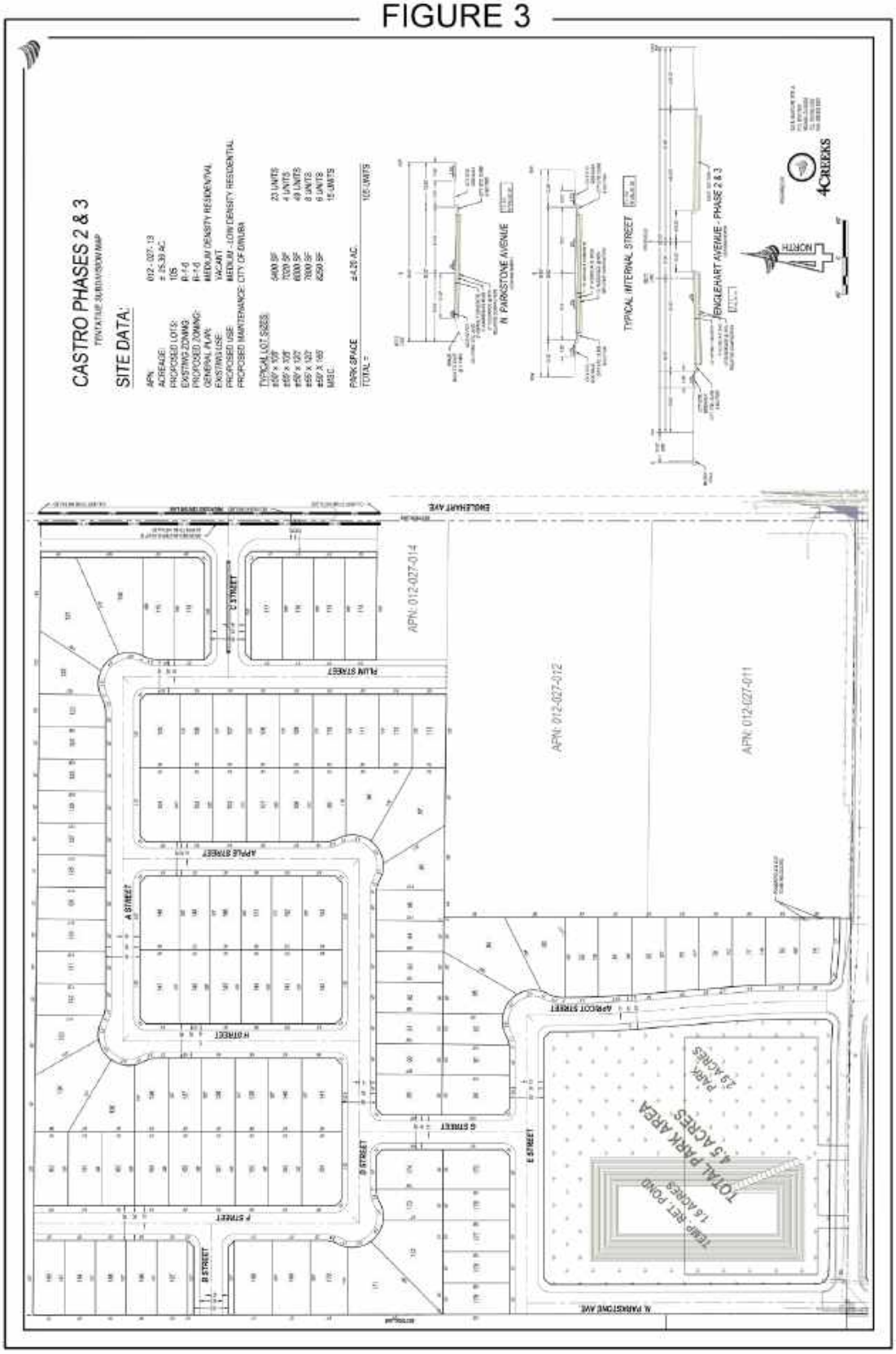
Residential land uses exist to the east and south of the proposed project. Agricultural land uses exist to the north and west of the project.


VICINITY MAP
FIGURE 1
PROJECT SITE
CITY OF DINUBA
SR 99
CITY OF VISALIA
SR 198
CITY OF TULARE
SR 137
SR 65
SR 190
CITY OF PORTERVILLE
N
NOT TO SCALE


LOCATION MAP
FIGURE 2
Project Site
Ave 424
Saginaw Ave
Euclid Ave
Saginaw Ave
Alta Ave
El Monte Way
Englehart Ave
Monte Vista Dr
Sierra Way
N
NOT TO SCALE

SITE PLAN

FIGURE 3



D. Roadway Descriptions

Alta Avenue is a north-south arterial that extends throughout the City of Dinuba. In the vicinity of the project it exists as a four-lane roadway with curb and gutter and provides access to commercial, residential, and agricultural land uses.

El Monte Way is an east-west arterial that extends west from Road 72 through the City of Orosi. In the vicinity of the project it exists as four-lane roadway with curb and gutter. El Monte Way provides access to commercial, residential, and agricultural land uses.

Englehart Avenue (Road 72) is a north-south arterial that extends north from Sierra Way. In the vicinity of the project it exists as a two-lane roadway and provides access to commercial, residential, and agricultural land uses.

Monte Vista Drive is a north-south local roadway that extends from Sierra Way to El Monte Way. North of El Monte Way, Monte Vista Drive is named Alice Avenue. In the vicinity of the project it exists as a four-lane roadway with curb and gutter and provides access to commercial, residential, and agricultural land uses.

PROJECT TRIP GENERATION AND DESIGN HOUR VOLUMES

The trip generation and design hour volumes for the residential and medical development were calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition. The ADT, AM and PM peak hour rate equations, and peak hour directional splits for ITE Land Use Code 210 (Single-Family Detached Housing) were used to estimate the project 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	105 Dwelling Units	eq	1055	eq	26% 20	74% 58	eq	63% 66	37% 38

TRIP DISTRIBUTION AND ASSIGNMENT

The project trip distribution in Table 2 represents the most likely travel routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers within the region and the types of land uses involved. These assumptions were used to distribute project traffic as shown in Figure 4.

Table 2
Project Trip Distribution

Direction	Percent
North	5
East	45
South	35
West	15

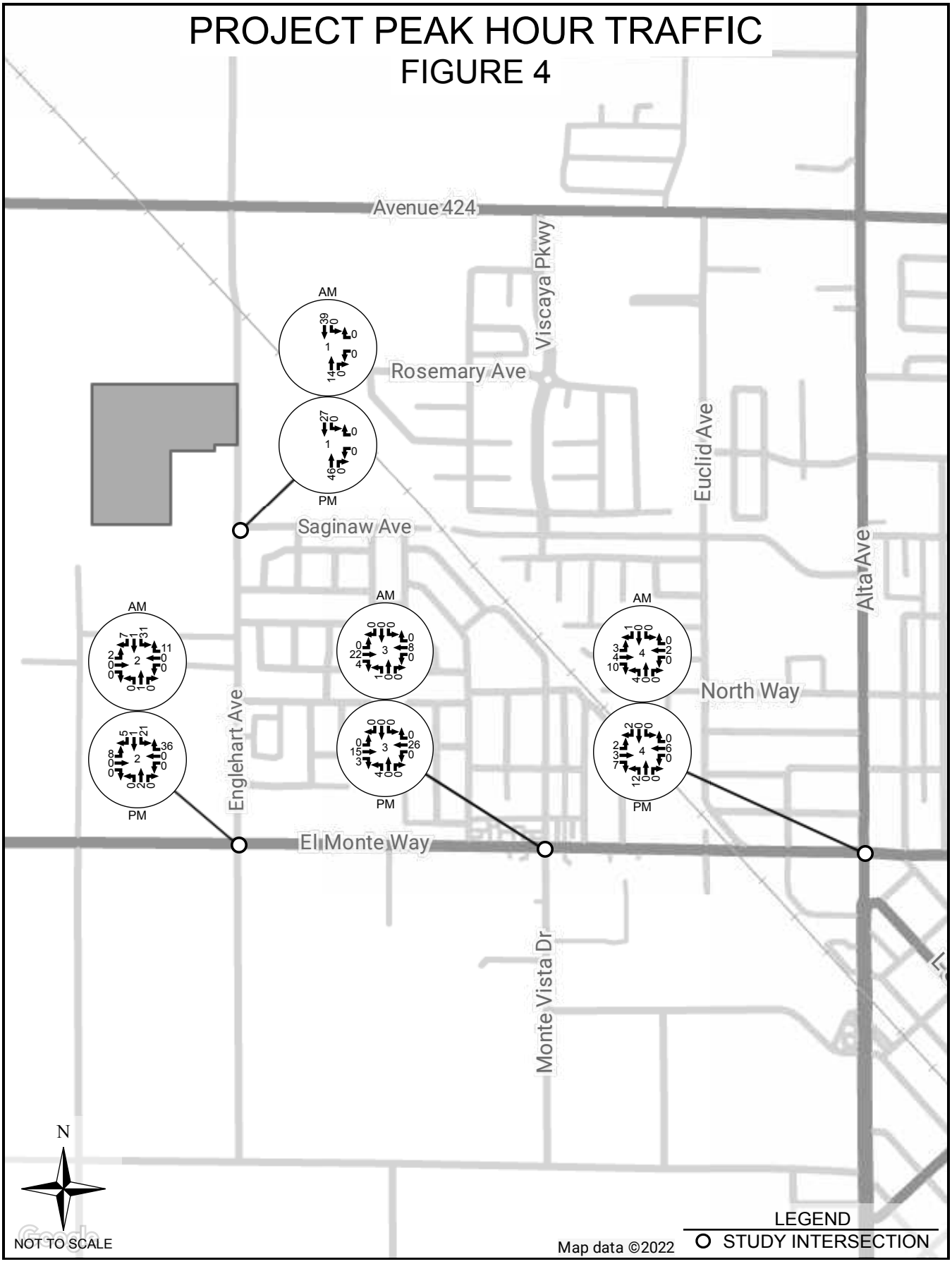
EXISTING AND FUTURE TRAFFIC

Weekday peak hour turning movements were counted at the following intersections in September 2021 and March 2022 (see Appendix for count data).

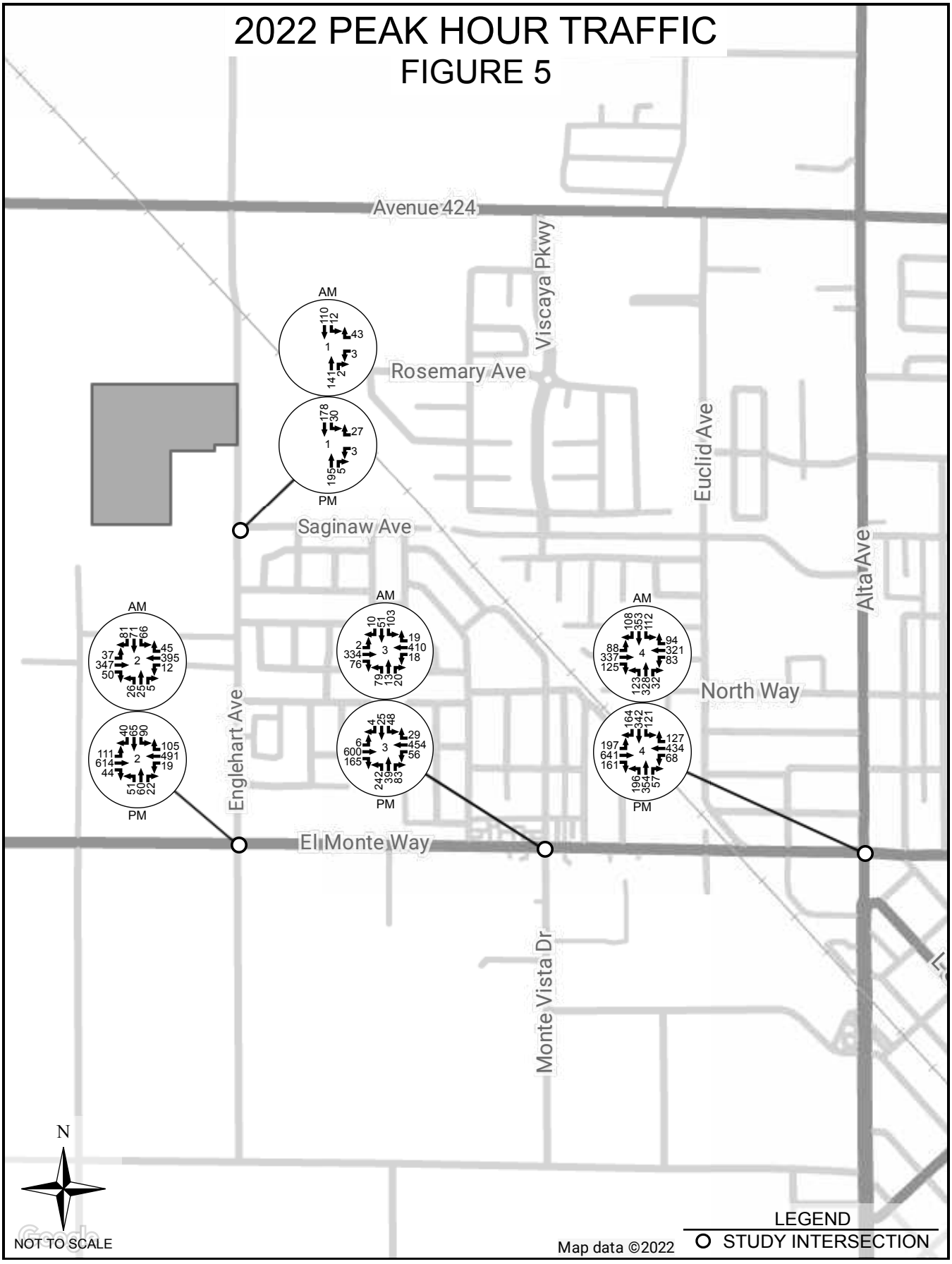
Traffic counts were conducted between the hours 6:00 to 8:00 AM and 4:00 to 6:00 PM and are shown in Figure 5. Traffic counts were compared to pre-COVID 19 count data and found to accurately reflect normal traffic volumes. Existing + Project peak hour volumes are shown in Figure 6.

Annual growth rates ranging between 1.94% and 5.72% were applied to existing traffic volumes to estimate future traffic volumes for the year 2042. These growth rates were estimated based on a review of existing and approved future developments in the vicinity of the project and TCAG traffic model data. Future peak hour volumes are shown in Figures 7 and 8.

