

County of Madera
California Environmental Quality Act (CEQA)
Initial Study

- 1. Project title:** CUP #2022-003 – SWS Land Development
- 2. Lead agency name and address:** County of Madera
Community and Economic Development Department
200 West 4th Street, Suite 3100
Madera, California 93637
- 3. Contact person and phone number:** Samuel J. Rashe, Senior Planner
559-675-7821

Samuel.Rashe@maderacounty.com
- 4. Project Location & APN:** The subject property is located on the eastside of Road 36 at the intersection of Hwy 145 and 36, Madera.

APN #: 051-481-024
- 5. Project sponsor's name and address:** SWS Land Development
Rajdeep Sandhu Singh
32685 Avenue 7
Madera, CA 93637
- 6. General Plan Designation:** CC (Community Commercial)
- 7. Zoning:** PDD (Planned Development) District
- 8. Description of project:**

The applicant is requesting a Conditional Use Permit on APN: 051-481-024, located on the east side of Road 36 and the south side of Hwy of 145 at the intersection of Hwy 145 and Road 36, to allow for the construction of a convenience store/restaurant, a Gas Island Canopy, and an Island Diesel Canopy. The convenience store/restaurant will be located on the northwest side of the parcel and will be angled, running from southwest to northwest. The facility will be approximately 4,634 square feet. 3,150 square feet of the facility will be dedicated as a food store, which will be located on the southwest side of the facility, 924 square feet of the building will potentially be utilized as a fast food restaurant located on the northwest side of the facility and the remaining 560 square feet will be covered porch located on the southeast side of the entire facility. There will be outdoor seating for dining located to the northeast of the fast food restaurant. East of the outdoor seating area is three Recreational Vehicle (RV) parking areas that will be approximately 12.5'x40', with a sign located to the east of the RV parking and an additional sign located on the northwest side of the project site. On the northeast side of the property, there are fire tanks positioned linearly going south, which will be fenced in. Each fire tank will consist of 15,000 gallons of water with 1,000 gallons per minute with a 20 PSI. To the immediate south of the fire tanks is a proposed ponding basin, which will also be located within the fenced-in area. To the west of the ponding basin are five above-ground fuel tanks approximately five feet apart, consisting of three 12,000 fuel tanks, one 4,000 and one 8,000 fuel tank, which will be shielded with bollards. To the west is another above-ground storage tank consisting of a 500-gallon tank consisting of natural gas a.

Primary access to the project site will be off Road 36, and the secondary access will be off State Road 145. The project will provide 35 parking stalls: 22 parking stalls for the building, eight parking stalls for the gas canopy, two parking stalls for the diesel canopy, and 3 for RV parking. Operations will be seven days a week 24 hours a day. and expect an average of 350 customers daily with no more than 460 customers.

Existing Conditions:

The project site (APN: 051-481-009; 010) is located on the east side of Road 36 at its intersection with Hwy 145. The property has been routinely disked for weed abatement on a routine basis. The property currently has no structures and has a mound in the middle of the property site with a slight grade downward as you head away from the center.