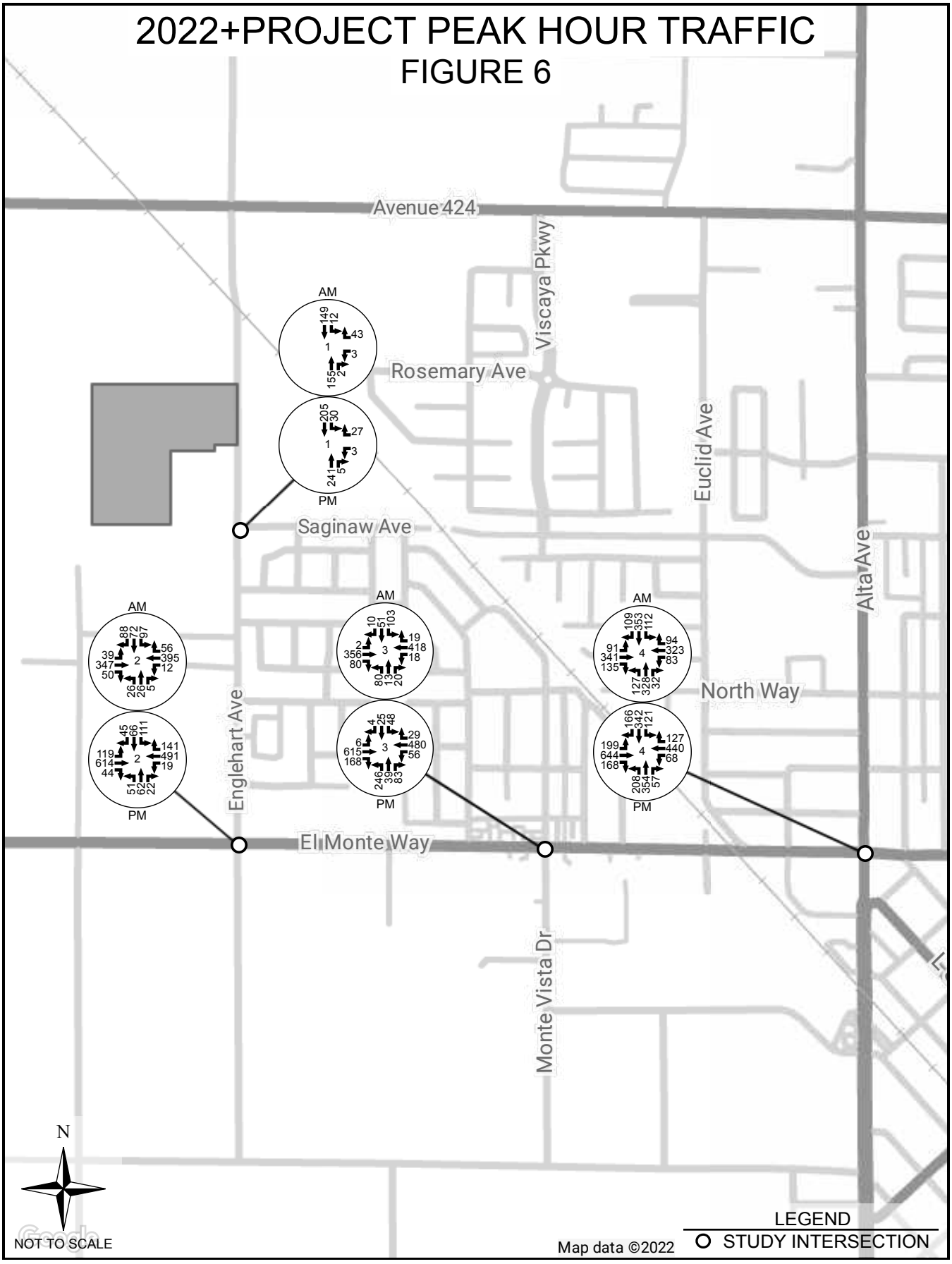
PROJECT PEAK HOUR TRAFFIC
FIGURE 4



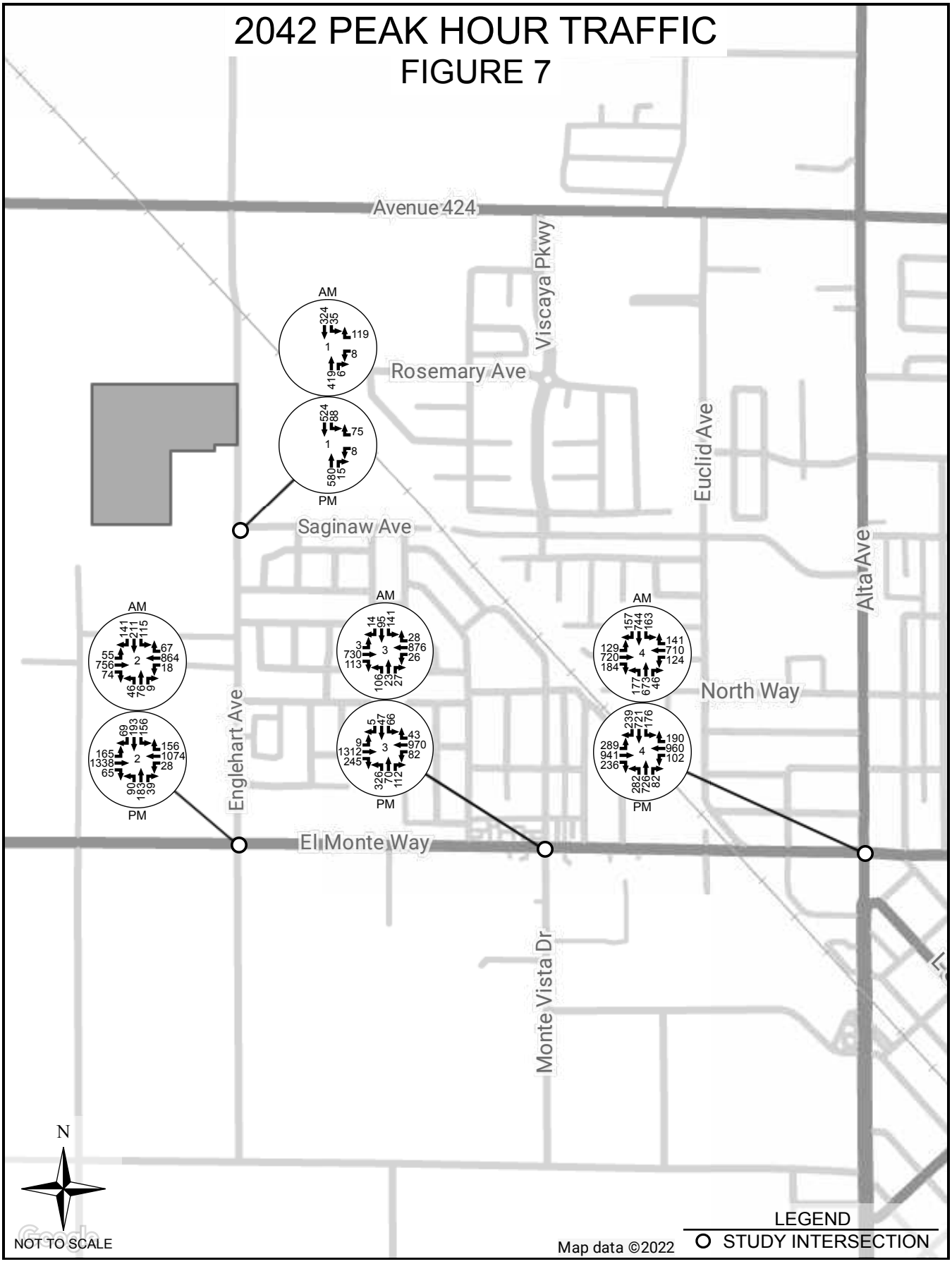
2022 PEAK HOUR TRAFFIC
FIGURE 5



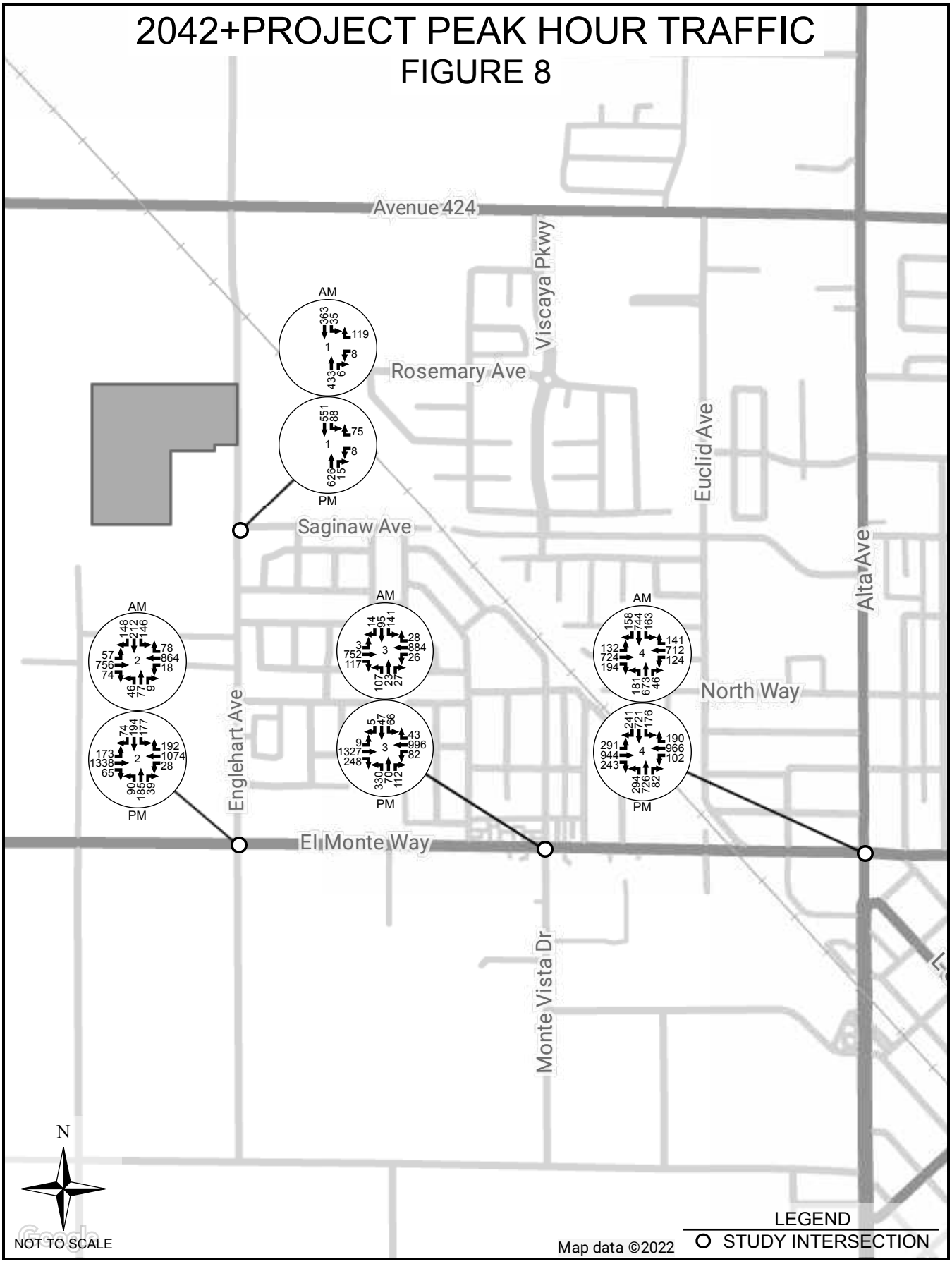
2022+PROJECT PEAK HOUR TRAFFIC
FIGURE 6



2042 PEAK HOUR TRAFFIC
FIGURE 7



2042+PROJECT PEAK HOUR TRAFFIC
FIGURE 8



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 (2022)
- Existing (2022) + Project
- Future (2042)
- Future (2042) + Project

Level of service (LOS) criteria for unsignalized and signalized intersections, as defined in HCM 2010, are presented in the tables below. The Tulare County Regional Transportation Plan designates LOS D as the minimum acceptable intersection peak hour level of service.

LEVEL OF SERVICE CRITERIA
UNSIGNALIZED INTERSECTION

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

LEVEL OF SERVICE CRITERIA
SIGNALIZED INTERSECTIONS

Volume/Capacity	Control Delay (sec/veh)	Level of Service
< 0.60	≤ 10	A
0.61 - 0.70	> 10 and ≤ 20	B
0.71 - 0.80	> 20 and ≤ 35	C
0.81 - 0.90	> 35 and ≤ 55	D
0.91 - 1.00	> 55 and ≤ 80	E
> 1.0	> 80	F

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 D.

Table 3a
PM Intersection Level of Service

#	Intersection	Control Type	2022	2022+ Project	2042	2042+ Project
1	Englehart Ave & Saginaw Ave	WB	A	B	C	C
2	Englehart Ave & El Monte Way	Signal	B	B	C	C
3	Monte Vista Dr & El Monte Way	Signal	B	B	C	C
4	Alta Ave & El Monte Way	Signal	C	C	D (46.1)	D (46.8)

Table 3b
AM Intersection Level of Service

#	Intersection	Control Type	2022	2022+ Project	2042	2042+ Project
1	Englehart Ave & Saginaw Ave	WB	B	B	C	C
2	Englehart Ave & El Monte Way	Signal	C	C	C	C
3	Monte Vista Dr & El Monte Way	Signal	C	C	C	C
4	Alta Ave & El Monte Way	Signal	C	C	D (52.2)	D (52.4)

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

		2022			2022+Project			2042			2042+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	Englehart Ave at Saginaw Ave	408	30	NO	481	30	NO	1207	83	YES	1280	83	YES

Table 4b
Traffic Signal Warrants
Weekday AM Peak Hour

		2022			2022+Project			2042			2042+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	Englehart Ave at Saginaw Ave	265	46	NO	318	46	NO	784	127	YES	837	127	YES

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 Dinuba 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 (2022)
- Existing (2022) + Project
- Future Cumulative (2042)
- Future Cumulative (2042) + Project

Table 5a
PM ROADWAY LEVEL OF SERVICE

Street	2022 Two-Way LOS		2022+Project Two-Way LOS		2042 Two-Way LOS		2042+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Englehart Ave: Saginaw Ave - El Monte Way	471	C	544	C	1127	C	1200	C
El Monte Way: Englehart Ave - Monte Vista Dr	1471	C	1519	C	2867	C	2915	C
El Monte Way: Monte Vista Dr - Alta Ave	1793	C	1825	C	3376	C	3408	C

Table 5b
AM ROADWAY LEVEL OF SERVICE

Street	2022 Two-Way LOS		2022+Project Two-Way LOS		2042 Two-Way LOS		2042+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Englehart Ave: Saginaw Ave - El Monte Way	325	C	378	C	757	C	810	C
El Monte Way: Englehart Ave - Monte Vista Dr	911	C	946	C	1842	C	1877	C
El Monte Way: Monte Vista Dr - Alta Ave	1102	C	1126	C	2077	C	2101	C

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 Dinuba 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) 2776, which has an average VMT/capita of 11.95 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:

- East side of Adelaide Way & Englehart Avenue (2 ramps)
- East side of Kelly Drive & Englehart Avenue (2 ramps)
- South side of Kelly Drive & Morningside Drive (2 ramps)
- North side of Kelly Drive & Morningside Drive (2 ramps)

Total project cost is estimated at approximately $24,000 with a 20 percent contingency. The guidelines include a minimum cost for mitigation of $20 per daily trip generated by the project. As shown in Table 1, the project is anticipated to generate 1009 daily trips, which equates to a target value of improvements of

$20,180. At the time of construction should prices fluctuate, an adjustment in the scope of improvements may need to be made.

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 11.95 or 0.1195. The resulting VMT/capita after mitigation is 11.83 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 single-family residential development located at Saginaw Avenue & Englehart Avenue in Dinuba, CA.

All four intersections operate at or above a LOS D prior to, and with the addition of project traffic in existing and future scenarios.

All roadway segments operate at a LOS C prior to, and with the addition of project traffic in existing and future scenarios.

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. Highway Capacity Manual, Special Report 209, Transportation Research Board
2. California Manual on Uniform Traffic Control Devices for Streets and Highways, 2012 Edition, Federal Highway Administration (FHA)
3. Caltrans Guide for the Preparation of Traffic Impact Studies, June 2001
4. City of Dinuba General Plan Policies Statement, September 23, 2008
5. Technical Advisory on Evaluating Impacts in CEQA, Governor's Office of Planning and Research, December 2018
6. Trip Generation, 11th Edition, Institute of Transportation Engineers (ITE)

APPENDIX

Intersection 1
Englehart Ave & Saginaw Ave

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	3	27	195	5	30	178
Future Vol, veh/h	3	27	195	5	30	178
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	30	219	6	34	200

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	489	222	0	0	225	0
Stage 1	222	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	538	818	-	-	1344	-
Stage 1	815	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	523	818	-	-	1344	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	774	1344	-
HCM Lane V/C Ratio	-	-	0.044	0.025	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	3	27	255	5	30	213
Future Vol, veh/h	3	27	255	5	30	213
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	30	287	6	34	239

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	596	289	0	0	292	0
Stage 1	289	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	466	750	-	-	1270	-
Stage 1	760	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	452	750	-	-	1270	-
Mov Cap-2 Maneuver	452	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	723	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	704	1270	-
HCM Lane V/C Ratio	-	-	0.048	0.027	-
HCM Control Delay (s)	-	-	10.4	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	8	75	580	15	88	524
Future Vol, veh/h	8	75	580	15	88	524
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	75	580	15	88	524

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1447	660	0	0	669	0
Stage 1	660	-	-	-	-	-
Stage 2	787	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	145	463	-	-	921	-
Stage 1	514	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	122	463	-	-	921	-
Mov Cap-2 Maneuver	122	-	-	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	377	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	1.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	365	921	-
HCM Lane V/C Ratio	-	-	0.256	0.107	-
HCM Control Delay (s)	-	-	18.2	9.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1	0.4	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	8	75	640	15	88	559
Future Vol, veh/h	8	75	640	15	88	559
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	84	719	17	99	628

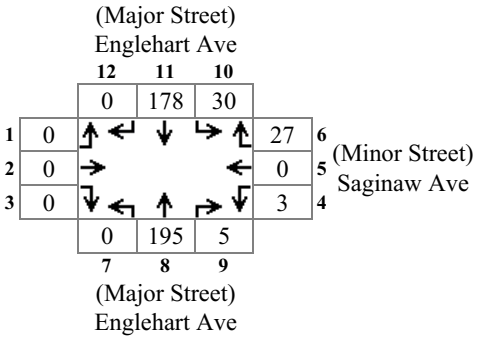
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1554	728	0	0	736	0
Stage 1	728	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	125	423	-	-	870	-
Stage 1	478	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	103	423	-	-	870	-
Mov Cap-2 Maneuver	103	-	-	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	355	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.4	0	1.3
HCM LOS	C		

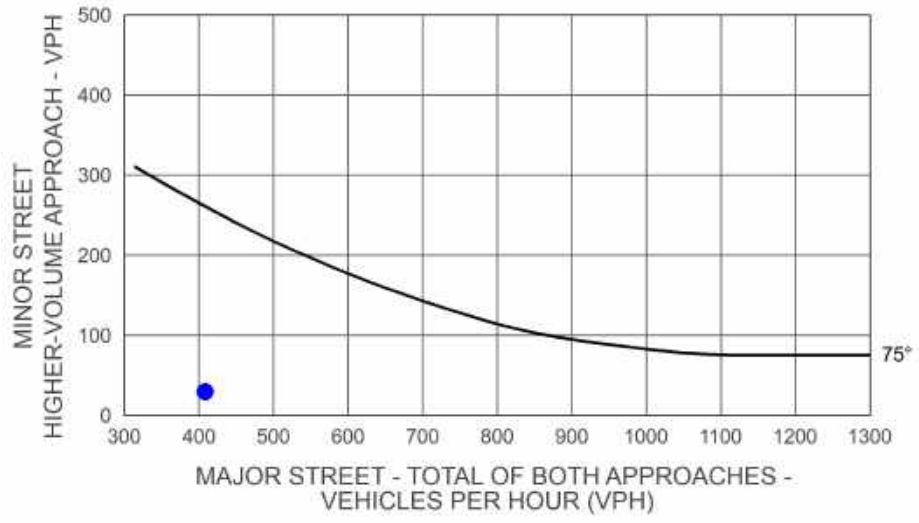
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	326	870	-
HCM Lane V/C Ratio	-	-	0.286	0.114	-
HCM Control Delay (s)	-	-	20.4	9.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.4	-