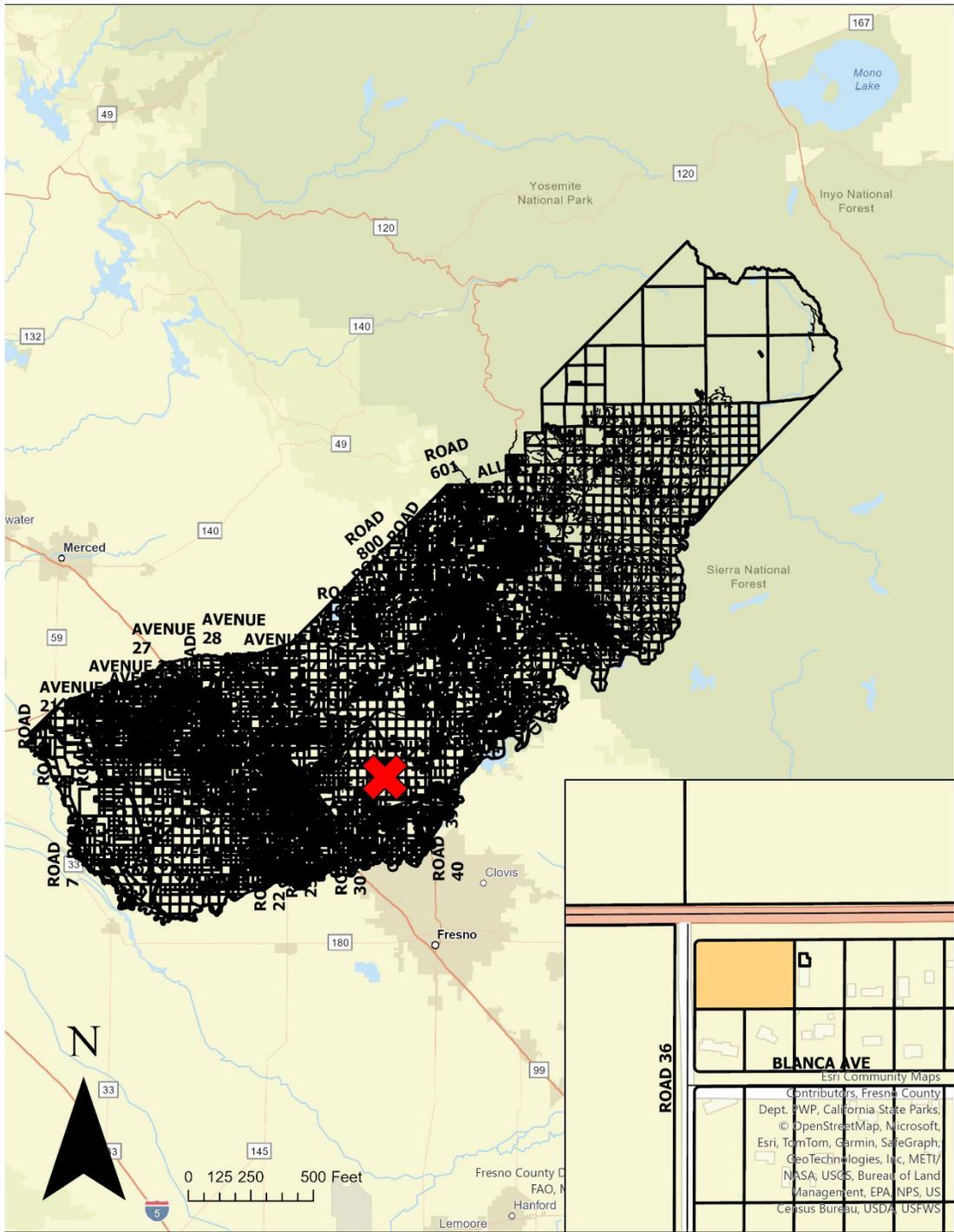


Figure 1 Area Map

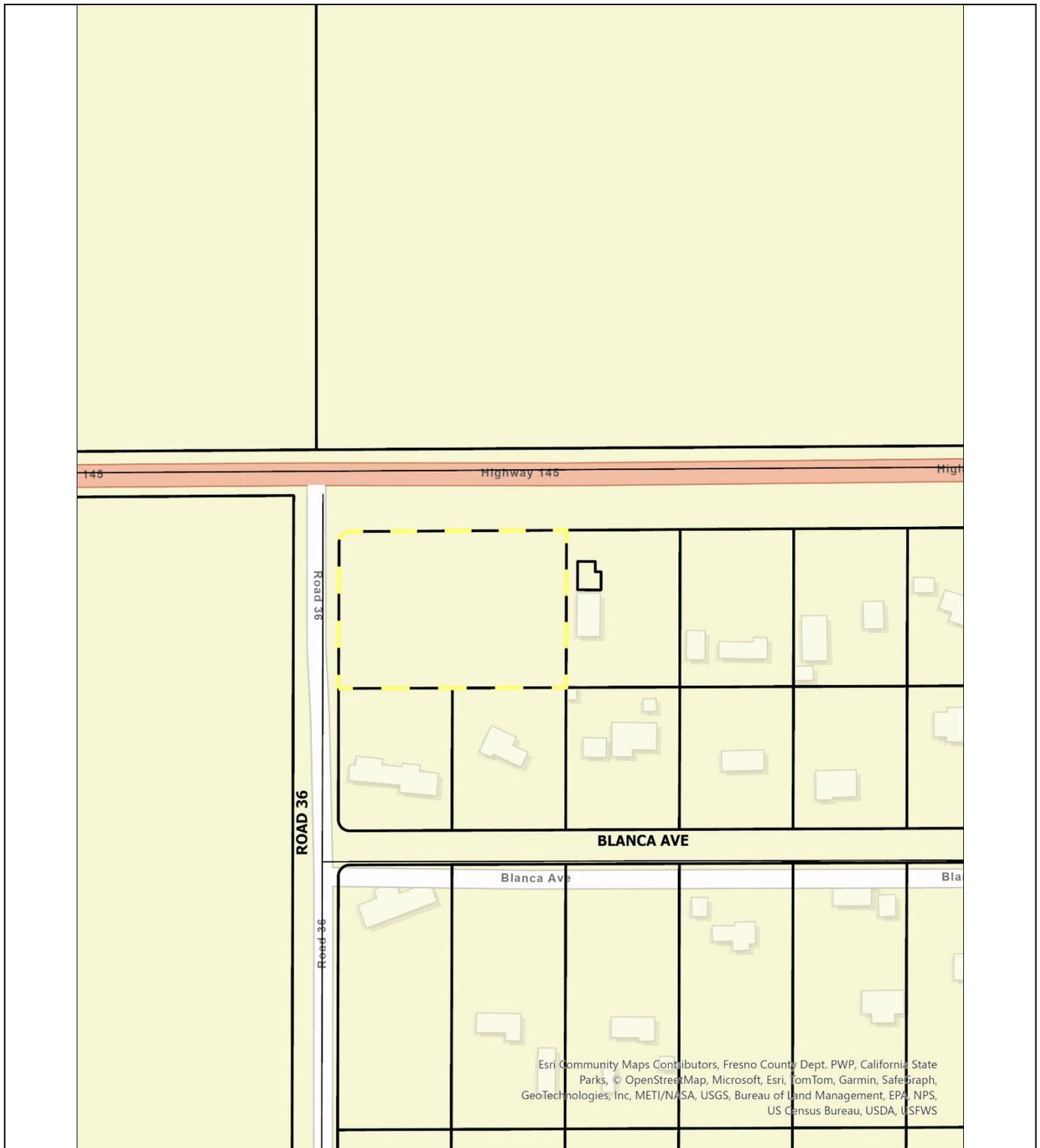


Figure 2 Project Boundary

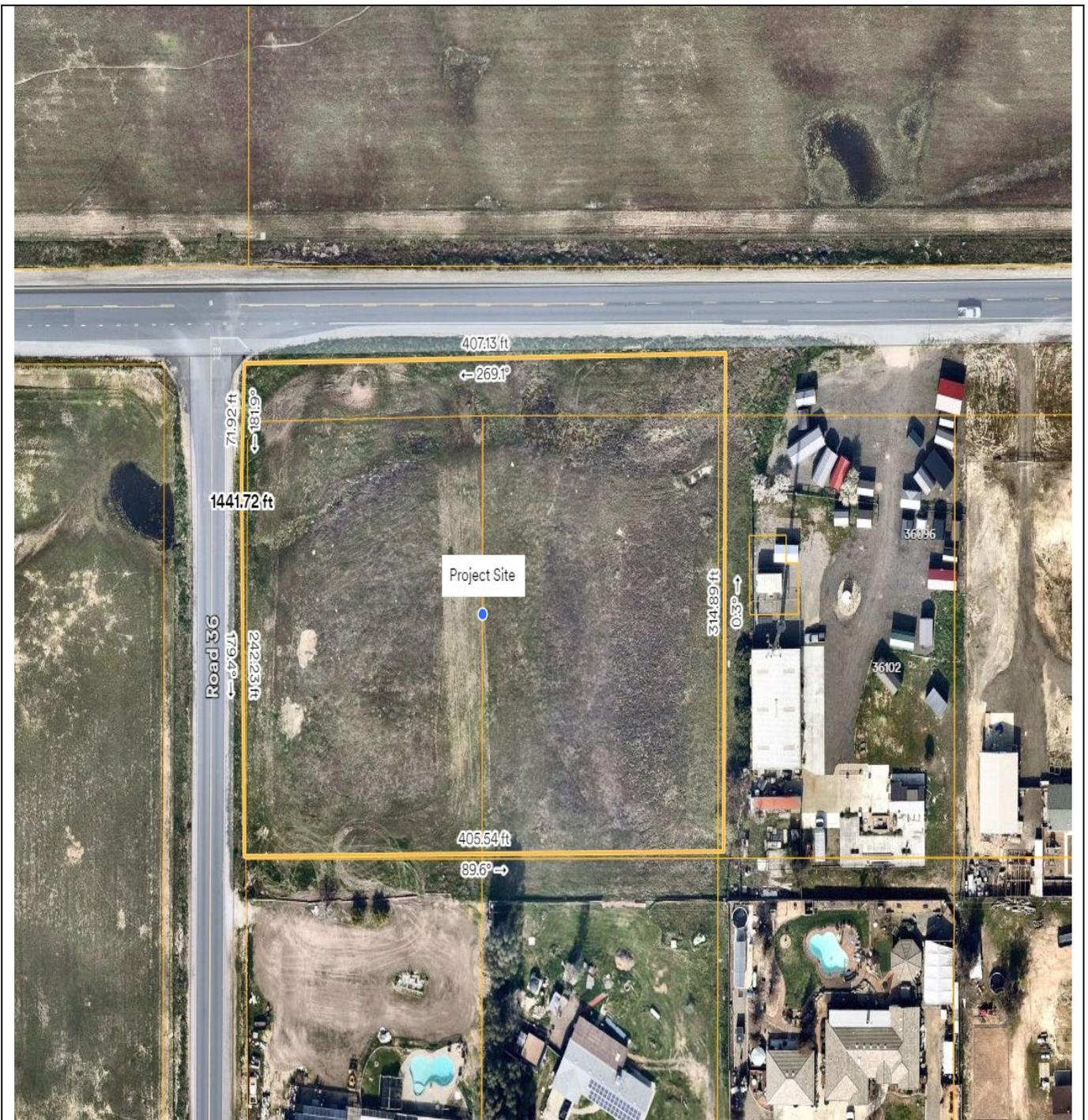


Figure 3 Project Site

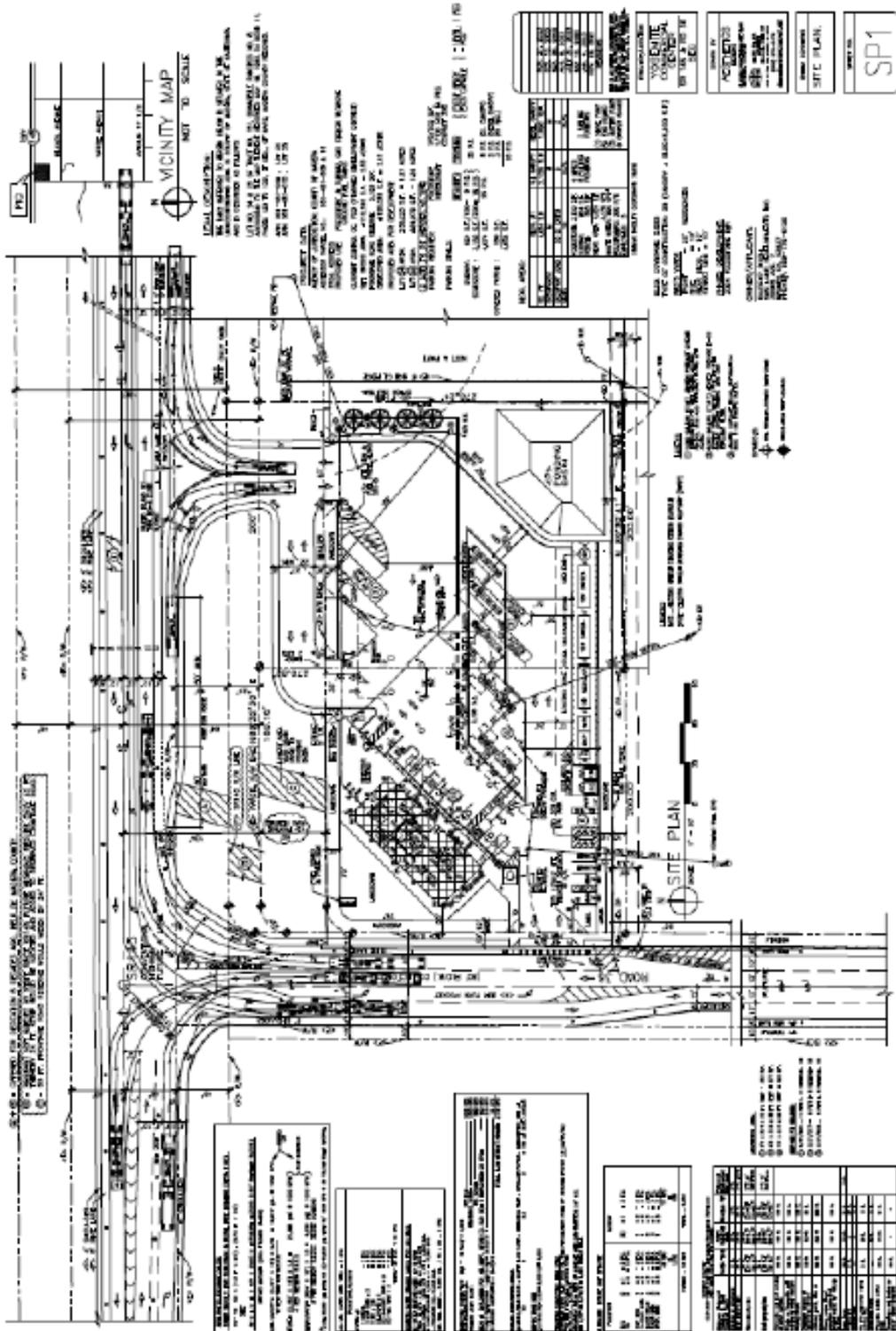


Figure 4 Site Plan

9. Surrounding Land Uses and Setting:

The surrounding area is zoned PDD (Planned Development District), RRM (Residential, Rural, Multiple Family District), and Agricultural, Rural Exclusive (ARE-40).

10. Other Public Agencies Whose Approval is Required:

None.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

In accordance with Public Resources Code Section 21080.3.1, notification letters were sent to tribal representatives of California Native American tribes that have requested to be notified of projects within the Project area of Madera County. Tribal representatives were advised of the Project and invited to request formal consultation with the County regarding the Project within 30 days of receiving the notification letters. Eight notification letters were sent to representatives of the following tribes on February 8th, 2022:

- Table Mountain Rancheria
- Picayune Rancheria of the Chukchansi Indians
- Dumna Wo Wah Tribal Government
- Chowchilla Yokuts Tribe

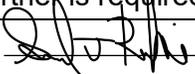
As of the preparation of this Initial Study, more than 30 days following the County's transmittal of notification letters. One letter was received from the Table Mountain Rancheria Cultural Resources Department was received requesting if a record search was conducted. Section XVIII of this Initial Study provides additional discussion of tribal cultural resources and outreach.

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.

- | | | |
|--|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural/Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION (to be completed by Lead Agency)	
On the basis of this initial evaluation:	
<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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 or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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.