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing
Intersection #: 1

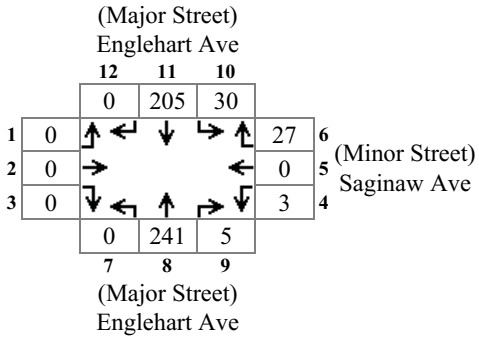


Major Total: 408
Minor High Volume: 30

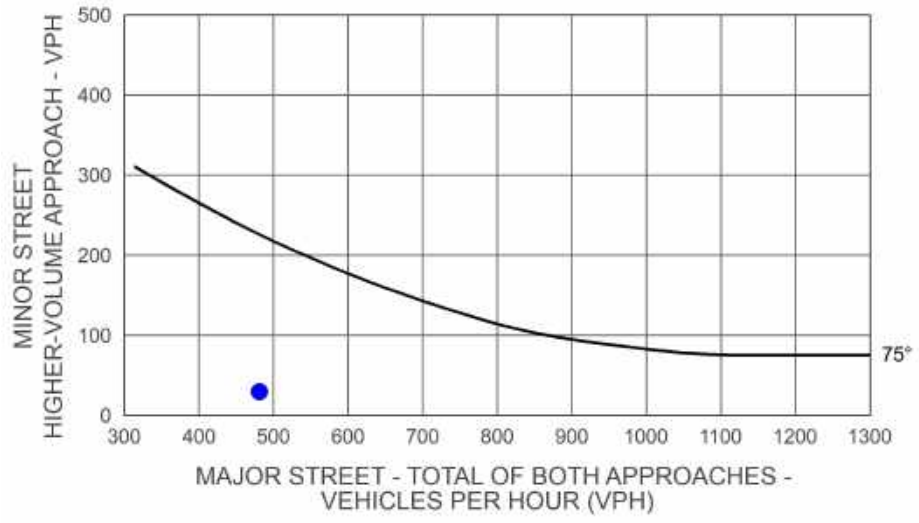


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing+Project
Intersection #: 1

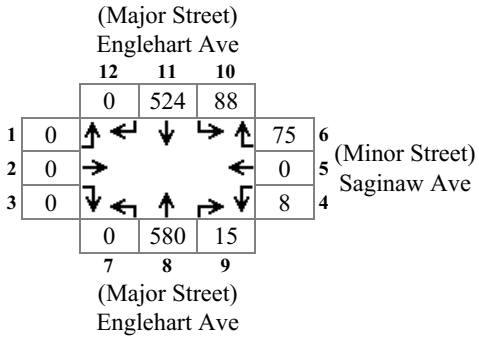


Major Total: 481
Minor High Volume: 30

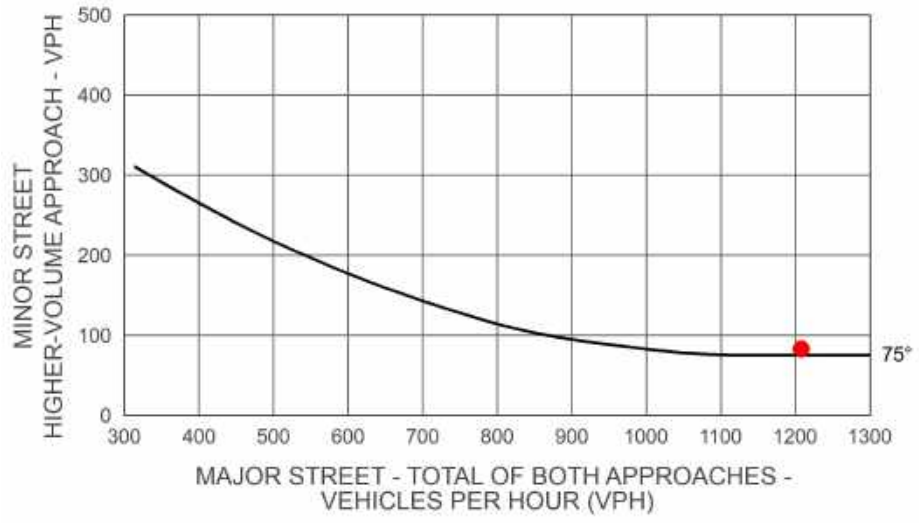


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Future
Intersection #: 1

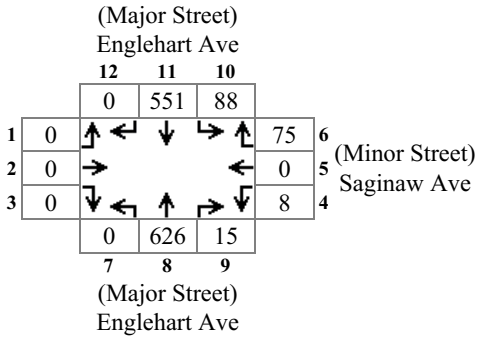


Major Total: 1207
Minor High Volume: 83

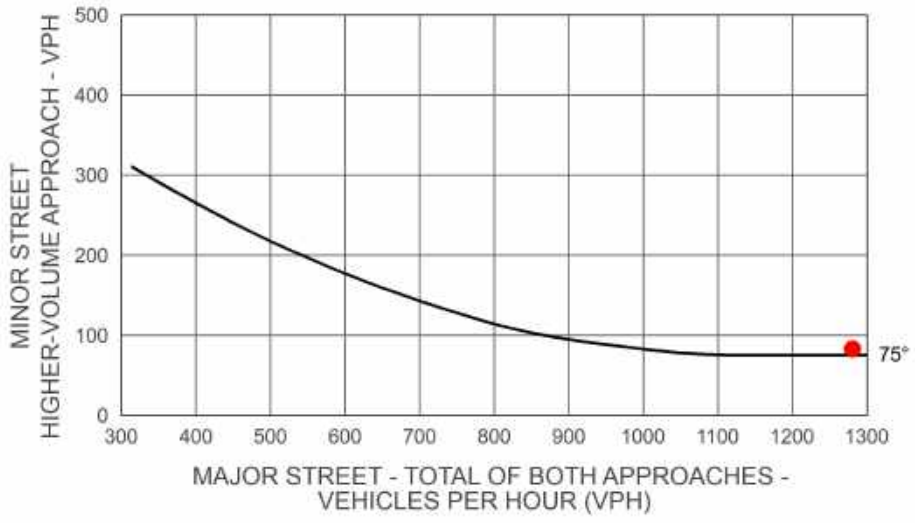


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Future+Project
Intersection #: 1



Major Total: 1280
Minor High Volume: 83



Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	3	43	141	2	12	110
Future Vol, veh/h	3	43	141	2	12	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	69	227	3	19	177

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	445	229	0	0	231	0
Stage 1	229	-	-	-	-	-
Stage 2	216	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	571	810	-	-	1337	-
Stage 1	809	-	-	-	-	-
Stage 2	820	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	562	810	-	-	1337	-
Mov Cap-2 Maneuver	562	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	807	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	787	1337	-
HCM Lane V/C Ratio	-	-	0.094	0.014	-
HCM Control Delay (s)	-	-	10.1	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	3	43	154	2	12	150
Future Vol, veh/h	3	43	154	2	12	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	69	248	3	19	242

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	531	250	0	0	252	0
Stage 1	250	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	509	789	-	-	1313	-
Stage 1	792	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	500	789	-	-	1313	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	754	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	760	1313	-
HCM Lane V/C Ratio	-	-	0.098	0.015	-
HCM Control Delay (s)	-	-	10.2	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	8	119	419	6	35	324
Future Vol, veh/h	8	119	419	6	35	324
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	192	676	10	56	523

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1316	681	0	0	685	0
Stage 1	681	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	174	450	-	-	908	-
Stage 1	503	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	159	450	-	-	908	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	482	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	403	908	-
HCM Lane V/C Ratio	-	-	0.508	0.062	-
HCM Control Delay (s)	-	-	22.8	9.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.8	0.2	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	8	119	432	6	35	364
Future Vol, veh/h	8	119	432	6	35	364
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	192	697	10	56	587

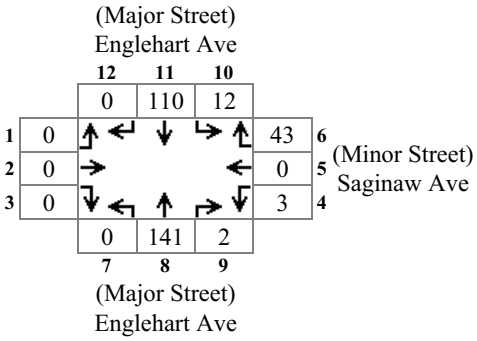
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1402	702	0	0	706	0
Stage 1	702	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	154	438	-	-	892	-
Stage 1	491	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	140	438	-	-	892	-
Mov Cap-2 Maneuver	140	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	447	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.4	0	0.8
HCM LOS	C		

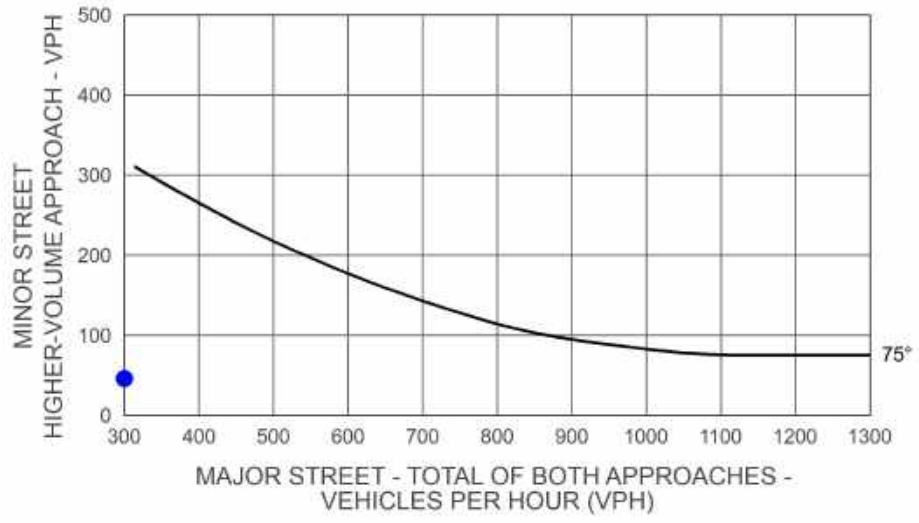
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	386	892	-
HCM Lane V/C Ratio	-	-	0.531	0.063	-
HCM Control Delay (s)	-	-	24.4	9.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	3	0.2	-

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing
Intersection #: 1

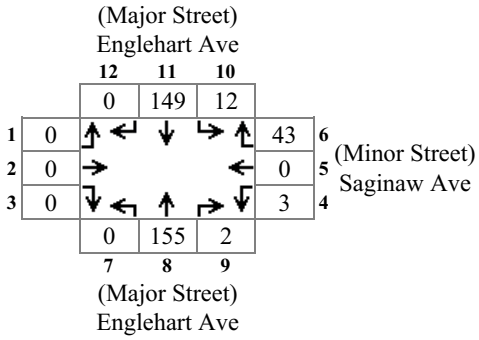


Major Total: 265
Minor High Volume: 46

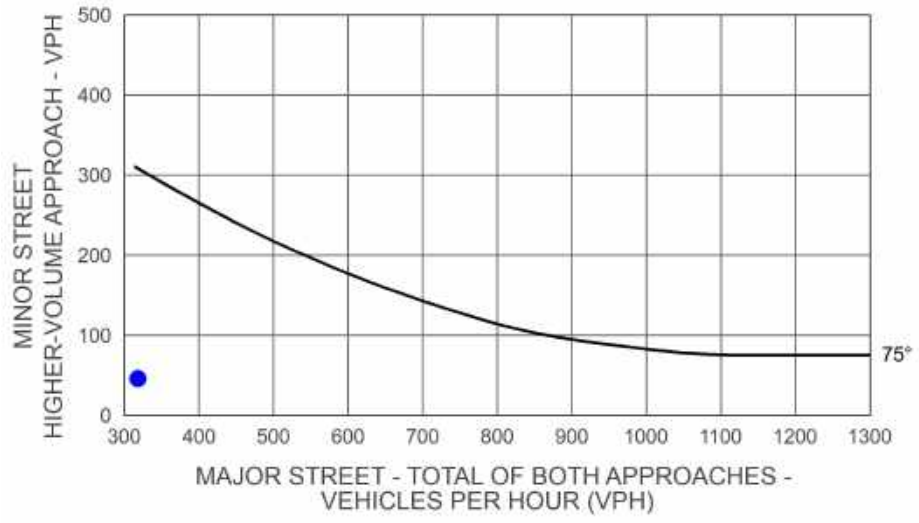


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing+Project
Intersection #: 1

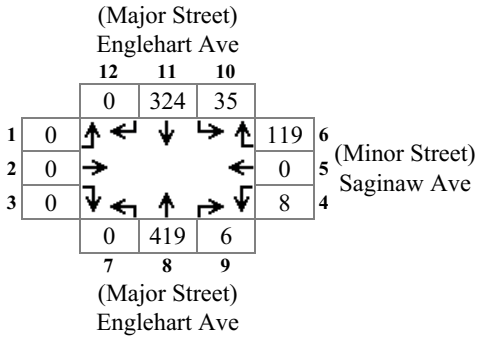


Major Total: 318
Minor High Volume: 46

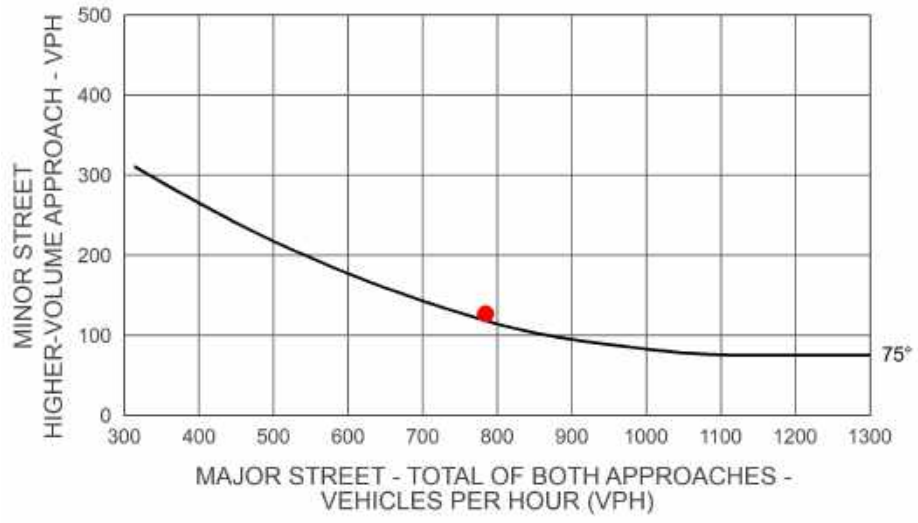


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: AM Future
Intersection #: 1

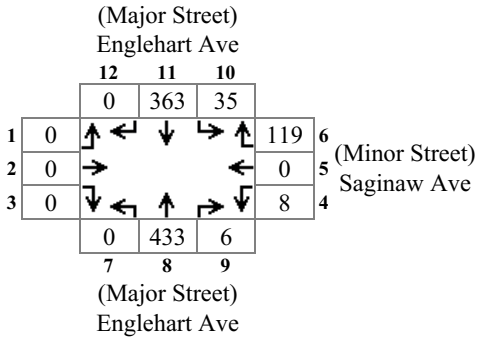


Major Total: 784
Minor High Volume: 127

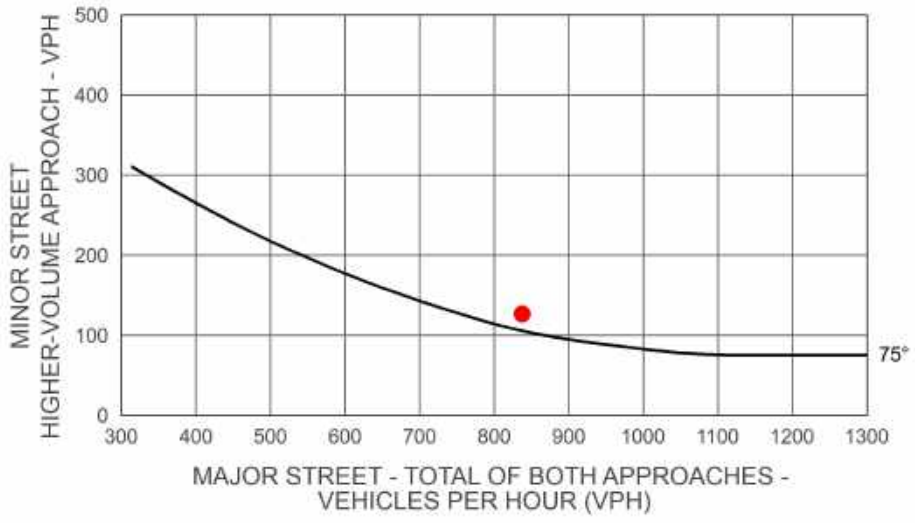


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: AM Future+Project
Intersection #: 1