Signed:  Date: 5/9/2024

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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I. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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 other regulations governing scenic quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Responses:

(a) No Impact. The project site is not within the viewshed of any areas designated as or having the characteristics of scenic vistas, therefore, the project would not have the potential to adversely affect a scenic vista.

(b) No Impact. According to the California State Scenic Highway System Map there is one eligible highway (SR 49) in the County. The eligible highway enters from Mariposa County and goes no further south than Oakhurst which is over twenty miles away from the project site (CalTrans, 2023). The project site is devoid of trees, rock outcroppings and does not have and structures on the property. As a result, the project would not have an impact.

(c) Less Than Significant Impact. The project is zoned PDD and is surrounded by residential and agricultural uses. The project site is vacant. The project consists of one building approximately 4,0634 sq-ft and will be utilized as a convenience/gas station and fast-food/restaurant, two gas canopies that will be a total of 4,287 sq-ft, and parking for RV's and tractor-trailers. The project site has housing directly to the south and east of the project, with agricultural land to the north and west of the project. The project has a zoning of Planned Development District and as a result does not conflict with the applicable zoning regulations and therefore the project would have a less than significant impact.

(d) Less than Significant Impact with Mitigation. The project is in an area where there is residential housing to the south and east. The property located to the north and west of the project site is otherwise vacant. There is potential for additional lighting resulting from the project; however, the additional lighting would be minimal. With the implementation of AES MM-1 it would have a less than significant impact.

AES MM-1 Lighting will be required to be hooded and directed down and away from neighboring parcels to maintain the visual character and mitigate any light disbursement during the evening.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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II. AGRICULTURAL AND FORESTRY RESOURCES

In determining whether agricultural impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Responses:

(a) No Impact. The property involved in this project is designated as Grazing Land (refer to figure 3) in the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program. Grazing Land is the existing vegetation suited to the grazing of livestock as well as the

areas located to the north and west of the site. Properties to the east and south of the project have been designated as Urban Built-Up Land which is occupied structures with a building density of at least one unit to one and a half acres or approximately six structures to a ten-acre parcel. Examples of Urban and Built-Up Land would be residential, industrial, and commercial. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use.

(b) No Impact. The project site is not located in an ag preserve and is not subject to the Williamson Act. The subject property is zoned PDD (Planned Development District) and a land use designation of CC (Community Commercial). With a land use designation of Community Commercial and the parcel not being subject to the Williamson Act the project will not have an impact.

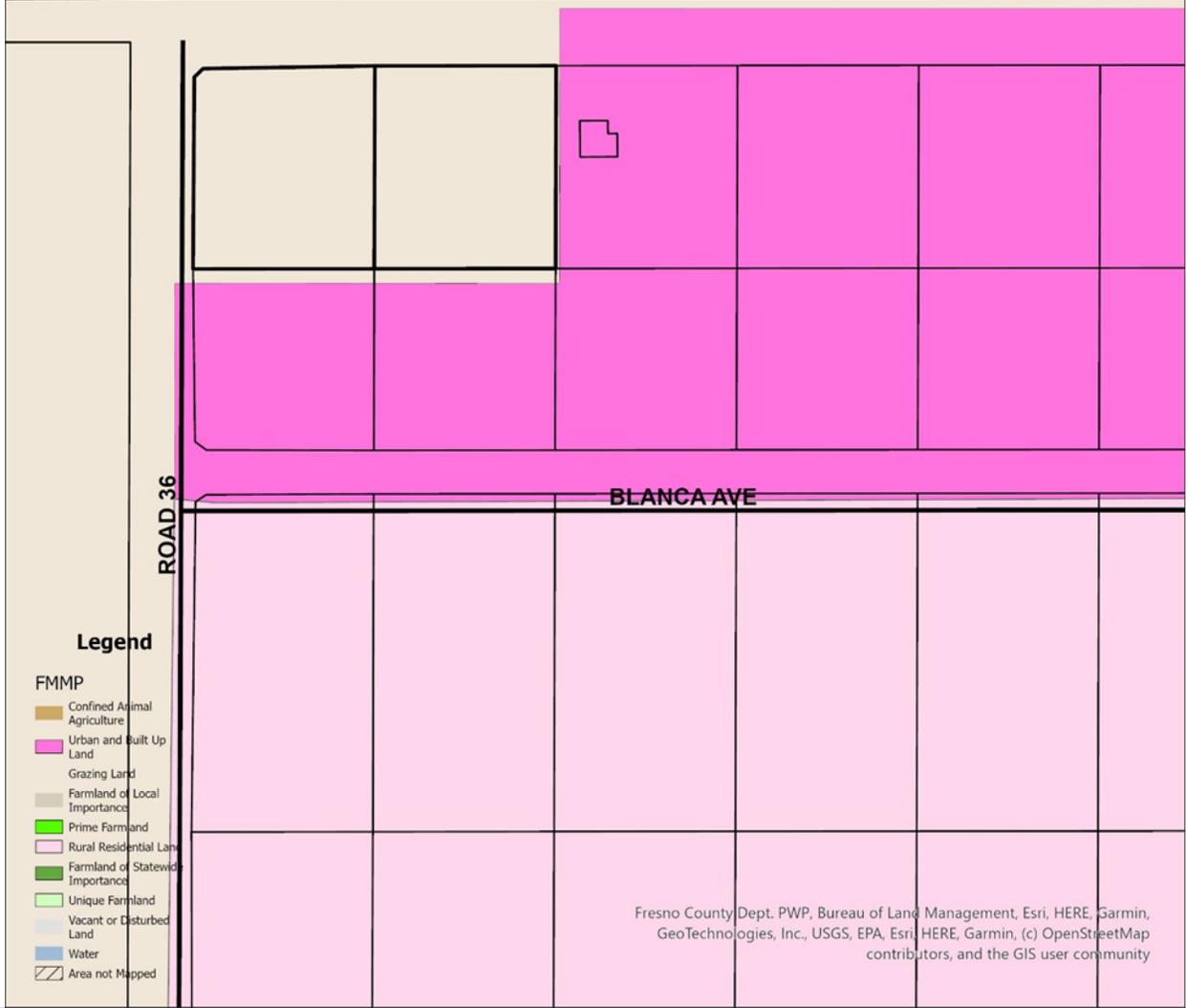
(c - d) No Impact. There is no forest land, or zoned for forest land, in the vicinity of the project site and therefore there is no impact.

(e) No Impact. The project site is not currently used for agricultural purposes or designated as farmland; therefore, the project would therefore not result in the conversion of an agricultural use to a non-agricultural use.

Farmland Mapping and Monitoring Program



0 0.01 0.02 0.05 Miles



Legend

FMMP

- Confined Animal Agriculture
- Urban and Built Up Land
- Grazing Land
- Farmland of Local Importance
- Prime Farmland
- Rural Residential Land
- Farmland of Statewide Importance
- Unique Farmland
- Vacant or Disturbed Land
- Water
- Area not Mapped

Fresno County Dept. PWP, Bureau of Land Management, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



Figure 5 Farmland Mapping and Monitoring Program

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Conflict with, or obstruct implementation of, the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Responses:

(a-b) Less Than Significant Impact San Joaquin Valley Air Pollution Control District (SJVAPCD) developed an Air Quality Plan in 2013 to bring the San Joaquin Valley into attainment. The 2013 Air Quality Plan Revoked 1-Hour Ozone Standard (Ozone Plan), adopted on September 19, 2013. The SJVAPCD also adopted the 2016 Plan for the 2008 8-Hour Ozone Standard in June 2016 to satisfy the Federal Clean Air ACT (FCAA) requirements and ensure attainment of the 75 parts per billion (ppb) 8-hour ozone standard.

To ensure the SJVAB's continued attainment of the EPA PM₁₀ standard, the SJVAPCD adopted the 2007 PM₁₀ Maintenance Plan in September 2007. SJVAPCD Regulation VIII (Fugitive PM₁₀ Prohibitions) is designed to reduce PM₁₀ emissions generated by human activity. The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards in November 2018 to address the EPA 1997 annual PM_{2.5} standard of 15 go/m³ and 24-hour PM_{2.5} standard of 65 µg/m³, the 2006 24-hour PM_{2.5} standard of 35 µg/m³, and the 2012 annual PM_{2.5} standard of 12 µg/m³.

CEQA requires that certain projects be analyzed for consistency with the applicable air quality plan. For a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality. As a result, Stantec prepared an emissions estimate using the CalEEMod in preparation of submitting an Air Impact Assessment application to the SJVAPCD to ensure consistency. In addition, emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD air quality plans.

Short-term construction and long-term operation emissions were evaluated.

Temporary construction activities consist of site preparation, grading, and paving activities. The activity identified to have an effect on air quality is the grading phase of construction activities. If the grading phase of the project is not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, 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.

As shown in Table 1, "Estimate Project Construction Emissions," construction emissions associated with the project would not exceed the SJVAPCD's thresholds for ROG, NOX, CO, SOX, PM10, and PM2.5 annual emissions. In addition to the construction-period thresholds of significance, the SJVAPCD has implemented Regulation VIII measures for dust control during construction.

Table 1. Estimated Project Construction Emissions (Tons per Year)

Year	Pollutant	Construction	Operation	Total	Below 2 tons per year?	Exempt from offsite fees
2023	NOx	0.7979	0.9615	1.7594	Yes	Yes
	PM10	0.0343	0.6365	0.6708	Yes	Yes
2024	NOx	0.5006	0.9615	1.4621	Yes	Yes
	PM10	0.0198	0.6365	0.6563	Yes	Yes
2025	NOx	0.2658	1.4695	1.7353		
	PM10	0.01	1.0249	1.0349		

(Stantec Consulting Services Inc. , 2022)

Although not required to mitigate a less than significant impact, to minimize from grading and temporary construction activities and consistent with the SJVAPCD VIII (Fugitive PM₁₀ Prohibitions), the following controls will be required at the construction site:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When materials are transported off site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes are expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is

expressly forbidden.)

- Following the addition of materials to, or the removal of materials from, the surface of out-door storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/ suppressant.

The SJAPCD threshold for PM10 is 15 tons per year and for NOx it is 10 tons per year and presented in the table, operational emissions associated with the project would be below the thresholds of significance and are considered less than significant and would therefore not conflict with any applicable air quality plan or have a significant impact associated with criteria air pollutants.

(c) Less Than Significant Impact Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units. There are residential dwellings located to the immediate south and east of the project site; however, construction, pollutant emissions would be below the SJVAPCD significance thresholds. As a result, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction and operation.

(d) Less Than Significant Impact

The SJVAPCD addresses odor criteria; rather than an established a rule or standard regarding odor emissions, the SJVAPCD has a nuisance rule: “Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact.”

During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The project would not include any activities or operations that would generate objectionable odors and, once operational, the project would not be a source of odors. Therefore, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. This impact would be less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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IV. BIOLOGICAL RESOURCES

Would the project:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 a native wildlife nursery site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Responses:

(a) Less Than Significant Impact. The subject property is approximately 1.53 acres and currently has no structures on the property. The California Natural Diversity Database (CNDDB) was reviewed to determine which special status species could be present within the area of the project site. The project is located in the Daulton quadrant according to the California Department of Fish and Wildlife with twelve species identified as endangered, threatened, Species of Special Concern (SSC) or Watch List (WL) (refer to table 1) (California Department of Fish and Wildlife , 2022).

Table 1 Species List (California Department of Fish and Wildlife , 2022)

Common Name	Federal Status	State Status	CDFW Status
California tiger salamander	Threatened	Threatened	WL
western spadefoot	None	None	SSC
Swainson's hawk	None	Threatened	-
northern harrier	None	None	SSC
tricolored blackbird	None	Threatened	SSC
burrowing owl	None	None	SSC
vernal pool fairy shrimp	Threatened	None	-
American badger	None	None	SSC
western pond turtle	None	None	SSC
succulent owl's-clover	Threatened	Endangered	-
San Joaquin Valley Orcutt grass	Threatened	Endangered	-
hairy Orcutt grass	Endangered	Endangered	-

As previously stated, the project is currently vacant has been disturbed with various weed abatement activities. The properties to the north and the west of the site are primarily used for growing livestock feed which consist of pasture grasses, hay and silage crops. The properties to the east and south of the project have been developed, and as a result the project would have a less than significant impact.

(b & c) Less Than Significant Impact With Mitigation. Wetlands are areas where water covers the soil at or near the surface. Water can be present all year or can be present during certain times of the year. Wetlands are capable of supporting both aquatic and terrestrial species (United States Environmental Protection Agency , 2023). The National Wetland Inventory (NWI) Map was reviewed, to determine if there are any wetlands or drainage features within the project area. Two wetlands were identified. The first wetland is located on the north corner of the project site and runs from northeast to southwest. The second wetland runs east to west and is located in the southeast portion of the project. Both wetlands have a designation of Freshwater Emergent Wetland with a classification code of PEM1A which stands for the following:

1. Palustrine (P): The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergent, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.
2. Emergent (EM): Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.
3. Persistent (1): Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in the Estuarine and Palustrine systems.

4. Temporary Flooded (A): Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for most of the season.

Currently State Road 145 and Road 36 cuts through several wetlands to include the wetland located on the northeast corner of the project area (refer to figure 5). The project area also has been disturbed for weed abatement purposes. The construction and operation of the proposed project would have an impact however the impact to the overall wetland would be less than significant. The wetland located in the southeast portion of the project site is where the proposed ponding basin is located and is contained in the project area. The purpose of a ponding basin is to hold stormwater during the rainy season and the location of the ponding basin would not interrupt surface water or groundwater flow and with the implementation of HYDRO MM-1 and HYDRO MM-2 it would prevent erosion. The applicant prior to any grading will be required to have a certified biologist do an on-site evaluation and determine if any delineations or buffers are required.

BIO – 1 A biological specialist shall be on site prior to any grading or construction activities to determine if buffers/delineations are needed. The biologist's findings shall be submitted in writing to the Planning Division before any permits being approved.

(d) No Impact. The project area is not located in or around a body of water where migratory fish would be located. The project site is also in a developed area with agricultural activities. The project would not have an impact.

(e & f) No Impact. A Habitat Conservation Plan or Natural Community Conservation Plan has not been adopted in the County of Madera, and therefore the project would have no impact.



Figure 5 Wetlands

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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V. CULTURAL RESOURCES

Would the project:

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Responses:

(a - b) Less Than Significant Impact. On February 9, 2022, the Table Mountain Rancheria Cultural Resources Department expressed interest in the project. A record search (Sacred Lands File) was requested from the Native American Heritage Commission (NAHC) and on March 24, 2022, the results of the Sacred Lands File which indicated the results were negative. A copy of the results was forwarded to the email indicated on the letter from Table Mountain Rancheria Cultural Resources Department with a follow-up on their request. However, Table Mountain has no longer expressed interest in the project.

(c) Less Than Significant with Mitigations. The project is to allow the construction of two buildings and a Gas Island Canopy. Although it is unlikely that human remains will be distributed the implementation of CUL-1 will ensure the project will have a less than significant impact.

CUL-1 In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area suspected to overlie adjacent remains until the Madera County Coroner has determined that the remains are not subject to any provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the Madera County Coroner determines that the remains are not subject to his or her authority and if the County Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone, the Native American Heritage Commission (NAHC). After notification, the NAHC will follow the procedures outlined in Public Resources Code Section 5097.98, that include notification of most likely descendants (MLDs), and recommendations for treatment of the remains. The MLDs will have 48 hours after notification by the NAHC to make their recommendations (PRC Section 5097.98)

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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VI. ENERGY

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Responses:

(a - b) Less Than Significant Impact.

During the project's construction phase, vehicles and equipment will be utilized and fuel consumption will be minimal. During the operational portion of the project, only activities typical of maintaining the grounds will occur, which will also be minimal in fuel consumption.

The activities associated with project will not conflict with any local or state plan for renewable energy or efficiency. There may be an increase in energy usage during nighttime play when the portable lighting powered through generators are being; however, the impacts would be minimal, and therefore the project would have a less than significant impact.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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VII. GEOLOGY AND SOILS

Would the project:

a) Directly or indirectly cause 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 Zone 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geological 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Responses:

(a i - iv) Less than Significant Impact. According to the California Earthquake Hazards Zone Application (EQ Zapp) located on the Department of Conservation, the project is not within an Earthquake Fault Zone (Department of Conservation, 2022).

The Earthquake Shaking Potential for California Map located on the Department of Conservations website displays the Level of hazards regarding ground shaking for each county. According to the map, the project site is located in a region were only weaker, masonry buildings would be

damaged. However, very infrequent earthquakes could still cause strong shaking. The project does not consist of constructing masonry buildings and therefore the project would have a less than significant impact (Department of Conservation , 2016).

(b) Less Than Significant Impact with Mitigation. The parcel is subject to potential erosion due to rain events; however, with the implementation of HYDRO MM-1, construction project proponents will be required to submit a Notice of Intent and Storm Water Pollution Prevention Plan (SWPPP) to the Regional Water Quality Board to obtain a National Pollutant Discharge Elimination System (NPDES) General Construction Permit. The SWPPP will include Best Management Practices (BMPs) to control erosion and siltation on the site in order to prevent water quality degradation. Such measures may include, but are not limited to, covering the graded area with straw or straw matting and using water for dust control. Due to the flat nature of the project site, and given that the site has been previously developed, future development within the project site would result in a less than significant soil erosion impact.

(c) Less Than Significant Impact. The project site is not located in an earthquake fault zone and is in an area with a low probability of seismic activity. Lateral spreading, subsidence, and collapse are uncommon in Madera County. Since the project site is not located on a geologic unit or soil that is unstable or would become unstable due to project activities, there is little to no potential for result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Impacts from these criteria are considered less than significant.

(d-e) Less Than Significant Impact. According to Table 18-1B of the Uniform Code (1994) soils meeting all four of the following provisions shall be considered expansive, except that tests to show compliance with Items 1, 2 and 3 shall not be required if the test prescribed in Item 4 is conducted (California Building Code , 2022) :

1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D4318.
2. More than 10 percent of the soil particles pass a No. 200 sieve (75 µm), determined in accordance with ASTM D422.
3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D422.
4. Expansion index greater than 20, determined in accordance with ASTM D4829.

According to the U.S. Department of Agriculture, Natural Resources Conservation Services Web Soil Survey, identified soil on the project site that primarily consists of Whitney-Trigo fine sand loams, 3 to 8 percent slopes which has a plasticity of 4.2 as a result the project will have a less than significant impact.

f) No impact. Refer to the discussion regarding Cultural Resources.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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VIII. GREENHOUSE GAS EMISSIONS

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Responses:

(a) Less than Significant Impact. Long-term GHG emissions are typically generated from mobile sources, area sources, indirect emissions from sources associated with energy consumption, waste sources, and water sources.

Mobile-source GHG emissions would include project-generated vehicle, van, and bus trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site.

Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the project.

Waste source emissions generated by the project include energy generated by land filling and other methods of disposal related to transporting and managing project generated waste. In addition, water source emissions associated with the project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Emissions estimates for operation of the project were calculated using CalEEMod. The table below shows the emissions sources by category; energy source emissions are the largest category, at approximately 36.9 percent of total CO₂e emissions, followed by waste source emissions at approximately 19 percent of the total, Area source emissions are less than 1 percent of the total emissions.