Major Total: 837
Minor High Volume: 127



Intersection 2
Englehart Ave & El Monte Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	614	44	19	491	105	51	60	22	90	65	40
Future Volume (veh/h)	111	614	44	19	491	105	51	60	22	90	65	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1750	1716	1863	1750	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	117	646	46	20	517	111	54	63	23	95	68	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1363	97	81	980	209	104	210	77	154	359	275
Arrive On Green	0.12	0.41	0.38	0.05	0.34	0.31	0.06	0.16	0.14	0.09	0.19	0.19
Sat Flow, veh/h	1634	3344	238	1634	2885	616	1634	1293	472	1634	1863	1426
Grp Volume(v), veh/h	117	341	351	20	316	312	54	0	86	95	68	42
Grp Sat Flow(s),veh/h/ln	1634	1770	1813	1634	1770	1731	1634	0	1765	1634	1863	1426
Q Serve(g_s), s	3.8	7.9	8.0	0.7	8.0	8.2	1.8	0.0	2.4	3.1	1.7	1.4
Cycle Q Clear(g_c), s	3.8	7.9	8.0	0.7	8.0	8.2	1.8	0.0	2.4	3.1	1.7	1.4
Prop In Lane	1.00		0.13	1.00		0.36	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	192	721	739	81	601	588	104	0	286	154	359	275
V/C Ratio(X)	0.61	0.47	0.47	0.25	0.53	0.53	0.52	0.00	0.30	0.62	0.19	0.15
Avail Cap(c_a), veh/h	205	1362	1395	167	1321	1292	155	0	1345	225	1500	1149
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	12.1	12.2	25.6	14.8	15.1	25.3	0.0	20.8	24.3	18.9	18.8
Incr Delay (d2), s/veh	4.7	0.5	0.5	1.6	0.7	0.7	3.9	0.0	0.6	4.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.9	4.0	0.3	4.0	4.0	0.9	0.0	1.2	1.6	0.9	0.6
LnGrp Delay(d),s/veh	28.1	12.6	12.7	27.1	15.5	15.9	29.2	0.0	21.4	28.3	19.2	19.0
LnGrp LOS	C	B	B	C	B	B	C		C	C	B	B
Approach Vol, veh/h		809			648			140			205	
Approach Delay, s/veh		14.9			16.1			24.4			23.4	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	13.1	6.8	26.8	7.6	14.8	10.6	23.0
Change Period (Y+Rc), s	5.3	5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s	6.4	41.3	4.0	41.3	4.0	43.7	5.3	40.0
Max Q Clear Time (g_c+I1), s	5.1	4.4	2.7	10.0	3.8	3.7	5.8	10.2
Green Ext Time (p_c), s	0.0	0.7	0.0	5.4	0.0	0.7	0.0	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	614	44	19	491	154	51	62	22	118	66	46
Future Volume (veh/h)	120	614	44	19	491	154	51	62	22	118	66	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1750	1716	1863	1750	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	126	646	46	20	517	162	54	65	23	124	69	48
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	1388	99	77	912	284	100	206	73	187	394	302
Arrive On Green	0.12	0.42	0.39	0.05	0.35	0.32	0.06	0.16	0.14	0.11	0.21	0.21
Sat Flow, veh/h	1634	3344	238	1634	2636	821	1634	1305	462	1634	1863	1428
Grp Volume(v), veh/h	126	341	351	20	346	333	54	0	88	124	69	48
Grp Sat Flow(s),veh/h/ln	1634	1770	1813	1634	1770	1688	1634	0	1767	1634	1863	1428
Q Serve(g_s), s	4.5	8.4	8.5	0.7	9.6	9.8	1.9	0.0	2.7	4.4	1.8	1.7
Cycle Q Clear(g_c), s	4.5	8.4	8.5	0.7	9.6	9.8	1.9	0.0	2.7	4.4	1.8	1.7
Prop In Lane	1.00		0.13	1.00		0.49	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	190	735	752	77	612	584	100	0	279	187	394	302
V/C Ratio(X)	0.66	0.46	0.47	0.26	0.57	0.57	0.54	0.00	0.31	0.66	0.18	0.16
Avail Cap(c_a), veh/h	190	1262	1293	155	1224	1168	144	0	1269	190	1391	1066
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	12.8	12.9	27.7	16.0	16.4	27.5	0.0	22.6	25.6	19.5	19.4
Incr Delay (d2), s/veh	8.4	0.5	0.5	1.8	0.8	0.9	4.5	0.0	0.6	8.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	4.2	4.3	0.4	4.8	4.7	1.0	0.0	1.4	2.4	1.0	0.7
LnGrp Delay(d),s/veh	33.9	13.2	13.3	29.5	16.8	17.3	32.0	0.0	23.3	33.9	19.7	19.6
LnGrp LOS	C	B	B	C	B	B	C		C	C	B	B
Approach Vol, veh/h		818			699			142			241	
Approach Delay, s/veh		16.5			17.4			26.6			27.0	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	13.5	6.8	29.0	7.7	16.7	11.0	24.9
Change Period (Y+Rc), s	5.3	5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s	5.7	42.0	4.0	41.3	4.0	43.7	5.3	40.0
Max Q Clear Time (g_c+I1), s	6.4	4.7	2.7	10.5	3.9	3.8	6.5	11.8
Green Ext Time (p_c), s	0.0	0.7	0.0	5.7	0.0	0.7	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1338	65	28	1074	156	90	183	39	156	193	69
Future Volume (veh/h)	165	1338	65	28	1074	156	90	183	39	156	193	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1750	1716	1863	1750	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	165	1338	65	28	1074	156	90	183	39	156	193	69
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1940	94	53	1485	215	123	260	55	190	404	309
Arrive On Green	0.12	0.57	0.55	0.06	0.96	0.94	0.08	0.18	0.17	0.12	0.22	0.22
Sat Flow, veh/h	1634	3431	166	1634	3091	448	1634	1482	316	1634	1863	1428
Grp Volume(v), veh/h	165	689	714	28	614	616	90	0	222	156	193	69
Grp Sat Flow(s),veh/h/ln	1634	1770	1828	1634	1770	1769	1634	0	1798	1634	1863	1428
Q Serve(g_s), s	14.4	40.2	40.5	2.4	6.5	7.4	7.8	0.0	16.8	13.5	13.1	5.8
Cycle Q Clear(g_c), s	14.4	40.2	40.5	2.4	6.5	7.4	7.8	0.0	16.8	13.5	13.1	5.8
Prop In Lane	1.00		0.09	1.00		0.25	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	192	1000	1033	53	850	850	123	0	316	190	404	309
V/C Ratio(X)	0.86	0.69	0.69	0.53	0.72	0.72	0.73	0.00	0.70	0.82	0.48	0.22
Avail Cap(c_a), veh/h	192	1000	1033	68	850	850	176	0	516	214	578	443
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	22.4	22.5	66.8	1.6	1.9	65.6	0.0	56.3	62.6	49.6	46.7
Incr Delay (d2), s/veh	39.4	4.0	3.9	6.1	4.0	4.0	9.2	0.0	2.9	23.1	0.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	20.6	21.4	1.2	3.1	3.6	3.8	0.0	8.6	7.3	6.9	2.3
LnGrp Delay(d),s/veh	102.3	26.4	26.4	72.8	5.6	5.9	74.7	0.0	59.2	85.7	50.5	47.1
LnGrp LOS	F	C	C	E	A	A	E		E	F	D	D
Approach Vol, veh/h		1568			1258			312			418	
Approach Delay, s/veh		34.4			7.2			63.7			63.1	
Approach LOS		C			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	29.5	8.7	86.0	14.9	35.4	21.0	73.6
Change Period (Y+Rc), s	5.3	5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s	17.7	40.3	4.3	60.7	14.3	43.7	15.3	49.7
Max Q Clear Time (g_c+I1), s	15.5	18.8	4.4	42.5	9.8	15.1	16.4	9.4
Green Ext Time (p_c), s	0.1	1.6	0.0	11.4	0.1	1.7	0.0	17.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	1338	65	28	1074	205	90	185	39	184	194	75
Future Volume (veh/h)	174	1338	65	28	1074	205	90	185	39	184	194	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1750	1716	1863	1750	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	183	1408	68	29	1131	216	95	195	41	194	204	79
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	1883	91	54	1351	257	233	263	55	214	308	235
Arrive On Green	0.12	0.55	0.54	0.07	0.91	0.89	0.14	0.18	0.17	0.13	0.17	0.17
Sat Flow, veh/h	1634	3433	165	1634	2954	561	1634	1486	313	1634	1863	1424
Grp Volume(v), veh/h	183	724	752	29	675	672	95	0	236	194	204	79
Grp Sat Flow(s),veh/h/ln	1634	1770	1828	1634	1770	1745	1634	0	1799	1634	1863	1424
Q Serve(g_s), s	16.0	45.3	45.8	2.5	19.8	21.9	7.7	0.0	18.0	17.0	14.9	5.4
Cycle Q Clear(g_c), s	16.0	45.3	45.8	2.5	19.8	21.9	7.7	0.0	18.0	17.0	14.9	5.4
Prop In Lane	1.00		0.09	1.00		0.32	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	203	971	1003	54	810	798	233	0	318	214	308	235
V/C Ratio(X)	0.90	0.75	0.75	0.54	0.83	0.84	0.41	0.00	0.74	0.91	0.66	0.34
Avail Cap(c_a), veh/h	203	971	1003	68	810	798	233	0	516	214	581	444
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.67	0.67	0.67	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	25.0	25.2	66.6	4.2	4.7	56.6	0.0	56.6	62.1	56.7	31.2
Incr Delay (d2), s/veh	37.4	5.2	5.1	5.4	6.8	7.3	1.1	0.0	3.4	36.9	2.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	23.5	24.4	1.2	10.0	10.9	3.5	0.0	9.3	9.8	7.9	2.2
LnGrp Delay(d),s/veh	100.1	30.2	30.3	72.1	11.0	11.9	57.7	0.0	60.0	99.0	59.2	32.0
LnGrp LOS	F	C	C	E	B	B	E		E	F	E	C
Approach Vol, veh/h		1659			1376			331			477	
Approach Delay, s/veh		38.0			12.8			59.4			70.9	
Approach LOS		D			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	29.7	8.8	83.5	24.7	28.0	22.0	70.3
Change Period (Y+Rc), s	5.3	5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s	17.7	40.3	4.3	60.7	14.1	43.9	16.3	48.7
Max Q Clear Time (g_c+I1), s	19.0	20.0	4.5	47.8	9.7	16.9	18.0	23.9
Green Ext Time (p_c), s	0.0	0.8	0.0	9.5	0.5	1.0	0.0	15.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	347	50	12	395	45	26	25	5	66	71	81
Future Volume (veh/h)	37	347	50	12	395	45	26	25	5	66	71	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1750	1716	1863	1750	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	45	423	61	15	482	55	32	30	6	80	87	99
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	1140	163	513	2023	230	57	143	29	134	266	203
Arrive On Green	0.05	0.37	0.35	0.63	1.00	1.00	0.03	0.10	0.08	0.08	0.14	0.14
Sat Flow, veh/h	1634	3095	443	1634	3194	363	1634	1498	300	1634	1863	1421
Grp Volume(v), veh/h	45	240	244	15	266	271	32	0	36	80	87	99
Grp Sat Flow(s),veh/h/ln	1634	1770	1769	1634	1770	1788	1634	0	1797	1634	1863	1421
Q Serve(g_s), s	3.1	11.3	11.5	0.4	0.0	0.0	2.2	0.0	2.1	5.4	4.8	7.3
Cycle Q Clear(g_c), s	3.1	11.3	11.5	0.4	0.0	0.0	2.2	0.0	2.1	5.4	4.8	7.3
Prop In Lane	1.00		0.25	1.00		0.20	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	80	652	652	513	1121	1132	57	0	172	134	266	203
V/C Ratio(X)	0.57	0.37	0.37	0.03	0.24	0.24	0.56	0.00	0.21	0.60	0.33	0.49
Avail Cap(c_a), veh/h	82	652	652	513	1121	1132	76	0	657	134	735	561
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	26.3	26.5	14.7	0.0	0.0	54.2	0.0	47.7	50.5	43.9	45.0
Incr Delay (d2), s/veh	8.4	1.6	1.6	0.0	0.5	0.5	8.4	0.0	0.6	7.0	0.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.8	5.9	0.2	0.1	0.1	1.1	0.0	1.1	2.7	2.5	3.0
LnGrp Delay(d),s/veh	61.4	27.9	28.2	14.7	0.5	0.5	62.6	0.0	48.3	57.5	44.7	46.8
LnGrp LOS	E	C	C	B	A	A	E		D	E	D	D
Approach Vol, veh/h		529			552			68			266	
Approach Delay, s/veh		30.9			0.9			55.0			49.3	
Approach LOS		C			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	14.9	39.8	46.0	8.0	20.3	9.6	76.2
Change Period (Y+Rc), s	5.3	5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s	7.3	40.4	4.0	40.3	4.0	43.7	4.0	40.3
Max Q Clear Time (g_c+I1), s	7.4	4.1	2.4	13.5	4.2	9.3	5.1	2.0
Green Ext Time (p_c), s	0.0	0.1	0.4	1.7	0.0	0.7	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	347	50	12	395	57	26	26	5	100	73	86
Future Volume (veh/h)	38	347	50	12	395	57	26	26	5	100	73	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1750	1716	1863	1750	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	46	423	61	15	482	70	32	32	6	122	89	105
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	1133	162	511	1946	281	57	146	27	141	275	210
Arrive On Green	0.05	0.37	0.35	0.62	1.00	1.00	0.03	0.10	0.08	0.09	0.15	0.15
Sat Flow, veh/h	1634	3095	443	1634	3093	447	1634	1516	284	1634	1863	1422
Grp Volume(v), veh/h	46	240	244	15	275	277	32	0	38	122	89	105
Grp Sat Flow(s),veh/h/ln	1634	1770	1769	1634	1770	1770	1634	0	1801	1634	1863	1422
Q Serve(g_s), s	3.2	11.5	11.7	0.4	0.0	0.0	2.2	0.0	2.2	8.5	4.9	7.8
Cycle Q Clear(g_c), s	3.2	11.5	11.7	0.4	0.0	0.0	2.2	0.0	2.2	8.5	4.9	7.8
Prop In Lane	1.00		0.25	1.00		0.25	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	81	648	648	511	1113	1114	57	0	173	141	275	210
V/C Ratio(X)	0.57	0.37	0.38	0.03	0.25	0.25	0.56	0.00	0.22	0.87	0.32	0.50
Avail Cap(c_a), veh/h	81	648	648	511	1113	1114	82	0	651	141	735	561
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	26.7	27.0	14.9	0.0	0.0	54.6	0.0	48.1	51.9	43.9	45.1
Incr Delay (d2), s/veh	9.1	1.6	1.7	0.0	0.5	0.5	8.5	0.0	0.6	39.2	0.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.9	6.0	0.2	0.2	0.2	1.1	0.0	1.2	5.4	2.6	3.2
LnGrp Delay(d),s/veh	62.6	28.4	28.6	14.9	0.5	0.5	63.1	0.0	48.7	91.1	44.6	47.0
LnGrp LOS	E	C	C	B	A	A	E		D	F	D	D
Approach Vol, veh/h		530			567			70			316	
Approach Delay, s/veh		31.5			0.9			55.3			63.3	
Approach LOS		C			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	15.0	39.9	46.1	8.0	21.0	9.7	76.4
Change Period (Y+Rc), s	5.3	5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s	8.3	40.3	4.0	40.4	4.5	44.1	4.0	40.4
Max Q Clear Time (g_c+I1), s	10.5	4.2	2.4	13.7	4.2	9.8	5.2	2.0
Green Ext Time (p_c), s	0.0	0.1	0.4	1.7	0.0	0.9	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	756	74	18	864	67	46	76	9	115	211	141
Future Volume (veh/h)	55	756	74	18	864	67	46	76	9	115	211	141
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1750	1716	1863	1750	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	67	922	90	22	1054	82	56	93	11	140	257	172
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1502	147	68	1433	111	96	273	32	200	431	331
Arrive On Green	0.07	0.46	0.44	0.04	0.43	0.41	0.06	0.17	0.15	0.12	0.23	0.23
Sat Flow, veh/h	1634	3249	317	1634	3320	258	1634	1630	193	1634	1863	1429
Grp Volume(v), veh/h	67	502	510	22	562	574	56	0	104	140	257	172
Grp Sat Flow(s),veh/h/ln	1634	1770	1796	1634	1770	1809	1634	0	1823	1634	1863	1429
Q Serve(g_s), s	3.1	16.5	16.6	1.0	20.5	20.6	2.6	0.0	3.9	6.4	9.5	8.2
Cycle Q Clear(g_c), s	3.1	16.5	16.6	1.0	20.5	20.6	2.6	0.0	3.9	6.4	9.5	8.2
Prop In Lane	1.00		0.18	1.00		0.14	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	118	818	830	68	764	780	96	0	306	200	431	331
V/C Ratio(X)	0.57	0.61	0.61	0.33	0.74	0.74	0.58	0.00	0.34	0.70	0.60	0.52
Avail Cap(c_a), veh/h	173	988	1003	120	931	951	301	0	978	388	1097	842
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	15.7	15.8	36.1	18.4	18.5	35.6	0.0	28.6	32.7	26.6	26.1
Incr Delay (d2), s/veh	4.3	0.8	0.8	2.7	2.4	2.4	5.5	0.0	0.7	4.4	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.1	8.4	0.5	10.5	10.7	1.3	0.0	2.0	3.1	5.1	3.3
LnGrp Delay(d),s/veh	39.1	16.5	16.6	38.9	20.8	20.9	41.1	0.0	29.2	37.0	27.9	27.3
LnGrp LOS	D	B	B	D	C	C	D		C	D	C	C
Approach Vol, veh/h		1079			1158			160			569	
Approach Delay, s/veh		17.9			21.2			33.4			30.0	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	17.0	7.2	39.9	8.6	21.9	9.6	37.5
Change Period (Y+Rc), s	5.3	5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s	17.1	40.3	4.0	41.6	13.0	44.4	6.5	39.1
Max Q Clear Time (g_c+I1), s	8.4	5.9	3.0	18.6	4.6	11.5	5.1	22.6
Green Ext Time (p_c), s	0.2	2.0	0.0	9.8	0.1	2.0	0.0	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	756	74	18	864	79	46	77	9	149	213	146
Future Volume (veh/h)	56	756	74	18	864	79	46	77	9	149	213	146
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1750	1716	1863	1750	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	68	922	90	22	1054	96	56	94	11	182	260	178
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	1503	147	64	1409	128	95	257	30	244	464	356
Arrive On Green	0.07	0.46	0.44	0.04	0.43	0.41	0.06	0.16	0.14	0.15	0.25	0.25
Sat Flow, veh/h	1634	3249	317	1634	3272	298	1634	1632	191	1634	1863	1430
Grp Volume(v), veh/h	68	502	510	22	570	580	56	0	105	182	260	178
Grp Sat Flow(s),veh/h/ln	1634	1770	1796	1634	1770	1800	1634	0	1823	1634	1863	1430
Q Serve(g_s), s	3.4	17.8	17.9	1.1	22.6	22.7	2.8	0.0	4.3	8.9	10.2	8.9
Cycle Q Clear(g_c), s	3.4	17.8	17.9	1.1	22.6	22.7	2.8	0.0	4.3	8.9	10.2	8.9
Prop In Lane	1.00		0.18	1.00		0.17	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	117	819	831	64	762	775	95	0	288	244	464	356
V/C Ratio(X)	0.58	0.61	0.61	0.34	0.75	0.75	0.59	0.00	0.37	0.75	0.56	0.50
Avail Cap(c_a), veh/h	176	1024	1039	113	956	972	312	0	906	453	1086	834
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	16.9	17.0	39.1	20.0	20.2	38.5	0.0	31.6	34.1	27.4	27.0
Incr Delay (d2), s/veh	4.5	0.8	0.7	3.1	2.5	2.5	5.8	0.0	0.8	4.5	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	8.8	9.0	0.6	11.5	11.7	1.4	0.0	2.2	4.4	5.3	3.6
LnGrp Delay(d),s/veh	42.2	17.6	17.7	42.2	22.5	22.6	44.2	0.0	32.3	38.6	28.5	28.1
LnGrp LOS	D	B	B	D	C	C	D		C	D	C	C
Approach Vol, veh/h		1080			1172			161			620	
Approach Delay, s/veh		19.2			23.0			36.5			31.4	
Approach LOS		B			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	17.2	7.3	42.7	8.8	24.8	10.0	40.0
Change Period (Y+Rc), s	5.3	5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s	21.9	40.3	4.1	46.7	14.7	47.5	7.3	43.5
Max Q Clear Time (g_c+I1), s	10.9	6.3	3.1	19.9	4.8	12.2	5.4	24.7
Green Ext Time (p_c), s	0.4	2.0	0.0	10.6	0.1	2.0	0.0	9.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Intersection 3
Monte Vista Dr & El Monte Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	600	165	56	454	29	242	39	83	48	25	4
Future Volume (veh/h)	6	600	165	56	454	29	242	39	83	48	25	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1750	1716	1863	1716	1750	1863	1750
Adj Flow Rate, veh/h	6	632	174	59	478	31	255	41	87	51	26	4
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	1165	466	113	1232	80	333	775	597	208	92	11
Arrive On Green	0.03	0.33	0.33	0.07	0.37	0.34	0.20	0.42	0.42	0.15	0.15	0.13
Sat Flow, veh/h	1634	3539	1415	1634	3368	218	1634	1863	1434	782	608	72
Grp Volume(v), veh/h	6	632	174	59	250	259	255	41	87	81	0	0
Grp Sat Flow(s),veh/h/ln	1634	1770	1415	1634	1770	1817	1634	1863	1434	1462	0	0
Q Serve(g_s), s	0.2	9.4	6.1	2.3	6.8	6.8	9.5	0.9	2.4	1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.2	9.4	6.1	2.3	6.8	6.8	9.5	0.9	2.4	3.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	0.63		0.05