Source Emissions

Emissions Category	Operational Emissions (Metric Tons per Year)				
	CO ₂	CH ₄	N ₂ O	CO ₂ e	Total
Area Source	<0.1	0.0	0.0	<0.1	<0.1
Energy Source	36.7	<0.1	<0.1	36.9	36.9
Mobile Source	0.00	0.00	0.00	0.00	0.00
Waste Source	7.67	0.45	0.0	19.00	27.12
Water Source	0.87	0.03	<0.1	1.89	5.58
Total Operational					69.6

Note = Some values may not appear to add up correctly due to rounding

CH₄ = methane

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent

N₂O = nitrous oxide

As shown in the above table, the project would generate approximately 69.6 metric tons of CO₂e per year of emissions. The SJVAPCD has not established a numeric threshold for GHG emissions. As discussed above, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds or consistency with a regional GHG reduction plan (such as a Climate Action Plan). Neither Madera County nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. However, based on the minimal emissions that would be generated by the project, as shown in the above table, the project would not result in the generation of substantial GHG emissions. As a result, would not have a less than significant impact either directly or indirectly.

(b) Less than Significant Impact

The SJVAPCD has adopted a CCAP, which includes suggested BPS for proposed development projects. However, the SVJAPCD's CCAP was adopted in 2009 and was prepared based on the State's 2020 GHG targets, which are now superseded by State policies (i.e., the 2019 California Green Building Code) and the 2030 GHG targets, established in SB 32. The project would only consist of a practice soccer field and a ten-stall parking lot. The project will not host any visitors, spectators, tournaments, or league-play outside of practice staff and incidental visitors. Many of the SJVAPCD's BPS measures are intended for commercial, residential, and mixed-use projects and would not be applicable to the project. As such, absent any other local or regional Climate Action Plan, the project was analyzed for consistency with the goals of AB 32 and the AB 32 Scoping Plan. The following discussion evaluates the project according to the goals of AB 32, the AB 32 Scoping Plan, Executive Order B-30-15, SB 32, and AB 197.

AB 32 is aimed at reducing GHG emissions to 1990 levels by 2020. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The AB 32 Scoping Plan has a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

Executive Order B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. The CARB released a second update to the Scoping Plan, the 2017

Scoping Plan, 13 to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Executive Order B-30-15. SB 32 builds on AB 32 and keeps the State on the path toward achieving its 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air pollutant emissions data that are collected by the CARB was posted in December 2016.

AB 32 Scoping Plan contains GHG reduction measures that work toward reducing GHG emissions, consistent with the targets set by AB 32, Executive Order B-30-15, and codified by SB 32 and AB 197. The measures applicable to the project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as discussed below.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The project would not include the construction of any new structures that would be subject to Title 24 standards. Therefore, the energy measures would not be applicable to the project.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. The project would be required to comply with the California Model Water Efficient Landscape Ordinance. The project would use all high-efficiency irrigation methods for water the fields. Therefore, the project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the project. However, vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all current vehicles. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the project would not conflict with the identified transportation and motor vehicle measures.

The project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32 and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs and would have a less than significant impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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 or excessive noise for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Responses:

(a – b) Less Than Significant Impact With Mitigation . The criteria and guidelines for identification of hazardous waste are as follows (California Department of Tax and Fee Administration , 2023):

1. Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.
2. Pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bio accumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

As previously stated, the project includes the construction of a Gas Island Canopy and an Island

Diesel Canopy which will require the transportation of hazardous materials in the form of petroleum. The project is located on the eastside of Road 36 at its intersection of Hwy 145. There are four major state Hwy's in the County of Madera; they are Hwy 99, 152, 145, and 41. The major transport routes are Hwy 99 and two railroads where thousands of hazardous materials are transported each year. Hwy 145, which links Hwy 41 and 99 has limitations because it crosses the city of Madera before intersecting Highway 99 and the potential for spills caused by accidents and affect a large number of people are great (Madera County, 1995). However, given that fifteen hazardous material transport specific incidents have occurred in the entire county dating back to 1974 to the present it is statistically it can be anticipated an incident will occur approximately every year. However according to Caltrans, the majority of incidents occur during loading and unloading and from the fluids of the vehicle transporting the hazardous materials and not the cargo itself. The overall impact Impacts from hazardous materials vary by location and severity of any given event and will likely only affect certain areas of the County during specific times. Based on the risk assessment, it is evident hazardous materials spills will continue to have potential economic impacts to certain areas of the County. However, many of the spills in the County are minor, localized events that are more of a nuisance than a disaster (Foster and Morrison, 2023). As stated, the release of hazardous materials occurs during loading and unloading and there is the potential for small leaks due to refueling of the construction equipment; however, standard construction Best Management Practices (BMPs) will reduce the potential for accidental release of construction-related fuels and other hazardous materials. These BMPs will prevent, minimize, or remedy storm water contamination from spills or leaks, control the amount of runoff from the site, and require proper disposal or recycling of hazardous materials. Therefore the project would have a less than significant impact with mitigations.

HAZ MM-1 The project proponent shall submit a Hazardous Materials Business Plan to the Madera County Department of Environmental Health and the California Environmental Reporting System before installing the UST and participate in the CUPA.

(c) No Impact. The closest school is Sierra View Elementary which is located at 16436 Paula Road and is approximately 1.5 miles southeast of the project .The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

(d) No Impact. The project is not listed on or near a hazardous materials site. The fore the project would have no impact.

(e) No Impact. The project area is not in a An Airport/Airspace Overlay (refer to figure 5) and therefore will have no impact.

(f) No Impact. The project is located on the east side of Road 36 at its intersection with Hwy 145. The project will ensure to comply with the emergency response plan therefore would not have an impact.

(g) Less Than Significant Impact. According to the Madera County General Plan, a Wildland is a nonurban, natural area that contains uncultivated land, timber, range, watershed, brush, or grasslands. Although there are areas of grassland, the project area is regulated through either weed abatement of grazing and therefore the project will not expose people or structures, directly or indirectly, to a significant risk of loss, injury, or death involving wildfires and therefore have a less than significant impact.

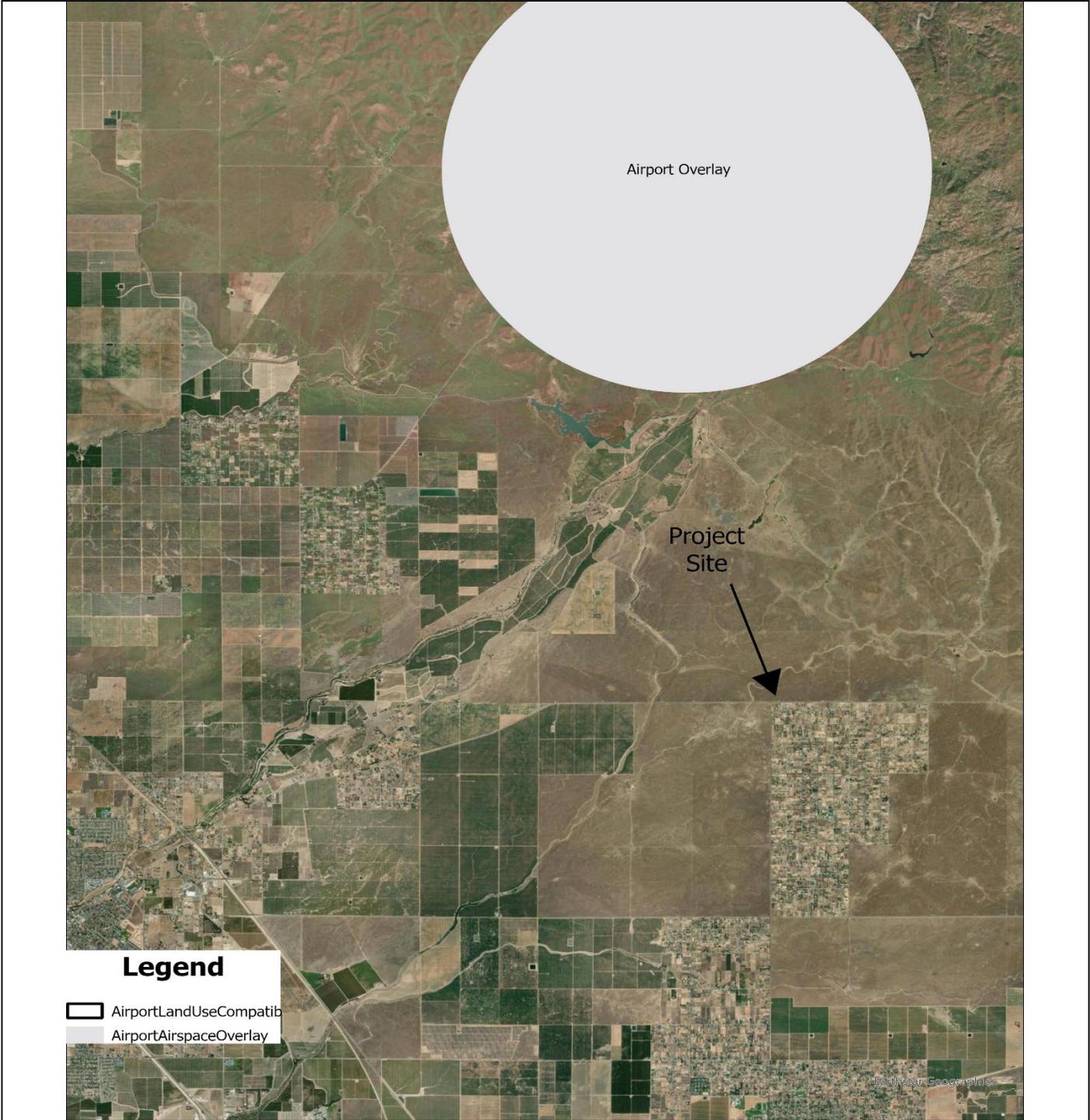




Figure 5 Airport Overlay

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 groundwater quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Responses:

(a) Less Than Significant Impact With Mitigation. The project will be required to meet the California Water Drinking Standards as required by the Madera County Code and as a result would not violate water quality standards. The project will provide its own private sewage disposal system with a leach field located in the north west corner of the property. An onsite wastewater treatment system will be installed and will be required to comply with Title 13 of the Madera County Code and the Madera County Local Agency Program.