Lane Grp Cap(c), veh/h	53	1165	466	113	647	665	333	775	597	311	0	0
V/C Ratio(X)	0.11	0.54	0.37	0.52	0.39	0.39	0.77	0.05	0.15	0.26	0.00	0.00
Avail Cap(c_a), veh/h	144	2482	992	144	1241	1274	495	1781	1371	932	0	0
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.4	17.7	16.6	29.1	15.2	15.3	24.3	11.3	11.7	24.6	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.4	0.5	3.7	0.4	0.4	4.1	0.0	0.1	0.4	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.6	2.4	1.1	3.3	3.5	4.6	0.4	1.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	31.3	18.1	17.1	32.8	15.5	15.6	28.4	11.3	11.9	25.0	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C		
Approach Vol, veh/h		812			568			383			81	
Approach Delay, s/veh		18.0			17.4			22.8			25.0	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		31.0	8.5	25.3	17.2	13.8	6.1	27.7
Change Period (Y+Rc), s		5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s		60.6	4.0	43.7	18.3	37.0	4.0	43.7
Max Q Clear Time (g_c+I1), s		4.4	4.3	11.4	11.5	5.0	2.2	8.8
Green Ext Time (p_c), s		0.8	0.0	5.9	0.5	0.7	0.0	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	622	168	56	495	29	247	39	83	48	25	4
Future Volume (veh/h)	6	622	168	56	495	29	247	39	83	48	25	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1750	1716	1863	1716	1750	1863	1750
Adj Flow Rate, veh/h	6	655	177	59	521	31	260	41	87	51	26	4
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	52	1187	475	112	1261	75	335	773	595	205	90	11
Arrive On Green	0.03	0.34	0.34	0.07	0.37	0.35	0.21	0.41	0.41	0.15	0.15	0.13
Sat Flow, veh/h	1634	3539	1415	1634	3389	201	1634	1863	1434	783	606	72
Grp Volume(v), veh/h	6	655	177	59	272	280	260	41	87	81	0	0
Grp Sat Flow(s),veh/h/ln	1634	1770	1415	1634	1770	1820	1634	1863	1434	1461	0	0
Q Serve(g_s), s	0.2	10.0	6.3	2.3	7.5	7.6	10.0	0.9	2.5	1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.2	10.0	6.3	2.3	7.5	7.6	10.0	0.9	2.5	3.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	0.63		0.05
Lane Grp Cap(c), veh/h	52	1187	475	112	659	678	335	773	595	307	0	0
V/C Ratio(X)	0.11	0.55	0.37	0.53	0.41	0.41	0.78	0.05	0.15	0.26	0.00	0.00
Avail Cap(c_a), veh/h	140	2455	982	140	1228	1263	468	1722	1326	910	0	0
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.2	18.0	16.7	29.8	15.4	15.5	24.9	11.6	12.1	25.2	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.4	0.5	3.8	0.4	0.4	5.3	0.0	0.1	0.5	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.9	2.5	1.2	3.8	3.9	5.0	0.5	1.0	1.4	0.0	0.0
LnGrp Delay(d),s/veh	32.2	18.4	17.2	33.6	15.8	15.9	30.3	11.6	12.2	25.7	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C		
Approach Vol, veh/h		838			611			388			81	
Approach Delay, s/veh		18.2			17.6			24.2			25.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		31.5	8.6	26.2	17.6	13.9	6.1	28.7
Change Period (Y+Rc), s		5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s		60.0	4.0	44.3	17.7	37.0	4.0	44.3
Max Q Clear Time (g_c+I1), s		4.5	4.3	12.0	12.0	5.1	2.2	9.6
Green Ext Time (p_c), s		0.8	0.0	6.3	0.4	0.7	0.0	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1312	245	82	970	43	326	70	112	66	47	5
Future Volume (veh/h)	9	1312	245	82	970	43	326	70	112	66	47	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1750	1716	1863	1716	1750	1863	1750
Adj Flow Rate, veh/h	9	1312	245	82	970	43	326	70	112	66	47	5
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	1718	689	116	1849	82	323	672	517	136	89	8
Arrive On Green	0.04	0.97	0.97	0.07	0.54	0.52	0.20	0.36	0.36	0.14	0.14	0.13
Sat Flow, veh/h	1634	3539	1420	1634	3448	153	1634	1863	1433	722	656	61
Grp Volume(v), veh/h	9	1312	245	82	498	515	326	70	112	118	0	0
Grp Sat Flow(s),veh/h/ln	1634	1770	1420	1634	1770	1831	1634	1863	1433	1439	0	0
Q Serve(g_s), s	0.8	6.0	1.1	7.1	26.3	26.4	28.7	3.6	7.9	9.4	0.0	0.0
Cycle Q Clear(g_c), s	0.8	6.0	1.1	7.1	26.3	26.4	28.7	3.6	7.9	11.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	0.56		0.04
Lane Grp Cap(c), veh/h	33	1718	689	116	949	982	323	672	517	233	0	0
V/C Ratio(X)	0.27	0.76	0.36	0.71	0.52	0.52	1.01	0.10	0.22	0.51	0.00	0.00
Avail Cap(c_a), veh/h	80	1718	689	116	949	982	323	912	702	414	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	68.6	1.2	1.1	65.9	21.7	21.7	58.1	30.8	32.1	58.8	0.0	0.0
Incr Delay (d2), s/veh	2.8	2.1	0.9	12.5	1.3	1.3	107.9	0.1	0.2	1.7	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.1	0.5	3.6	13.2	13.7	22.6	1.9	3.1	4.6	0.0	0.0
LnGrp Delay(d),s/veh	71.3	3.3	2.0	78.4	23.0	23.0	166.1	30.9	32.4	60.5	0.0	0.0
LnGrp LOS	E	A	A	E	C	C	F	C	C	E		
Approach Vol, veh/h		1566			1095			508			118	
Approach Delay, s/veh		3.5			27.2			118.0			60.5	
Approach LOS		A			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		56.3	14.3	74.4	32.7	23.6	6.9	81.8
Change Period (Y+Rc), s		5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s		69.7	8.6	50.0	27.4	37.0	5.4	53.2
Max Q Clear Time (g_c+I1), s		9.9	9.1	8.0	30.7	13.0	2.8	28.4
Green Ext Time (p_c), s		1.1	0.0	17.5	0.0	1.1	0.0	13.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1334	248	82	1011	43	331	70	112	66	47	5
Future Volume (veh/h)	9	1334	248	82	1011	43	331	70	112	66	47	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1750	1716	1863	1716	1750	1863	1750
Adj Flow Rate, veh/h	9	1404	261	86	1064	45	348	74	118	69	49	5
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	1731	694	101	1835	78	327	682	525	139	90	8
Arrive On Green	0.04	0.98	0.98	0.06	0.53	0.52	0.20	0.37	0.37	0.14	0.14	0.13
Sat Flow, veh/h	1634	3539	1420	1634	3456	146	1634	1863	1433	721	650	58
Grp Volume(v), veh/h	9	1404	261	86	545	564	348	74	118	123	0	0
Grp Sat Flow(s),veh/h/ln	1634	1770	1420	1634	1770	1832	1634	1863	1433	1430	0	0
Q Serve(g_s), s	0.8	6.1	0.9	7.6	30.3	30.3	29.0	3.8	8.2	10.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	6.1	0.9	7.6	30.3	30.3	29.0	3.8	8.2	11.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	0.56		0.04
Lane Grp Cap(c), veh/h	33	1731	694	101	940	973	327	682	525	237	0	0
V/C Ratio(X)	0.27	0.81	0.38	0.85	0.58	0.58	1.06	0.11	0.22	0.52	0.00	0.00
Avail Cap(c_a), veh/h	65	1731	694	101	940	973	327	916	705	412	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.43	0.43	0.43	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	68.6	0.9	0.8	67.3	23.0	23.1	58.0	30.3	31.7	58.6	0.0	0.0
Incr Delay (d2), s/veh	2.3	2.3	0.8	24.1	1.1	1.1	68.0	0.1	0.2	1.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.9	0.4	4.1	15.0	15.5	19.2	2.0	3.3	4.8	0.0	0.0
LnGrp Delay(d),s/veh	70.9	3.2	1.6	91.4	24.2	24.2	126.0	30.4	31.9	60.3	0.0	0.0
LnGrp LOS	E	A	A	F	C	C	F	C	C	E		
Approach Vol, veh/h		1674			1195			540			123	
Approach Delay, s/veh		3.3			29.0			92.4			60.3	
Approach LOS		A			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		57.1	13.0	74.9	33.0	24.1	6.9	81.0
Change Period (Y+Rc), s		5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s		70.0	7.3	51.0	27.7	37.0	4.1	54.2
Max Q Clear Time (g_c+I1), s		10.2	9.6	8.1	31.0	13.5	2.8	32.3
Green Ext Time (p_c), s		1.2	0.0	20.1	0.0	1.1	0.0	14.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	334	76	18	410	19	79	13	20	103	51	10
Future Volume (veh/h)	2	334	76	18	410	19	79	13	20	103	51	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1750	1716	1863	1716	1750	1863	1750
Adj Flow Rate, veh/h	3	451	103	24	554	26	107	18	27	139	69	14
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	302	1948	782	55	1372	64	122	579	445	232	96	19
Arrive On Green	0.37	1.00	1.00	0.03	0.40	0.38	0.07	0.31	0.31	0.20	0.20	0.19
Sat Flow, veh/h	1634	3539	1421	1634	3437	161	1634	1863	1432	900	479	93
Grp Volume(v), veh/h	3	451	103	24	285	295	107	18	27	222	0	0
Grp Sat Flow(s),veh/h/ln	1634	1770	1421	1634	1770	1829	1634	1863	1432	1472	0	0
Q Serve(g_s), s	0.1	0.0	0.0	1.6	13.1	13.2	7.4	0.8	1.5	15.5	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.6	13.1	13.2	7.4	0.8	1.5	16.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	0.63		0.06
Lane Grp Cap(c), veh/h	302	1948	782	55	706	730	122	579	445	347	0	0
V/C Ratio(X)	0.01	0.23	0.13	0.44	0.40	0.40	0.88	0.03	0.06	0.64	0.00	0.00
Avail Cap(c_a), veh/h	302	1948	782	82	706	730	122	830	638	548	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.90	0.90	0.90	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.3	0.0	0.0	54.0	24.5	24.6	52.2	27.3	27.6	43.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.3	4.9	1.5	1.5	46.6	0.0	0.1	2.0	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.8	6.7	7.0	4.9	0.4	0.6	6.8	0.0	0.0
LnGrp Delay(d),s/veh	29.3	0.3	0.3	58.9	26.1	26.1	98.8	27.4	27.7	45.0	0.0	0.0
LnGrp LOS	C	A	A	E	C	C	F	C	C	D		
Approach Vol, veh/h		557			604			152			222	
Approach Delay, s/veh		0.4			27.4			77.7			45.0	
Approach LOS		A			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		39.4	7.8	66.7	12.5	26.9	25.1	49.5
Change Period (Y+Rc), s		5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s		49.5	4.0	43.8	7.2	37.0	4.0	43.8
Max Q Clear Time (g_c+I1), s		3.5	3.6	2.0	9.4	18.3	2.1	15.2
Green Ext Time (p_c), s		0.5	0.0	2.4	0.0	0.7	0.5	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	365	79	18	421	19	80	13	20	103	51	10
Future Volume (veh/h)	2	365	79	18	421	19	80	13	20	103	51	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1750	1716	1863	1716	1750	1863	1750
Adj Flow Rate, veh/h	3	493	107	24	569	26	108	18	27	139	69	14
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	1941	779	55	1377	63	128	585	449	232	96	19
Arrive On Green	0.36	1.00	1.00	0.03	0.40	0.39	0.08	0.31	0.31	0.20	0.20	0.19
Sat Flow, veh/h	1634	3539	1421	1634	3442	157	1634	1863	1432	900	478	93
Grp Volume(v), veh/h	3	493	107	24	292	303	108	18	27	222	0	0
Grp Sat Flow(s),veh/h/ln	1634	1770	1421	1634	1770	1830	1634	1863	1432	1471	0	0
Q Serve(g_s), s	0.1	0.0	0.0	1.7	13.6	13.7	7.5	0.8	1.5	15.7	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.7	13.6	13.7	7.5	0.8	1.5	16.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	0.63		0.06
Lane Grp Cap(c), veh/h	297	1941	779	55	708	732	128	585	449	346	0	0
V/C Ratio(X)	0.01	0.25	0.14	0.44	0.41	0.41	0.84	0.03	0.06	0.64	0.00	0.00
Avail Cap(c_a), veh/h	297	1941	779	81	708	732	128	831	639	543	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.90	0.90	0.90	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.0	0.0	0.0	54.5	24.8	24.9	52.3	27.3	27.6	43.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.4	4.9	1.6	1.6	37.6	0.0	0.1	2.0	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.8	7.0	7.2	4.7	0.4	0.6	6.9	0.0	0.0
LnGrp Delay(d),s/veh	30.0	0.3	0.4	59.5	26.4	26.4	89.9	27.4	27.6	45.4	0.0	0.0
LnGrp LOS	C	A	A	E	C	C	F	C	C	D		
Approach Vol, veh/h		603			619			153			222	
Approach Delay, s/veh		0.5			27.7			71.6			45.4	
Approach LOS		A			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		40.1	7.8	67.1	13.0	27.1	24.9	50.0
Change Period (Y+Rc), s		5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s		50.0	4.0	44.3	7.7	37.0	4.0	44.3
Max Q Clear Time (g_c+I1), s		3.5	3.7	2.0	9.5	18.4	2.1	15.7
Green Ext Time (p_c), s		0.5	0.0	2.6	0.0	0.7	0.5	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	730	113	26	876	28	106	23	27	141	95	14
Future Volume (veh/h)	3	730	113	26	876	28	106	23	27	141	95	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1750	1716	1863	1716	1750	1863	1750
Adj Flow Rate, veh/h	4	986	153	35	1184	38	143	31	36	191	128	19
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	1285	514	97	1396	45	195	827	637	296	164	24
Arrive On Green	0.02	0.36	0.36	0.06	0.40	0.38	0.12	0.44	0.44	0.28	0.28	0.27
Sat Flow, veh/h	1634	3539	1416	1634	3497	112	1634	1863	1435	834	586	85
Grp Volume(v), veh/h	4	986	153	35	599	623	143	31	36	338	0	0
Grp Sat Flow(s),veh/h/ln	1634	1770	1416	1634	1770	1839	1634	1863	1435	1505	0	0
Q Serve(g_s), s	0.2	22.1	4.2	1.8	27.6	27.6	7.6	0.8	1.3	18.3	0.0	0.0
Cycle Q Clear(g_c), s	0.2	22.1	4.2	1.8	27.6	27.6	7.6	0.8	1.3	18.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	0.57		0.06
Lane Grp Cap(c), veh/h	38	1285	514	97	707	734	195	827	637	484	0	0
V/C Ratio(X)	0.11	0.77	0.30	0.36	0.85	0.85	0.73	0.04	0.06	0.70	0.00	0.00
Avail Cap(c_a), veh/h	104	1793	718	104	897	932	264	1178	907	704	0	0
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.0	25.3	7.7	40.6	24.5	24.6	38.1	14.1	14.2	30.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	1.3	0.3	2.2	6.2	6.1	6.7	0.0	0.0	1.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.1	2.4	0.9	14.7	15.3	3.8	0.4	0.5	8.0	0.0	0.0
LnGrp Delay(d),s/veh	44.2	26.6	8.0	42.8	30.7	30.6	44.9	14.1	14.3	31.9	0.0	0.0
LnGrp LOS	D	C	A	D	C	C	D	B	B	C		
Approach Vol, veh/h		1143			1257			210			338	
Approach Delay, s/veh		24.2			31.0			35.1			31.9	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		43.9	9.3	36.6	14.7	29.1	6.1	39.9
Change Period (Y+Rc), s		5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s		55.5	4.0	43.8	13.2	37.0	4.0	43.8
Max Q Clear Time (g_c+I1), s		3.3	3.8	24.1	9.6	20.7	2.2	29.6
Green Ext Time (p_c), s		1.5	0.1	5.1	0.1	1.3	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	761	116	26	887	28	107	23	27	141	95	14
Future Volume (veh/h)	3	761	116	26	887	28	107	23	27	141	95	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1750	1716	1863	1716	1750	1863	1750
Adj Flow Rate, veh/h	4	1028	157	35	1199	38	145	31	36	191	128	19
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	1317	527	86	1406	45	197	826	636	295	163	24
Arrive On Green	0.02	0.37	0.37	0.05	0.40	0.38	0.12	0.44	0.44	0.28	0.28	0.26
Sat Flow, veh/h	1634	3539	1417	1634	3498	111	1634	1863	1435	835	585	85
Grp Volume(v), veh/h	4	1028	157	35	606	631	145	31	36	338	0	0
Grp Sat Flow(s),veh/h/ln	1634	1770	1417	1634	1770	1839	1634	1863	1435	1505	0	0
Q Serve(g_s), s	0.2	23.4	4.3	1.9	28.4	28.4	7.8	0.9	1.3	18.6	0.0	0.0
Cycle Q Clear(g_c), s	0.2	23.4	4.3	1.9	28.4	28.4	7.8	0.9	1.3	19.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	0.57		0.06
Lane Grp Cap(c), veh/h	37	1317	527	86	711	739	197	826	636	482	0	0
V/C Ratio(X)	0.11	0.78	0.30	0.41	0.85	0.85	0.74	0.04	0.06	0.70	0.00	0.00
Avail Cap(c_a), veh/h	102	1765	707	102	883	917	262	1164	897	694	0	0
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.6	25.3	7.5	41.7	24.8	24.8	38.6	14.3	14.5	30.5	0.0	0.0
Incr Delay (d2), s/veh	1.2	1.6	0.3	3.1	6.8	6.6	7.2	0.0	0.0	1.9	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.7	1.7	0.9	15.1	15.7	3.9	0.4	0.5	8.1	0.0	0.0
LnGrp Delay(d),s/veh	44.8	26.9	7.8	44.8	31.5	31.4	45.8	14.4	14.5	32.4	0.0	0.0
LnGrp LOS	D	C	A	D	C	C	D	B	B	C		
Approach Vol, veh/h		1189			1272			212			338	
Approach Delay, s/veh		24.5			31.8			35.9			32.4	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		44.4	8.8	37.9	15.0	29.4	6.1	40.6
Change Period (Y+Rc), s		5.3	5.7	5.7	5.3	5.3	5.7	5.7
Max Green Setting (Gmax), s		55.6	4.0	43.7	13.3	37.0	4.0	43.7
Max Q Clear Time (g_c+I1), s		3.3	3.9	25.4	9.8	21.0	2.2	30.4
Green Ext Time (p_c), s		1.5	0.1	5.2	0.1	1.3	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Intersection 4
Alta Ave & El Monte Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	641	161	68	434	127	196	354	57	121	342	164
Future Volume (veh/h)	197	641	161	68	434	127	196	354	57	121	342	164
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), 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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1716	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	212	689	173	73	467	137	211	381	61	130	368	176
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	1228	497	220	1107	448	281	744	118	169	915	370
Arrive On Green	0.10	0.35	0.35	0.07	0.31	0.31	0.09	0.24	0.23	0.10	0.26	0.26
Sat Flow, veh/h	3170	3539	1433	3170	3539	1432	3170	3051	484	1634	3539	1430
Grp Volume(v), veh/h	212	689	173	73	467	137	211	220	222	130	368	176
Grp Sat Flow(s),veh/h/ln	1585	1770	1433	1585	1770	1432	1585	1770	1766	1634	1770	1430
Q Serve(g_s), s	4.3	10.7	6.1	1.5	7.1	4.9	4.4	7.2	7.4	5.2	5.8	7.0
Cycle Q Clear(g_c), s	4.3	10.7	6.1	1.5	7.1	4.9	4.4	7.2	7.4	5.2	5.8	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	328	1228	497	220	1107	448	281	431	430	169	915	370
V/C Ratio(X)	0.65	0.56	0.35	0.33	0.42	0.31	0.75	0.51	0.52	0.77	0.40	0.48
Avail Cap(c_a), veh/h	328	2480	1004	295	2443	988	281	1133	1130	169	2318	936
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	17.9	16.4	30.0	18.4	17.7	30.1	22.1	22.2	29.5	20.8	21.2
Incr Delay (d2), s/veh	4.3	0.4	0.4	0.9	0.3	0.4	10.7	0.9	1.0	19.1	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.2	2.4	0.7	3.5	2.0	2.4	3.6	3.7	3.2	2.8	2.8
LnGrp Delay(d),s/veh	33.5	18.3	16.8	30.9	18.7	18.0	40.8	23.0	23.2	48.6	21.0	22.2
LnGrp LOS	C	B	B	C	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1074			677			653			674	
Approach Delay, s/veh		21.1			19.9			28.8			26.7	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	20.5	8.7	27.5	10.0	21.5	11.0	25.2
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green Setting (Gmax), s	6.4	42.7	4.6	45.7	5.4	43.7	5.3	45.0
Max Q Clear Time (g_c+I1), s	7.2	9.4	3.5	12.7	6.4	9.0	6.3	9.1
Green Ext Time (p_c), s	0.0	4.0	0.0	7.2	0.0	4.1	0.0	7.3

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	649	168	68	450	127	211	354	57	121	342	171
Future Volume (veh/h)	201	649	168	68	450	127	211	354	57	121	342	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), 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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1716	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	216	698	181	73	484	137	227	381	61	130	368	184
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	1233	499	217	1115	451	323	743	118	175	880	356
Arrive On Green	0.10	0.35	0.35	0.07	0.32	0.32	0.10	0.24	0.23	0.11	0.25	0.25
Sat Flow, veh/h	3170	3539	1433	3170	3539	1432	3170	3051	484	1634	3539	1430
Grp Volume(v), veh/h	216	698	181	73	484	137	227	220	222	130	368	184
Grp Sat Flow(s),veh/h/ln	1585	1770	1433	1585	1770	1432	1585	1770	1766	1634	1770	1430
Q Serve(g_s), s	4.5	11.0	6.5	1.5	7.5	5.0	4.8	7.4	7.5	5.3	6.0	7.6
Cycle Q Clear(g_c), s	4.5	11.0	6.5	1.5	7.5	5.0	4.8	7.4	7.5	5.3	6.0	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	323	1233	499	217	1115	451	323	431	430	175	880	356
V/C Ratio(X)	0.67	0.57	0.36	0.34	0.43	0.30	0.70	0.51	0.52	0.74	0.42	0.52
Avail Cap(c_a), veh/h	323	2387	966	290	2351	951	323	1060	1057	240	2279	921
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	18.2	16.7	30.6	18.7	17.8	29.9	22.5	22.6	29.8	21.7	22.3
Incr Delay (d2), s/veh	5.3	0.4	0.4	0.9	0.3	0.4	6.8	0.9	1.0	7.9	0.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.4	2.6	0.7	3.7	2.0	2.4	3.7	3.8	2.8	3.0	3.1
LnGrp Delay(d),s/veh	35.0	18.6	17.2	31.5	19.0	18.2	36.6	23.4	23.6	37.7	22.0	23.4
LnGrp LOS	D	B	B	C	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1095			694			669			682	
Approach Delay, s/veh		21.6			20.1			28.0			25.4	
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
Phs Duration (G+Y+Rc), s	11.4	20.7	8.7	28.0	11.0	21.1	11.0	25.7
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green Setting (Gmax), s	9.5	40.6	4.6	44.7	6.4	43.7	5.3	44.0
Max Q Clear Time (g_c+I1), s	7.3	9.5	3.5	13.0	6.8	9.6	6.5	9.5
Green Ext Time (p_c), s	0.1	4.1	0.0	7.4	0.0	4.1	0.0	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	941	236	102	960	190	282	726	82	176	721	239
Future Volume (veh/h)	289	941	236	102	960	190	282	726	82	176	721	239
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), 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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1716	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	289	941	236	102	960	190	282	726	82	176	721	239
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	379	1609	652	134	1334	540	434	835	94	202	877	354
Arrive On Green	0.12	0.45	0.45	0.04	0.38	0.38	0.14	0.26	0.26	0.12	0.25	0.25
Sat Flow, veh/h	3170	3539	1435	3170	3539	1433	3170	3199	361	1634	3539	1430
Grp Volume(v), veh/h	289	941	236	102	960	190	282	401	407	176	721	239
Grp Sat Flow(s),veh/h/ln	1585	1770	1435	1585	1770	1433	1585	1770	1791	1634	1770	1430
Q Serve(g_s), s	11.9	26.7	8.6	4.3	31.3	12.9	11.4	29.3	29.3	14.3	26.0	15.3
Cycle Q Clear(g_c), s	11.9	26.7	8.6	4.3	31.3	12.9	11.4	29.3	29.3	14.3	26.0	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	379	1609	652	134	1334	540	434	462	467	202	877	354
V/C Ratio(X)	0.76	0.58	0.36	0.76	0.72	0.35	0.65	0.87	0.87	0.87	0.82	0.67
Avail Cap(c_a), veh/h	493	1609	652	134	1334	540	434	536	542	202	1161	469
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
Upstream Filter(I)	0.57	0.57	0.57	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	27.4	8.5	64.0	35.9	30.2	55.2	47.7	47.7	58.1	48.0	25.8
Incr Delay (d2), s/veh	3.0	0.9	0.9	25.5	3.4	1.8	3.4	14.7	14.7	40.7	3.8	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	13.3	3.6	2.4	16.0	5.3	5.2	16.2	16.4	8.7	13.2	6.3
LnGrp Delay(d),s/veh	60.6	28.3	9.4	89.5	39.4	32.0	58.6	62.4	62.4	98.8	51.8	28.2
LnGrp LOS	E	C	A	F	D	C	E	E	E	F	D	C
Approach Vol, veh/h		1466			1252			1090			1136	
Approach Delay, s/veh		31.6			42.3			61.4			54.1	
Approach LOS		C			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	39.2	9.7	65.4	22.5	37.4	20.2	54.9
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green Setting (Gmax), s	16.1	40.3	4.0	54.0	12.7	43.7	19.3	38.7
Max Q Clear Time (g_c+I1), s	16.3	31.3	6.3	28.7	13.4	28.0	13.9	33.3
Green Ext Time (p_c), s	0.0	2.3	0.0	12.6	0.0	3.8	0.5	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	46.1
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	1378	243	102	976	190	297	726	82	176	721	246
Future Volume (veh/h)	293	1378	243	102	976	190	297	726	82	176	721	246
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), 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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1716	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	315	1482	261	110	1049	204	319	781	88	189	775	265
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	477	1489	603	210	1191	482	350	891	100	203	1034	418
Arrive On Green	0.30	0.84	0.84	0.07	0.34	0.34	0.11	0.28	0.27	0.12	0.29	0.29
Sat Flow, veh/h	3170	3539	1434	3170	3539	1433	3170	3200	360	1634	3539	1431
Grp Volume(v), veh/h	315	1482	261	110	1049	204	319	432	437	189	775	265
Grp Sat Flow(s),veh/h/ln	1585	1770	1434	1585	1770	1433	1585	1770	1791	1634	1770	1431
Q Serve(g_s), s	12.6	59.3	6.6	4.9	40.5	11.1	14.4	33.8	33.8	16.6	28.8	16.3
Cycle Q Clear(g_c), s	12.6	59.3	6.6	4.9	40.5	11.1	14.4	33.8	33.8	16.6	28.8	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	477	1489	603	210	1191	482	350	493	499	203	1034	418
V/C Ratio(X)	0.66	1.00	0.43	0.52	0.88	0.42	0.91	0.88	0.88	0.93	0.75	0.63
Avail Cap(c_a), veh/h	477	1489	603	210	1206	488	350	516	522	203	1081	437
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.45	0.45	0.45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	11.4	7.2	65.5	45.4	17.9	63.8	49.9	50.0	62.9	46.5	21.7
Incr Delay (d2), s/veh	1.5	14.5	0.2	2.3	7.8	0.6	27.2	15.1	15.0	44.3	2.8	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	30.0	2.6	2.2	21.1	4.4	7.7	18.6	18.8	10.0	14.5	6.8
LnGrp Delay(d),s/veh	48.9	25.9	7.4	67.8	53.1	18.5	91.0	65.1	65.0	107.2	49.3	24.5
LnGrp LOS	D	C	A	E	D	B	F	E	E	F	D	C
Approach Vol, veh/h		2058			1363			1188			1229	
Approach Delay, s/veh		27.1			49.1			72.0			52.9	
Approach LOS		C			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	44.4	13.6	65.0	20.0	46.4	25.8	52.8
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green Setting (Gmax), s	17.4	41.7	6.0	59.3	15.4	43.7	17.6	47.7
Max Q Clear Time (g_c+I1), s	18.6	35.8	6.9	61.3	16.4	30.8	14.6	42.5
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	6.7	2.4	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	337	125	83	321	94	123	328	32	112	353	108
Future Volume (veh/h)	88	337	125	83	321	94	123	328	32	112	353	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), 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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1716	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	128	488	181	120	465	136	178	475	46	162	512	157
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	1
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	1012	409	267	1018	412	286	876	85	212	1092	442
Arrive On Green	0.08	0.29	0.29	0.08	0.29	0.29	0.09	0.27	0.26	0.13	0.31	0.31
Sat Flow, veh/h	3170	3539	1431	3170	3539	1431	3170	3256	314	1634	3539	1432
Grp Volume(v), veh/h	128	488	181	120	465	136	178	257	264	162	512	157
Grp Sat Flow(s),veh/h/ln	1585	1770	1431	1585	1770	1431	1585	1770	1800	1634	1770	1432
Q Serve(g_s), s	2.7	7.9	7.2	2.5	7.5	5.2	3.7	8.6	8.7	6.6	8.1	5.9
Cycle Q Clear(g_c), s	2.7	7.9	7.2	2.5	7.5	5.2	3.7	8.6	8.7	6.6	8.1	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	261	1012	409	267	1018	412	286	476	485	212	1092	442
V/C Ratio(X)	0.49	0.48	0.44	0.45	0.46	0.33	0.62	0.54	0.54	0.77	0.47	0.36
Avail Cap(c_a), veh/h	261	2154	871	412	2323	939	357	1046	1064	283	2307	933
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	20.5	20.2	30.2	20.2	19.4	30.3	21.6	21.7	29.1	19.3	18.6
Incr Delay (d2), s/veh	1.4	0.4	0.8	1.2	0.3	0.5	2.2	1.0	1.0	8.4	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.9	2.9	1.1	3.7	2.1	1.7	4.3	4.5	3.5	4.0	2.4
LnGrp Delay(d),s/veh	31.8	20.8	21.0	31.3	20.5	19.9	32.5	22.6	22.6	37.5	19.7	19.1
LnGrp LOS	C	C	C	C	C	B	C	C	C	D	B	B
Approach Vol, veh/h		797			721			699			831	
Approach Delay, s/veh		22.6			22.2			25.1			23.0	
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
Phs Duration (G+Y+Rc), s	13.0	22.6	9.8	23.8	10.2	25.3	9.7	23.9
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green Setting (Gmax), s	11.4	40.3	7.3	40.4	7.2	44.5	4.0	43.7
Max Q Clear Time (g_c+I1), s	8.6	10.7	4.5	9.9	5.7	10.1	4.7	9.5
Green Ext Time (p_c), s	0.1	5.0	0.1	5.9	0.1	5.1	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	351	136	83	326	94	127	328	32	112	353	110
Future Volume (veh/h)	94	351	136	83	326	94	127	328	32	112	353	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), 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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1716	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	136	509	197	120	472	136	184	475	46	162	512	159
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	1
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1031	417	265	1040	421	292	872	84	211	1079	436
Arrive On Green	0.08	0.29	0.29	0.08	0.29	0.29	0.09	0.27	0.26	0.13	0.30	0.30
Sat Flow, veh/h	3170	3539	1431	3170	3539	1431	3170	3256	314	1634	3539	1432
Grp Volume(v), veh/h	136	509	197	120	472	136	184	257	264	162	512	159
Grp Sat Flow(s),veh/h/ln	1585	1770	1431	1585	1770	1431	1585	1770	1800	1634	1770	1432
Q Serve(g_s), s	2.9	8.4	7.9	2.5	7.6	5.2	3.9	8.7	8.8	6.7	8.2	6.1
Cycle Q Clear(g_c), s	2.9	8.4	7.9	2.5	7.6	5.2	3.9	8.7	8.8	6.7	8.2	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	258	1031	417	265	1040	421	292	474	482	211	1079	436
V/C Ratio(X)	0.53	0.49	0.47	0.45	0.45	0.32	0.63	0.54	0.55	0.77	0.47	0.36
Avail Cap(c_a), veh/h	258	2139	865	407	2305	932	361	1032	1049	272	2250	910
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	20.6	20.4	30.6	20.2	19.3	30.7	22.0	22.1	29.5	19.8	19.1
Incr Delay (d2), s/veh	2.0	0.4	0.8	1.2	0.3	0.4	2.4	1.0	1.0	9.4	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.1	3.2	1.1	3.8	2.1	1.8	4.3	4.5	3.6	4.0	2.4
LnGrp Delay(d),s/veh	33.0	20.9	21.3	31.8	20.5	19.8	33.1	23.0	23.1	39.0	20.1	19.6
LnGrp LOS	C	C	C	C	C	B	C	C	C	D	C	B
Approach Vol, veh/h		842			728			705			833	
Approach Delay, s/veh		23.0			22.2			25.7			23.7	
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
Phs Duration (G+Y+Rc), s	13.1	22.8	9.9	24.4	10.5	25.4	9.7	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 Setting (Gmax), s	11.1	40.3	7.3	40.7	7.4	44.0	4.0	44.0
Max Q Clear Time (g_c+I1), s	8.7	10.8	4.5	10.4	5.9	10.2	4.9	9.6
Green Ext Time (p_c), s	0.1	5.1	0.1	6.1	0.1	5.1	0.0	6.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	720	184	124	710	141	177	673	46	163	744	157
Future Volume (veh/h)	129	720	184	124	710	141	177	673	46	163	744	157
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), 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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1716	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	187	1043	267	180	1029	204	257	975	67	236	1078	228
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	1
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	1176	476	251	1176	476	317	1031	71	261	1299	526
Arrive On Green	0.08	0.33	0.33	0.08	0.33	0.33	0.10	0.31	0.30	0.16	0.37	0.37
Sat Flow, veh/h	3170	3539	1432	3170	3539	1432	3170	3356	231	1634	3539	1433
Grp Volume(v), veh/h	187	1043	267	180	1029	204	257	514	528	236	1078	228
Grp Sat Flow(s),veh/h/ln	1585	1770	1432	1585	1770	1432	1585	1770	1817	1634	1770	1433
Q Serve(g_s), s	7.6	36.7	20.1	7.3	36.0	9.2	10.4	37.3	37.3	18.7	36.5	12.0
Cycle Q Clear(g_c), s	7.6	36.7	20.1	7.3	36.0	9.2	10.4	37.3	37.3	18.7	36.5	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	251	1176	476	251	1176	476	317	544	558	261	1299	526
V/C Ratio(X)	0.75	0.89	0.56	0.72	0.88	0.43	0.81	0.95	0.95	0.90	0.83	0.43
Avail Cap(c_a), veh/h	251	1254	508	251	1292	523	340	552	566	261	1299	526
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	41.6	36.0	59.1	41.3	13.6	58.0	44.5	44.5	54.3	37.9	18.3
Incr Delay (d2), s/veh	11.5	7.7	1.2	9.5	6.6	0.6	13.0	25.2	24.8	31.9	4.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	19.2	8.1	3.5	18.6	5.0	5.1	21.9	22.6	10.8	18.7	5.3
LnGrp Delay(d),s/veh	70.7	49.2	37.3	68.6	47.9	14.2	71.0	69.7	69.3	86.2	42.6	18.9
LnGrp LOS	E	D	D	E	D	B	E	E	E	F	D	B
Approach Vol, veh/h		1497			1413			1299			1542	
Approach Delay, s/veh		49.8			45.7			69.8			45.7	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	44.4	14.4	47.7	17.2	52.3	14.4	47.7
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green Setting (Gmax), s	20.4	40.4	8.7	44.9	13.5	47.3	7.3	46.3
Max Q Clear Time (g_c+I1), s	20.7	39.3	9.3	38.7	12.4	38.5	9.6	38.0
Green Ext Time (p_c), s	0.0	0.5	0.0	3.3	0.1	6.2	0.0	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	52.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	734	195	124	715	141	181	673	46	163	744	159
Future Volume (veh/h)	135	734	195	124	715	141	181	673	46	163	744	159
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), 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
Adj Sat Flow, veh/h/ln	1716	1863	1716	1716	1863	1716	1716	1863	1750	1716	1863	1716
Adj Flow Rate, veh/h	196	1064	283	180	1036	204	262	975	67	236	1078	230
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	1
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	1192	483	236	1203	487	322	1033	71	261	1294	524
Arrive On Green	0.07	0.34	0.34	0.07	0.34	0.34	0.10	0.31	0.30	0.16	0.37	0.37
Sat Flow, veh/h	3170	3539	1433	3170	3539	1433	3170	3356	231	1634	3539	1433
Grp Volume(v), veh/h	196	1064	283	180	1036	204	262	514	528	236	1078	230
Grp Sat Flow(s),veh/h/ln	1585	1770	1433	1585	1770	1433	1585	1770	1817	1634	1770	1433
Q Serve(g_s), s	8.1	37.5	15.4	7.3	36.0	9.1	10.7	37.3	37.3	18.7	36.6	16.0
Cycle Q Clear(g_c), s	8.1	37.5	15.4	7.3	36.0	9.1	10.7	37.3	37.3	18.7	36.6	16.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	226	1192	483	236	1203	487	322	545	559	261	1294	524
V/C Ratio(X)	0.87	0.89	0.59	0.76	0.86	0.42	0.81	0.94	0.94	0.91	0.83	0.44
Avail Cap(c_a), veh/h	226	1268	513	236	1279	518	347	551	566	261	1294	524
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	41.4	18.5	59.8	40.6	13.2	57.9	44.5	44.5	54.4	38.1	31.6
Incr Delay (d2), s/veh	27.9	8.0	1.6	13.7	5.9	0.6	13.0	25.0	24.6	32.2	4.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	19.7	7.0	3.7	18.5	5.0	5.2	22.1	22.6	10.8	18.7	6.4
LnGrp Delay(d),s/veh	88.4	49.4	20.1	73.5	46.5	13.7	71.0	69.5	69.1	86.6	42.9	32.1
LnGrp LOS	F	D	C	E	D	B	E	E	E	F	D	C
Approach Vol, veh/h		1543			1420			1304			1544	
Approach Delay, s/veh		49.0			45.2			69.6			48.0	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	44.5	13.8	48.4	17.4	52.2	13.4	48.8
Change Period (Y+Rc), s	4.6	4.6	5.7	5.7	4.6	4.6	5.7	5.7
Max Green Setting (Gmax), s	20.4	40.4	8.1	45.5	13.8	47.0	7.7	45.9
Max Q Clear Time (g_c+I1), s	20.7	39.3	9.3	39.5	12.7	38.6	10.1	38.0
Green Ext Time (p_c), s	0.0	0.5	0.0	3.1	0.1	4.4	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.4
HCM 2010 LOS	D