Site preparation of the project would require the disturbance of the approximate two and half acre project site, which could result in erosion and siltation with the potential to violate water quality standards. Additionally, accidental spills or disposal of potentially harmful materials used during construction or operation of the project could possibly wash into and pollute surface water runoff. A Storm Water Pollution Prevention Plan for construction-related activities would include, but not be limited to, the following types of Best Management Practices (BMPs) to minimize the potential for pollution related to material spills:

- Vehicles and equipment will be cleaned;
- Vehicle and equipment fueling, and maintenance requirements will be established;
- And A spill containment and clean-up plan will be in place prior to and during construction activities.

In order to reduce potential impacts to water quality during construction activities, Mitigation Measure MM HYDRO-1 requires the project proponent to file a Notice of Intent (NOI) to comply with the NPDES General Construction Permit and prepare a SWPPP. The project SWPPP would include BMPs targeted at minimizing and controlling construction and post construction runoff and erosion to the “maximum extent practicable.” And therefore, the project would have a less than significant impact with mitigation.

HYDRO MM - 1 Prior to construction, the Applicant shall submit a copy of: (1) the approved Storm Water Pollution Prevention Plan (SWPPP) and (2) the Notice of Intent (NOI) to comply with the General National Pollutant Discharge Elimination System (NPDES) from the Central Valley Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts. The Applicant or person responsible shall meet County of Madera construction site requirements regarding the control of surface water, and runoff. Runoff created at the project site shall meet the following minimum requirements:

- Sediments generated on the project site shall be retained using adequate treatment
 - control or structural Best Management Practices (BMPs)
- Construction-related materials, wastes, spill or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters or adjacent properties by wind or run-off

(b) Less Than Significant Impact. In 2014 the State of California passed the Sustainable Groundwater Management Act (SGMA) allowing for local control of groundwater management with the mandate of sustainable management of the state’s groundwater basins. SGMA required that all local agencies establish a Groundwater Sustainability Agency and to develop a Groundwater Sustainability Plan, to better manage the groundwater conditions and achieve sustainable groundwater management. In January of 2017 the Madera County GSA was formed and manages approximately 177,800 acres

of the Madera Subbasin. The majority of the Madera Subbasin is comprised of agricultural land followed by native vegetation with the remaining being developed (Madera Subbasin, 2023). The project intends on drilling a water well on site with an estimated 2,300 gpd. The project will have to comply with the demand management program implemented through the Ground Sustainability Plan and may be required to one or more of the following and therefore the project would have a less than significant impact:

1. **Allocations.** Madera County would implement a groundwater allocation program that would directly relate to the overall demand reduction goals necessary to achieve anticipated reductions by 2040. Allocations could be tied to a crop-type or historic use or could be evenly distributed among existing irrigators or over all lands. Various approaches have differing effects on grower flexibility, County management and administration, and perceptions of equality.
2. **Water trading program (water market, cap and trade).** Madera County would establish a local groundwater credit system and allow trading of those credits among groundwater users. The program would establish a full accounting of available groundwater supply, allocation of that water supply to local stakeholders, and a record-keeping system that facilitates and records all trades. Additional conditions on location and timing of the use of traded credits may be needed, and in fact, are likely to be required in many areas.

(c i - iv) Less Than Significant Impact With Mitigation. Extensive grading or other soil disturbing activities often leave the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil can be carried as sediment and deposited in local creek beds and adjacent wetlands. All disturbed areas will be vulnerable to erosion during the winter rainy season. The possible deposition of silt in offsite drainages would constitute a potentially significant adverse effect of the project. With the implementation of HYDRO MM-1 and HYDRO MM-2 the project will have a less than significant impact.

HYDRO MM - 2 Prior to the onset of construction, a qualified engineer will prepare an erosion control plan consistent with the requirements of a Madera County grading permit and a General Construction Permit. The plan will include a requirement to implement the specified erosion control measures prior to the onset of the rainy season, and to monitor the site periodically throughout the rainy season to ensure that the erosion control measures are successfully preventing onsite erosion and the concomitant deposition of sediment in onsite and offsite drainages. The plan must address both the potential for soil erosion and non-point source pollution, and include the following elements:

1. Protection of exposed graded slopes from sheet, rill and gully erosion. Such protection could be in the form of erosion control fabric, hydro mulch containing the seed of native soil-binding plants, straw mechanically imbedded in exposed soils, or some combination of the three.
 2. Protection of natural drainage channels from sedimentation. Straw bale check dams or waddles should be installed below graded areas so that any sediment carried by surface runoff is intercepted and retained behind the check dams before it can enter a drainage channel.
- Use of best management practices (BMPs) to control soil erosion and non-point source pollution. BMPs may include measures in 1 and 2 above, but they may include any number of additional measures appropriate for this particular site and this particular project, including grease traps in parking lots, landscape management practices to reduce the use of pesticides and herbicides, the discharge of stormwater runoff from “hardscapes” into grassy swales or detention basins, regular site inspections for pollutants that could be carried by runoff into natural drainages.

(d) No Impact. The project is not located in a flood hazard, tsunami, or seiche zone, and would not have the potential to release pollutants from flooding with the implementation of HAZ MM-2.

(e) Less Than Significant Impact. With the implementation of the Groundwater Sustainability Plan the project would not increase groundwater use beyond the sustainable yield and would not have the potential to obstruct an implementation of a water quality control plan.

XI. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Responses:

(a - b) No Impact. The project is located at the corner of road 36 at its intersection with Hwy 145. There is no development to the north or the west of the project. The project is not requesting any changes in land use or zoning and therefore would have no impact.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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XII. MINERAL RESOURCES

Would the project:

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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Responses:

(a - b) No Impact. Mineral resources in Madera County include aggregate (sand, gravel, and crushed stone), asbestos, copper, gold, iron, and silver. There are no known minerals in the vicinity of the project area, which consists primarily of grazing land, and therefore the project would have no impact.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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XIII. NOISE

Would the project result in:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 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 ordinances, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Responses:

(a) Less Than Significant Impact.

- Short-Term (Construction) Impacts Development or construction of the Project would temporarily increase ambient noise levels in the vicinity due to construction equipment use. On-site construction noise impacts were evaluated by determining the noise levels generated by the different types of construction activity and calculating the construction related noise level at nearby sensitive receptor locations. The distance between construction site noise sources and surrounding sensitive receptors were measured using the Project site plan and Google Earth. Typical construction activities related to building construction generate noise levels of 74 to 84 dBA at 50 feet. The following formula, taken from the Technical Noise Supplement to the Traffic Noise Analysis Protocol by the California Department of Transportation (Caltrans), calculates the change in noise level due to distance for point sources. This formula was used to calculate Project related construction noise levels at sensitive land uses adjacent to the Project site.

$$dBA2 = dBA1 + 10\log_{10}[(D1/D2)]^2 = dBA1 + 20\log_{10}(D1/D2)$$

Where:

dBA1 = noise level at distance D1
dBA2 = noise level at distance D2

Based on building construction noise levels described above and the noise attenuation formula, the nearest residence(s) to the south and southeast of the Project site (100 feet or more from building construction activities) would be subject to short-term noise levels reaching 68 to 78 dBA Lmax from Project related construction activities. Although there would be a relatively high single-event noise exposure potential at a maximum of 78 dBA Lmax at 100 feet, causing possible short-term intermittent annoyances, the effect on ambient noise levels would be less than 1 dBA when

averaged over one hour or 24 hours. In other words, the changes in noise levels over 1 hour or 24 hours attributable to Project construction noise would not be perceptible to the normal human ear. Therefore, short-term

construction-related impacts associated with the Project would result in a less than significant impact on noise-sensitive receptors adjacent to the Project site. As a result, mitigation measures are not required. Noise associated with Project construction should be limited to permitted construction hours, as determined by Madera County.

- Long-Term (Operational) Impacts Caltrans' Traffic Census Programs shows that the existing peak hour traffic along SR 145 in the Project area is approximately 1,600 trips. SR 145 traverses through the San Joaquin Valley from Interstate 5 to SR 41 (north of Fresno). Traffic noise in the study area is primarily generated from traffic on SR 145 given its connectivity to numerous areas throughout Madera County. The noise section of the Austin Quarry Project Final EIR (3.10 Noise – Benchmark Resources) shows that the projected noise level along SR 145 near Road 36 in Future Year 2035 is approximately 68 dB Ldn. This is the anticipated noise level in the future at 100 feet from the SR 145 centerline. New trips generated by the Project would primarily use SR 145 as shown in the traffic study prepared for the Project. Per the traffic study prepared by Vang Inc. Consulting Engineers (VICE), the Project will generate approximately 3,162 'new' weekday trips, 305 'new' AM Peak hour trips, and 226 'new' PM Peak hour trips. Section 6.3.3 (Fundamentals of Traffic Noise) of the Technical Noise Supplement to the Traffic Noise Analysis Protocol by Caltrans indicates that it takes a doubling of traffic to increase noise levels by 3 dB. Project peak hour trips represent approximately 19% of existing peak hour trips along SR 145. As a result, the increase in noise levels along SR 145 would be less than 3 dB with the addition of Project traffic. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible by the human ear. Therefore, operation related noise impacts associated with the Project would result in a less than significant impact on noise-sensitive receptors adjacent to the Project site. Mitigation measures are not required.

- Project Related Stationary Point-Source Noise Stationary point-source noise impacts were evaluated by identifying the noise levels generated by idling trucks from fuel and product delivery. To conservatively estimate noise levels associated with the Project, it was assumed that trucks idled for no longer than five (5) minutes. Typical noise levels for idling Tractor Trailers at the noise source is 96 dBs. The noise attenuation formula shown above was used to calculate noise levels at sensitive land uses resulting from noise generated by idling Tractor-Trailers. Residences adjacent to the Project site (150 feet from diesel engines) would be subject to noise levels reaching 53 dBs from Project related diesel truck idling. Therefore, operation related noise impacts associated with diesel truck idling would result in a less than significant impact on noise-sensitive receptors adjacent to the Project site. As a result, mitigation measures are not required.