Vehicle Turn Movement Data

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

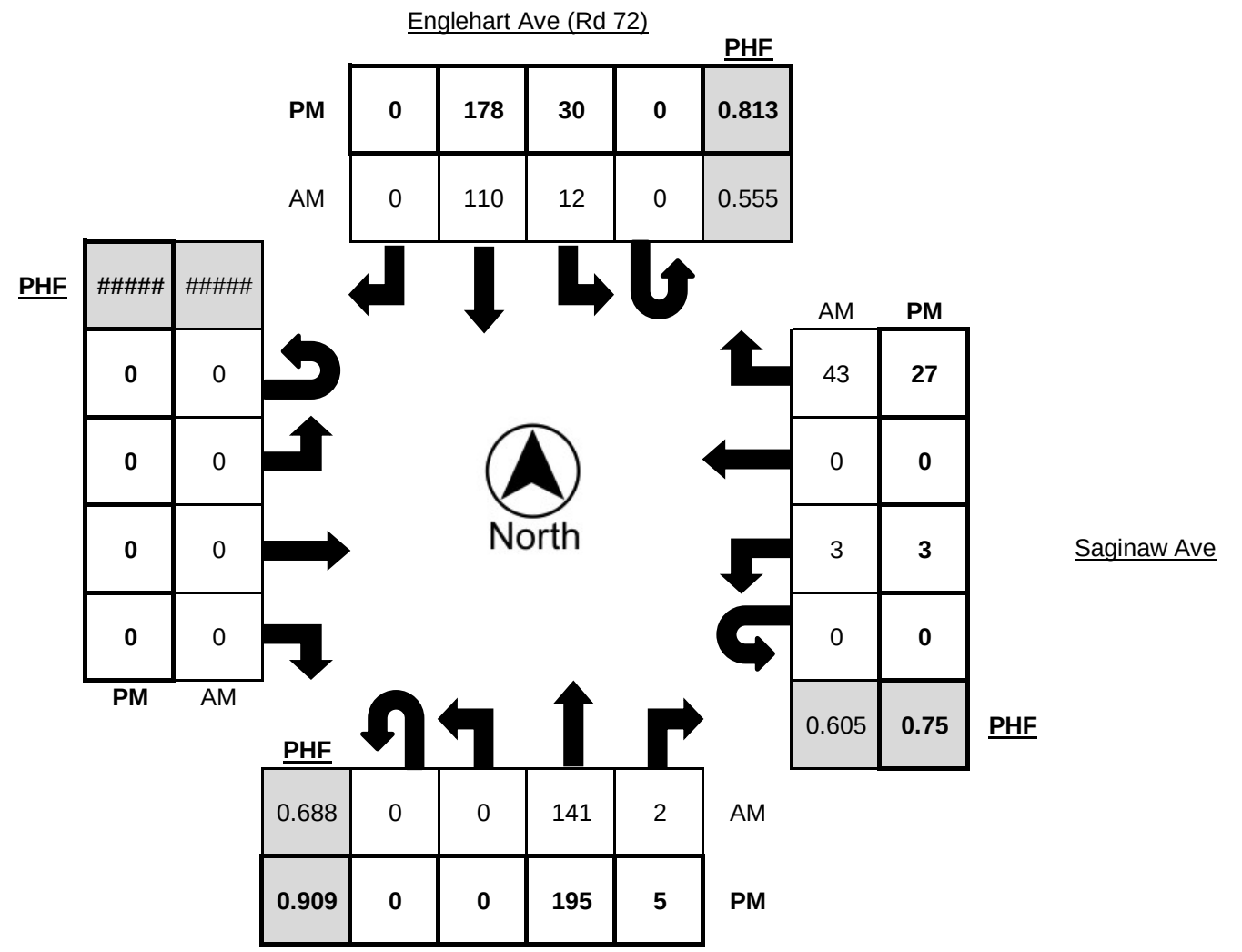
LOCATION Englehart Ave (Rd 72) @ Saginaw Ave
LATITUDE 36.5533
COUNTY Tulare
LONGITUDE -119.4128
COLLECTION DATE Tuesday, March 15, 2022
WEATHER Clear

	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	6	0	0	0	2	12	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM - 6:30 AM	0	0	15	0	0	0	0	17	0	1	0	0	0	0	0	0	1	0	1	0
6:30 AM - 6:45 AM	0	0	10	0	0	0	4	21	0	0	0	0	0	0	0	0	2	0	5	0
6:45 AM - 7:00 AM	0	0	19	0	1	0	0	17	0	0	0	0	0	0	0	0	0	0	3	0
7:00 AM - 7:15 AM	0	0	13	0	0	0	1	12	0	0	0	0	0	0	0	0	2	0	3	0
7:15 AM - 7:30 AM	0	0	27	1	2	0	1	20	0	0	0	0	0	0	0	0	0	0	5	1
7:30 AM - 7:45 AM	0	0	49	1	0	0	3	30	0	1	0	0	0	0	0	0	1	0	16	0
7:45 AM - 8:00 AM	0	0	52	0	1	0	7	48	0	0	0	0	0	0	0	0	0	0	19	0
TOTAL	**0**	**0**	**191**	**2**	**4**	**0**	**18**	**177**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**52**	**1**

	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	47	2	0	0	7	57	0	1	0	0	0	0	0	0	1	0	9	0
4:15 PM - 4:30 PM	0	0	54	1	1	0	4	37	0	1	0	0	0	0	0	0	1	0	6	0
4:30 PM - 4:45 PM	0	0	48	0	1	0	11	46	0	0	0	0	0	0	0	0	0	0	7	0
4:45 PM - 5:00 PM	0	0	46	2	0	0	8	38	0	0	0	0	0	0	0	0	1	0	5	0
5:00 PM - 5:15 PM	0	0	51	0	0	0	7	43	0	0	0	0	0	0	0	0	3	0	1	0
5:15 PM - 5:30 PM	0	0	53	1	0	0	8	47	0	0	0	0	0	0	0	0	0	0	7	0
5:30 PM - 5:45 PM	0	0	41	1	1	0	6	33	0	0	0	0	0	0	0	0	0	0	7	0
5:45 PM - 6:00 PM	0	0	36	2	1	0	8	35	0	0	0	0	0	0	0	0	2	0	5	0
TOTAL	**0**	**0**	**376**	**9**	**4**	**0**	**59**	**336**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**47**	**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	0	141	2	3	0	12	110	0	1	0	0	0	0	0	0	3	0	43	1
4:00 PM - 5:00 PM	0	0	195	5	2	0	30	178	0	2	0	0	0	0	0	0	3	0	27	0