(b) Less Than Significant Impact. Ground-borne vibration impacts were evaluated by identifying potential vibration sources and measuring the distance between vibration sources and surrounding structure locations. It should be noted that Madera County has established a criterion of 0.1 in/sec for vibration impacts. The vibration threshold of 0.1 in/sec was used to estimate the impact of vibrations from construction activities associated with the Project. The predicted vibration velocity levels for the residences to the south of the Project are predicted to approach 0.011 in/sec using a Large Bulldozer vibration level (0.089 at 25ft). The level of vibration generated by the Project's construction phase is considered less than significant based on vibration velocity levels. As a result, mitigation measures are not required.

c) Less Than Significant Impact. The nearest airport is located more than seven (7) miles from the Project site. As a result, aircraft noise is not expected to result in significant impacts in the

Project Area. Therefore, mitigation measures are not required.

XIV. POPULATION AND HOUSING

Would the project:

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

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Responses:

(a - c) Less Than Significant Impact. As previously stated, the project consists of constructing a building for retail and restaurant operations, a Gas Island Canopy, and an Island Diesel Canopy. The project will bring in a total of twelve employees however the impact will be nominal, therefore the project will have no impact.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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XV. PUBLIC SERVICES

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:

i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Responses:

(a – i-ii) Less Than Significant Impact. The project would bring in approximately 400 customers a day which could increase the risk of emergency services being provided to the project site; however, the increase would be minimal and would not result in a need for new or physically altered governmental facilities. Therefore, the project would have a less than significant impact.

(a – iii through v) No Impact. The project would not result in new or physically altered governmental facilities to maintain acceptable service ratios, response times, or other performance objectives for any public services. And therefore, the project will have no impact.

XVI. RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Responses:

(a – b) No Impact. The project consists of a retail/gas station/restaurant. The project does not have a recreational component, the closes park is approximately eight miles to the west and therefore the project would have no impact.

Potentially Significant Impact Less Than Significant With Mitigation Incorporation Less Than Significant Impact No Impact

XVII. TRANSPORTATION

Would the project:

- 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?

Responses:

(a) Less Than Significant Impact. The State of California does not recognize traffic congestion and delay as an environmental impact per the California Environmental Quality Act (CEQA). However, Policy 2.A.8 of the Madera County General Plan Policy Document requires that LOS D or better be maintained on County roadways.

The Highway Capacity Manual (HCM) 6th Edition methodologies were implemented to determine the LOS for the intersections identified in table 1. The intersections all operate above an LOS of D and therefore the project would have a less than significant impact.

Table 1: Intersection Level of Service

Intersection	Time Period	Existing	Existing Plus Project	Cumulative	Cumulative Plus Project
1: Rd 36/ SR145	AM	B	C	B	C
	PM	B	C	B	C
2: Rd 36/Avenue 15	AM	B	B	B	B
	PM	A	B	C	C
3: Rd 36 Primary Driveway	AM	-	B	-	B
	PM	-	B	-	B
4: SR145 Alternative	AM	-	A	-	A
	PM	-	B	-	A

(b) Less Than Significant Impact. Senate Bill 743 (SB 743) was approved September 27, 2013, and statewide implementation was targeted for July 1, 2020. SB 743 requires land use projects under CEQA to analyze the project's impacts and mitigation measures based on Vehicle Miles Traveled (VMT). A quantitative analysis of VMT utilizing CALEEMOD version 2022 was implemented when evaluating the proposed project. Madera County has not adopted a VMT threshold. The proposed Project may be developed in response to existing demand for services by services by users of the local roadway network. Therefore, if this site was not developed, an alternative site would likely not eliminate related VMT. In consideration of this, the Project is not anticipated to result in a significant impact under CEQA pursuant to SB 743.

This section documents the Vehicle Miles Traveled (VMT) analysis which was completed for the purpose of determining Senate Bill 743 (SB 743) compliance for the Project. With the passage of SB 743, VMT has become an important indicator for determining if new development will result in a "significant transportation impact" as defined by the California Environmental Quality Act (CEQA). Based on the Project's land use information, the Project was categorized as a "Retail" land use and analyzed qualitatively. As Madera County has not adopted SB 743 guidance, the California Governor's Office of Planning and Research (OPR) Technical Advisory (December 2018) was used as the basis for this analysis.

The Project is assumed to be locally serving retail that caters to nearby residents and drivers already on SR-145. The assumption is that customers will frequent the Project because of its proximity (thus reducing the length of their current trip for services). Therefore, the Project is not expected to generate a substantial amount of new demand. With regards to the Project's employee trips, the Project is expected to reduce the average commuter trip lengths of residents, thus resulting in a net decrease to regional net VMT.

Other site-related trips (e.g., employee lunches offsite, supply deliveries, etc.) are expected to be relatively infrequent and usually short in distance. Therefore, their impact to the overall VMT of the site is likely to be minimal and less than the customer and employee trips. The Project is expected to primarily serve drivers already on the local roadway network (i.e., SR 145). Therefore, if this site was not developed, another property would probably be developed elsewhere to meet existing demand. Thus, it is reasonable to assume that the alternative to this development would likely not eliminate any related VMT.

In conclusion, the Project is not expected to have a significant impact under CEQA pursuant to SB 743. Consequently, VMT reducing measures are not necessary

(c) No Impact. The project will not result in a geometric design feature that will result in sharp curves or dangerous intersections.

(d) No Impact. The project will not result in inadequate emergency response and therefore have no impact.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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XVIII. TRIBAL CULTURAL RESOURCES

Would the project:

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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Responses:

Cultural resources can be defined as buildings, sites, structures, objects, or places of importance that may have historical, architectural, archaeological, cultural, or scientific importance (including those associated with Native Americans or Native American activities). Preservation of the County's unique cultural heritage should be considered when planning for future development of the area.

The western area of the County was originally inhabited by the Northern Valley Yokuts. Ethnographic information about this group is sparse due to the early dissemination of the aboriginal populations in the lower San Joaquin Valley.

The Northern Valley Yokuts territory is defined roughly by the crest of the Diablo Range on the west, and the foothills of the Sierra Nevada on the east. The southern boundary is approximately where the San Joaquin River bends northwards, and the northern boundary is roughly halfway between the Calaveras and Mokelumne Rivers.

Principle settlements were located on the tops of low mounds, on or near the banks of larger watercourses. Settlements were composed of single-family dwellings, sweathouses, and ceremonial assembly chambers. Dwellings were small and lightly constructed, semi-subterranean and oval. The public structures were large, and earth covered.

With the development of Spanish Ranchos throughout California, cattle husbandry was prevalent, while dairy farms remained crude and sparse.

As a result of AB 52, which requires jurisdictions to notify Tribal Governments that request such outreach, the County alerted Tribal Entities that requested initial review packets.

(a – i, ii) No Impact. Per Public Resources Code Section 21080.3.1 notification letters were sent to tribal representatives of California Native American Tribes. One letter was received from the Table Mountain Rancheria Cultural Resources Department. A follow up email was sent to the Table Mountain Rancheria and a follow up response was never submitted. A records search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed with negative findings therefore the project has no impact.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it had adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Responses:

(a - e) Less Than Significant Impact. As previously stated, the project intends on drilling a water well on site with an estimated 2,300 gpd with its own septic for waste water and ponding basin. However, the project would not result in a change to facilities or operations of existing wastewater treatment plants. The project also will be participating in the Madera County Ground Sustainability Plan and compliant with the Madera County Subbasin which is responsible for the sustainable management of the groundwater which as a result would ensure the availability of water.

According to the Madera County General Plan, all solid waste generated in the unincorporated area is currently disposed at the Fairmead landfill which is owned by the County. The Madera County General Plan Final EIR indicated in its Waste Collection Analysis that the Fairmead Landfill had estimated capacity to accommodate all the solid waste generated in Madera County through the year 2020, which included population growths. The Fairmead Landfill requested to increase the acreage from 121.7 acres to 146.9 acres increasing volumetric capacity from 13,186,000 to 23,007,696 after the EIR was adopted. The increase to the Fairmead Landfill would be capable of accommodating solid waste generated by the project. Therefore, the project would have a less than significant impact.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Responses:

(a - d) No Impact. The project is not located in a State Responsibility Area (SRA). The closest SRA is two and a half miles east of the project site and has a designation of moderate (refer to figure 6). The project does not propose any habitable structures and would therefore have no occupants. Further analysis of the project's potential impacts on wildfire is not warranted.

Madera County developed an Operational Area Emergency Operations Plan which, was updated in January of 2010 and a Multi-Hazard Functional Plan which, is responsible for establishing emergency management organization required to mitigate any emergency or disaster affecting Madera County. Both documents Identify policies, responsibilities and procedures required to protect the health and safety of Madera County communities, public and private property and the environmental effects of natural and technological emergencies and disasters. And establish the operational concepts and procedures associated with Initial Response Operations (field response) to emergencies, the Extended Response Operations County Emergency Operations Center (EOC) activities and the recovery process. Madera County also developed a Local Hazard Mitigation Plan (LHMP) which is responsible for evacuation procedures. The LHMP states the Sheriff's Department uses a system known as "MCALERT". There is nothing in both documents That indicate the project would impact a response plan or emergency evacuation plan. The project does not propose any actions or structures that expose people or structures to significant risks. Furthermore, the project would not generate runoff, post-fire slope instability, or negatively impact drainage.