	PHF	Trucks
AM	0.617	1.6%
PM	0.890	0.9%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
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Turning Movement Report

Prepared For:

Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

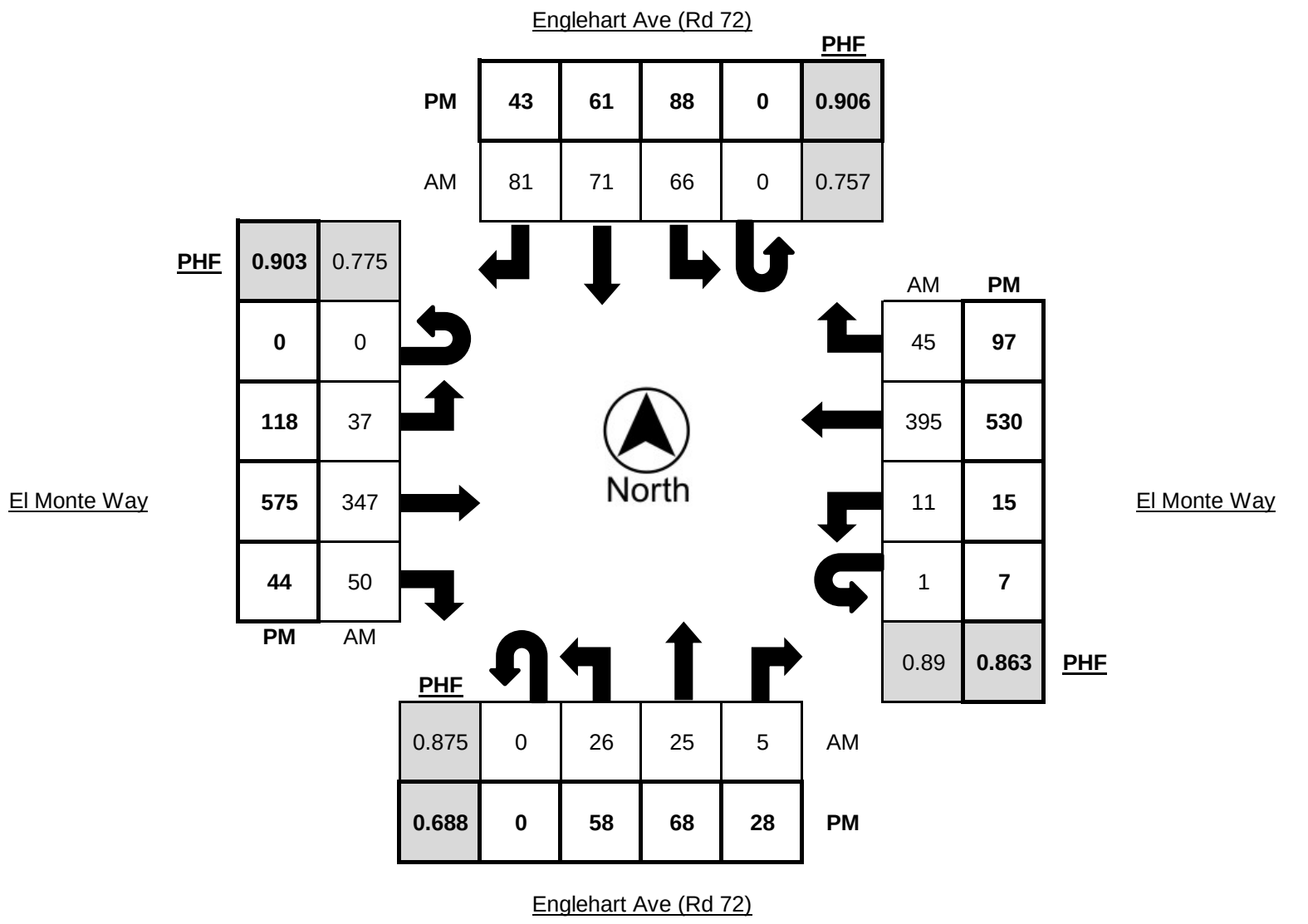
LOCATION Englehart Ave (Rd 72) @ El Monte Way
LATITUDE 36.5461
COUNTY Tulare
LONGITUDE -119.4128
COLLECTION DATE Tuesday, March 15, 2022
WEATHER Clear

	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	1	5	1	0	0	2	8	18	0	0	0	25	5	4	0	0	104	2	3
6:15 AM - 6:30 AM	0	3	2	2	3	0	6	5	28	2	0	8	42	6	3	0	0	92	6	1
6:30 AM - 6:45 AM	0	6	2	0	0	0	9	14	19	0	0	6	49	5	1	1	3	132	3	5
6:45 AM - 7:00 AM	0	4	3	1	2	0	12	17	15	0	0	13	45	18	6	2	1	95	8	6
7:00 AM - 7:15 AM	0	4	6	2	1	0	9	10	20	0	0	7	74	9	8	0	2	83	9	6
7:15 AM - 7:30 AM	0	7	6	1	0	0	13	13	21	2	0	12	63	8	2	1	1	105	13	4
7:30 AM - 7:45 AM	0	7	5	2	1	0	21	24	15	0	0	6	97	18	7	0	0	100	11	4
7:45 AM - 8:00 AM	0	8	8	0	0	0	23	24	25	2	0	12	113	15	6	0	8	107	12	3
TOTAL	**0**	**40**	**37**	**9**	**7**	**0**	**95**	**115**	**161**	**6**	**0**	**64**	**508**	**84**	**37**	**4**	**15**	**818**	**64**	**32**

	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	12	17	6	2	0	23	16	6	1	0	18	171	11	4	0	3	121	30	5
4:15 PM - 4:30 PM	0	13	10	3	1	0	24	15	11	1	0	31	162	11	6	3	4	129	22	4
4:30 PM - 4:45 PM	0	12	11	5	1	0	24	12	11	0	0	32	151	10	5	0	1	125	28	6
4:45 PM - 5:00 PM	0	14	22	8	3	0	19	22	12	0	0	30	130	12	4	2	6	116	25	3
5:00 PM - 5:15 PM	0	19	25	12	2	0	21	12	9	1	0	25	132	11	8	2	4	160	22	7
5:15 PM - 5:30 PM	0	15	28	3	0	0	30	10	12	0	0	29	127	11	4	1	7	123	28	4
5:30 PM - 5:45 PM	0	14	17	4	1	0	15	13	11	0	0	21	134	12	7	3	5	89	21	2
5:45 PM - 6:00 PM	0	4	14	6	0	0	10	15	7	1	0	29	135	12	3	1	7	129	19	6
TOTAL	**0**	**103**	**144**	**47**	**10**	**0**	**166**	**115**	**79**	**4**	**0**	**215**	**1142**	**90**	**41**	**12**	**37**	**992**	**195**	**37**

	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	26	25	5	2	0	66	71	81	4	0	37	347	50	23	1	11	395	45	17
4:15 PM - 5:15 PM	0	58	68	28	7	0	88	61	43	2	0	118	575	44	23	7	15	530	97	20

	PHF	Trucks
AM	0.817	4.0%
PM	0.954	3.0%



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Hanford, CA 93230

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Turning Movement Report

Prepared For:

Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

LOCATION Monte Vista Dr / Alice Ave @ El Monte Way

LATITUDE 36.5460

COUNTY Tulare

LONGITUDE -119.4041

COLLECTION DATE Tuesday, March 15, 2022

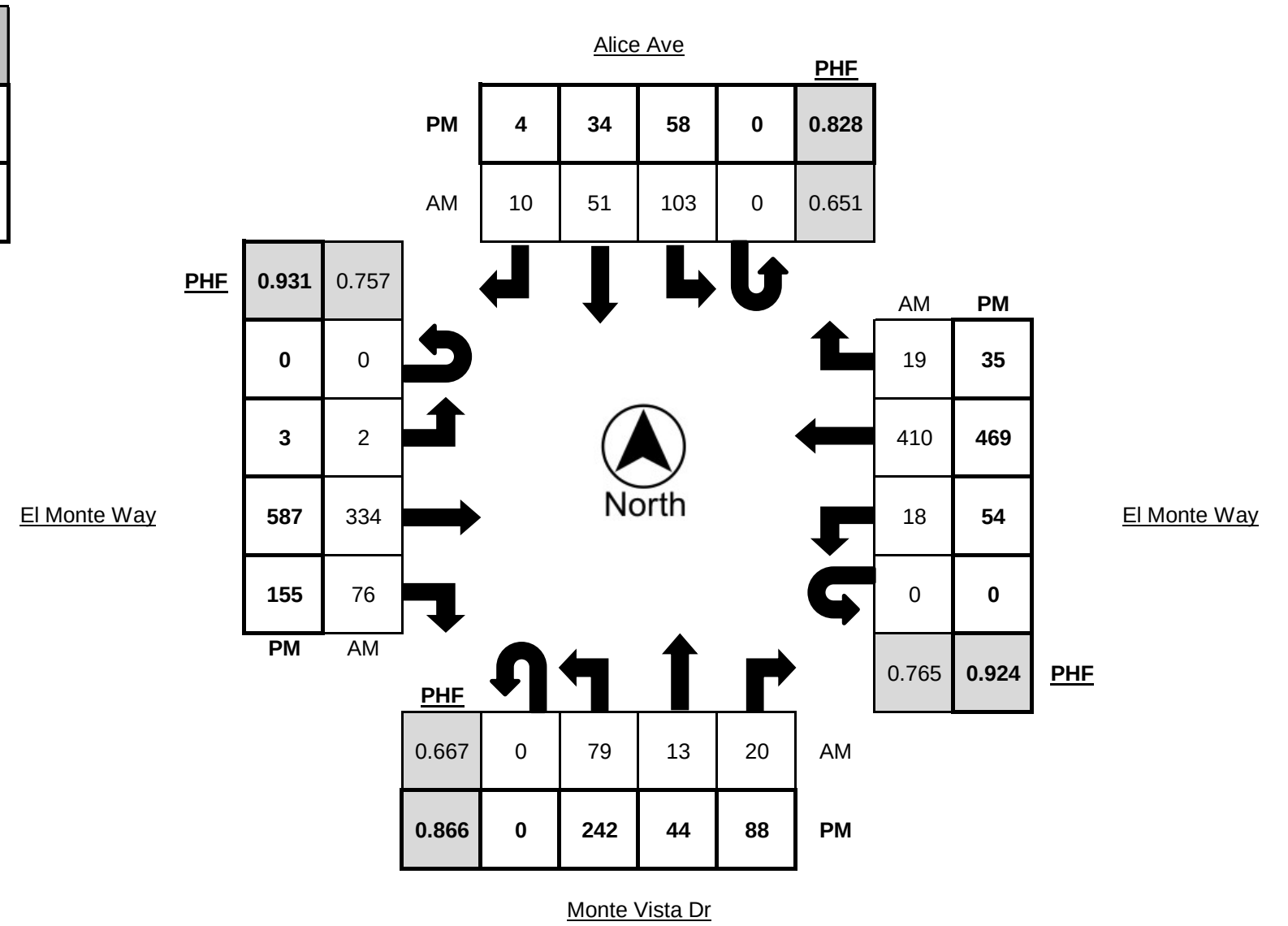
WEATHER Clear

	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	16	0	3	3	0	3	5	0	0	0	0	18	13	4	0	1	82	1	3
6:15 AM - 6:30 AM	0	5	0	1	0	0	6	2	1	0	0	0	38	9	2	0	0	98	1	1
6:30 AM - 6:45 AM	0	9	0	4	5	0	4	5	3	0	0	0	46	15	2	0	0	121	1	2
6:45 AM - 7:00 AM	0	4	1	1	2	0	12	5	0	0	0	0	47	17	2	0	7	94	1	3
7:00 AM - 7:15 AM	0	17	2	3	5	0	8	8	1	1	0	1	60	19	6	0	1	81	4	2
7:15 AM - 7:30 AM	0	17	3	1	1	0	14	6	5	0	0	0	66	16	2	0	1	112	3	3
7:30 AM - 7:45 AM	0	20	0	7	4	0	43	19	1	0	0	0	97	17	3	0	3	93	3	3
7:45 AM - 8:00 AM	0	25	8	9	0	0	38	18	3	3	0	1	111	24	5	0	13	124	9	5
TOTAL	**0**	**113**	**14**	**29**	**20**	**0**	**128**	**68**	**14**	**4**	**0**	**2**	**483**	**130**	**26**	**0**	**26**	**805**	**23**	**22**

	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	64	12	19	2	0	11	7	2	1	0	1	174	45	6	0	16	117	4	3
4:15 PM - 4:30 PM	0	55	8	23	1	0	8	7	1	0	0	4	142	35	3	0	13	116	5	5
4:30 PM - 4:45 PM	0	66	10	22	4	0	14	4	0	0	0	0	152	48	6	0	10	105	9	5
4:45 PM - 5:00 PM	0	57	9	19	1	0	15	7	1	0	0	1	132	37	8	0	17	116	11	3
5:00 PM - 5:15 PM	0	70	12	26	3	0	15	9	2	2	0	2	154	28	7	0	15	130	6	5
5:15 PM - 5:30 PM	0	49	13	21	3	0	14	14	1	0	0	0	149	42	3	0	12	118	9	2
5:30 PM - 5:45 PM	0	66	7	17	2	0	12	6	0	0	0	0	137	45	4	0	11	84	8	0
5:45 PM - 6:00 PM	0	48	10	15	2	0	9	6	0	0	0	1	116	36	4	0	13	112	11	4
TOTAL	**0**	**475**	**81**	**162**	**18**	**0**	**98**	**60**	**7**	**3**	**0**	**9**	**1156**	**316**	**41**	**0**	**107**	**898**	**63**	**27**

	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	79	13	20	10	0	103	51	10	4	0	2	334	76	16	0	18	410	19	13
4:30 PM - 5:30 PM	0	242	44	88	11	0	58	34	4	2	0	3	587	155	24	0	54	469	35	15

	PHF	Trucks
AM	0.741	3.8%
PM	0.945	2.9%



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Turning Movement Report

Prepared For:

Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

LOCATION Alta Ave @ El Monte Way

LATITUDE 36.5459

COUNTY Tulare

LONGITUDE -119.3951

COLLECTION DATE Tuesday, March 15, 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	1	15	24	2	5	0	5	38	10	4	0	2	25	5	2	0	15	59	6	1
6:15 AM - 6:30 AM	2	12	42	7	3	0	11	40	15	4	0	4	28	13	1	0	19	74	12	0
6:30 AM - 6:45 AM	1	21	42	4	1	0	9	68	16	0	0	5	37	15	2	0	26	89	8	0
6:45 AM - 7:00 AM	2	24	55	6	9	0	9	64	14	4	0	5	38	14	1	0	23	68	17	4
7:00 AM - 7:15 AM	0	16	58	6	4	0	11	58	19	4	0	20	56	13	2	0	17	58	12	3
7:15 AM - 7:30 AM	0	23	71	8	5	0	14	61	23	7	0	19	57	23	1	0	20	78	9	0
7:30 AM - 7:45 AM	2	26	101	10	5	0	35	103	25	7	0	21	109	35	5	0	23	80	25	3
7:45 AM - 8:00 AM	1	55	98	8	7	0	52	131	41	1	0	28	115	54	3	0	23	105	48	2
TOTAL	**9**	**192**	**491**	**51**	**39**	**0**	**146**	**563**	**163**	**31**	**0**	**104**	**465**	**172**	**17**	**0**	**166**	**611**	**137**	**13**

	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	41	92	19	2	1	29	94	45	8	0	55	179	51	5	0	23	112	27	2
4:15 PM - 4:30 PM	1	65	88	15	5	1	29	80	46	6	0	28	137	34	1	0	18	105	31	4
4:30 PM - 4:45 PM	0	43	81	14	8	0	27	92	39	2	0	61	168	39	3	0	10	90	31	2
4:45 PM - 5:00 PM	1	44	93	9	2	1	33	76	34	1	0	53	157	37	4	0	17	127	38	1
5:00 PM - 5:15 PM	0	59	85	10	7	0	30	71	41	1	0	47	148	42	5	0	20	111	29	4
5:15 PM - 5:30 PM	2	47	98	13	6	0	32	86	30	4	0	49	140	37	3	0	21	91	36	1
5:30 PM - 5:45 PM	1	50	101	14	2	1	28	107	40	1	0	41	148	38	2	0	21	96	28	1
5:45 PM - 6:00 PM	1	45	73	13	3	0	29	57	39	3	0	43	158	27	3	0	16	112	29	3
TOTAL	**7**	**394**	**711**	**107**	**35**	**4**	**237**	**663**	**314**	**26**	**0**	**377**	**1235**	**305**	**26**	**0**	**146**	**844**	**249**	**18**

	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	3	120	328	32	21	0	112	353	108	19	0	88	337	125	11	0	83	321	94	8
4:00 PM - 5:00 PM	3	193	354	57	17	3	118	342	164	17	0	197	641	161	13	0	68	434	127	9

	PHF	Trucks
AM	0.693	2.8%
PM	0.930	2.0%