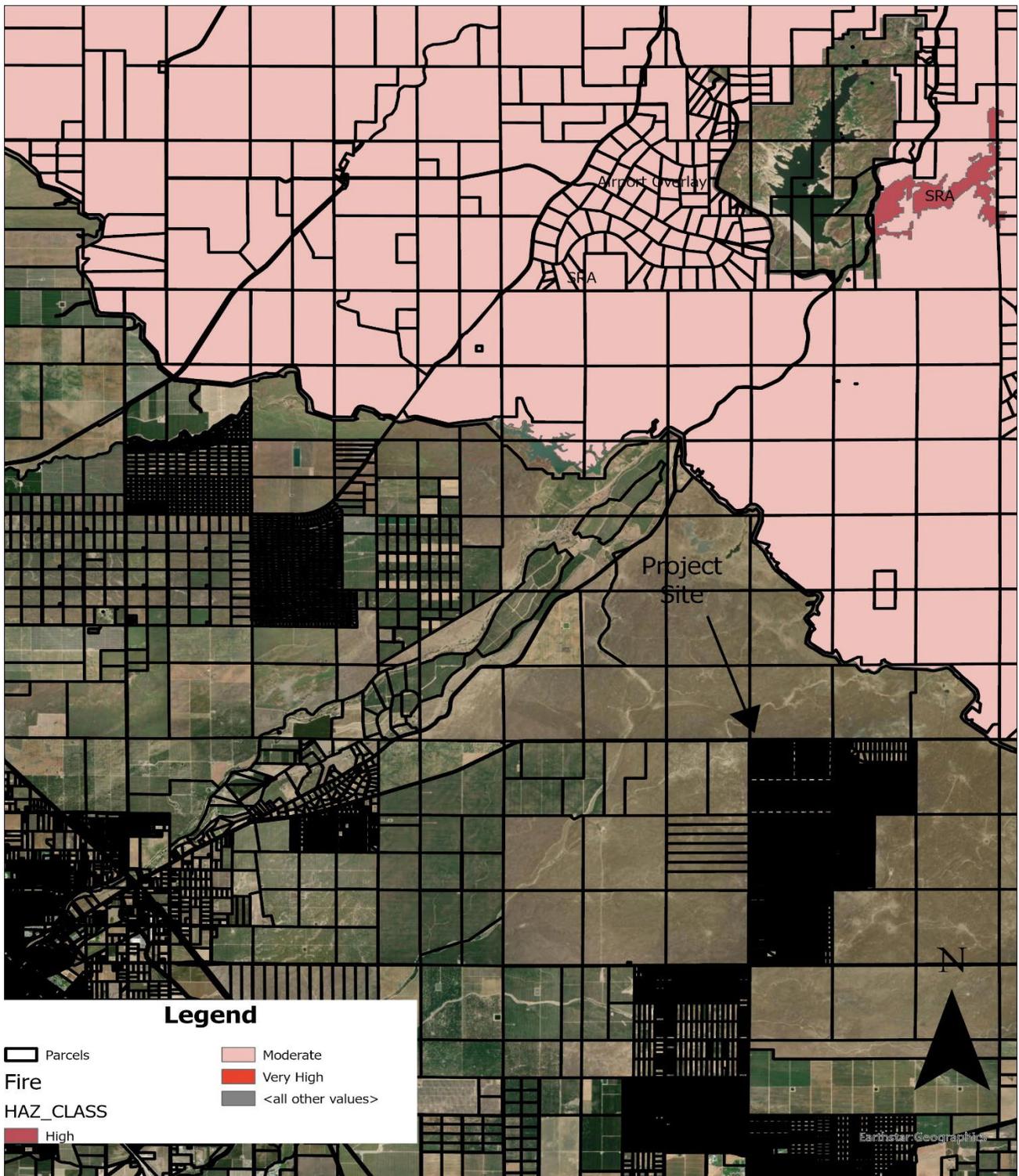


Figure 7 Fire Hazard

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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a) Does the project have the potential to substantially 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, substantially 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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Responses:

CEQA defines three types of impacts or effects:

- Direct impacts are caused by a project and occur at the same time and place (CEQA §15358(a)(1).
- Indirect or secondary impacts are reasonably foreseeable and are caused by a project but occur at a different time or place. They may include growth inducing effects and other effects related to changes in the pattern of land use, population density or growth rate and related effects on air, water and other natural systems, including ecosystems (CEQA §15358(a)(2).
- Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts (CEQA §15355(b)). Impacts from individual projects may be considered minor but considered retroactively with other projects over a period of time, those impacts could be significant, especially where listed or sensitive species are involved.

(a) Less Than Significant Impact. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the project, with the incorporation of mitigation measures, would have a less than significant impact on the environment. As a result, the project would not have the potential to substantially degrade the quality of the environment and, therefore will have a less than significant impact.

(b) 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. Implementation of the project would not result in significant cumulative impacts and all potential impacts would be reduced to less than significant.

(c) Less Than Significant Impact. The project would include the construction of a building, a Gas Island Canopy, an Island Diesel Canopy. 37 parking stalls: 25 parking stalls for the building, eight parking stalls for the gas canopy, and a ponding basin. Other than the previous mentioned activities and with the mitigations incorporated, the project does not contain an element that will affect the environment that could potentially affect human beings either directly or indirectly.

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APPENDIX

Air Impact Assessment Application

Traffic Impact Study

Lighting Consistency

Noise Memorandum

MITIGATION MONITORING REPORT

MND # 2024-004

No.	Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
						Initials	Date	Remarks
Aesthetics								
AES MM-1	Lighting will be required to be hooded and directed down and away from neighboring parcels to maintain the visual character and mitigate any light disbursement during the evening.	Construction	Planning					
BIO MM-1	A biological specialist shall be on site prior to any grading or construction activities to determine if buffers/delineations are needed. The biologist's findings shall be submitted in writing to the Planning Division before any permits being approved.	Preconstruction	Planning					
Cultural Resources								
CUL MM-1	In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area suspected to overlie adjacent remains until the Madera County Coroner has determined that the remains are not subject to any provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the Madera County Coroner determines that the remains are not subject to his or her authority and if the County Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone, the Native American Heritage Commission (NAHC). After notification, the NAHC will follow the procedures outlined in Public Resources Code Section 5097.98, that include notification of most likely descendants (MLDs), and recommendations for treatment of the remains. The MLDs will have 48 hours after notification by the NAHC to make their recommendations (PRC Section 5097.98)	Preconstruction/Construction	Applicant					

No.	Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
						Initials	Date	Remarks
Hazards And Hazardous Materials								
HAZ MM-1	The project proponent shall submit a Hazardous Materials Business Plan to the Madera County Department of Environmental Health and the California Environmental Reporting System before installing the UST and participate in the CUPA.	Operations	Environmental Health					
Hydrology And Water Quality								
HYDRO MM-1	<p>Prior to construction, the Applicant shall submit a copy of: (1) the approved Storm Water Pollution Prevention Plan (SWPPP) and (2) the Notice of Intent (NOI) to comply with the General National Pollutant Discharge Elimination System (NPDES) from the Central Valley Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts.</p> <p>The Applicant or person responsible shall meet County of Madera construction site requirements regarding the control of surface water, and runoff. Runoff created at the project site shall meet the following minimum requirements:</p> <ul style="list-style-type: none"> • Sediments generated on the project site shall be retained using adequate treatment control or structural Best Management Practices (BMPs) • Construction-related materials, wastes, spill or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters or adjacent properties by wind or run-off 	Preconstruction/Construction	Central Valley Regional Water Quality Control Board/Public Works					

No.	Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
						Initials	Date	Remarks
Hydro MM-2	<p>Prior to the onset of construction, a qualified engineer will prepare an erosion control plan consistent with the requirements of a Madera County grading permit and a General Construction Permit. The plan will include a requirement to implement the specified erosion control measures prior to the onset of the rainy season, and to monitor the site periodically throughout the rainy season to ensure that the erosion control measures are successfully preventing onsite erosion and the concomitant deposition of sediment in onsite and offsite drainages. The plan must address both the potential for soil erosion and non-point source pollution, and include the following elements:</p> <ol style="list-style-type: none"> 1. Protection of exposed graded slopes from sheet, rill and gully erosion. Such protection could be in the form of erosion control fabric, hydro mulch containing the seed of native soil-binding plants, straw mechanically imbedded in exposed soils, or some combination of the three. 2. Protection of natural drainage channels from sedimentation. Straw bale check dams or wattles should be installed below graded areas so that any sediment carried by surface runoff is intercepted and retained behind the check dams before it can enter a drainage channel. 3. Use of best management practices (BMPs) to control soil erosion and non-point source pollution. BMPs may include measures in 1 and 2 above, but they may include any number of additional measures appropriate for this particular site and this particular project, including grease traps in parking lots, landscape management practices to reduce the use of pesticides and herbicides, the discharge of stormwater runoff from "hardscapes" into grassy swales or detention basins, regular site inspections for pollutants that could be carried by runoff into natural drainages. <p>pollution, and include the following elements:</p>	Construction	Building					



Air Impact Assessment Application

SWS Center

July 19, 2022

Prepared for:

SWS Land Development Inc.
32685 Avenue 7
Madera, CA 93637

Prepared by:

Stantec Consulting Services Inc.
6780 North West Avenue, Suite 103
Fresno, CA 93711

Contact: Elena Nuño, Principal Air Quality
Specialist
559.355.0580



July 19, 2022
File: 185705917

Attention: Patia Siong, Air Quality Supervisor
1990 E. Gettysburg Avenue
Fresno, CA 93726

Dear Ms. Siong,

Reference: SWS Center

Stantec Consulting Services Inc. (Stantec) respectfully submits the enclosed Air Impact Assessment Application on behalf of SWS Land Development Inc. for the SWS Center Project. The SWS Center Project (Project) is located on the east side of Road 36 at the intersection of Highway 145 and Road 36 in the County of Madera, California (Assessor Parcel Numbers 051-481-009 and 051-481-010). The Project consists of the development of a retail convenience store/sandwich shop with gasoline station and a coffee shop with drive-through on an approximately 2.53-acre site. The developed area encompasses 2.41 acres.

The project will start the first phase of construction in January 2023 with site preparation and grading for the entire project site. Phase 1 of building construction for the fuel station and convenience store/sandwich shop will occur in January 2023 and be completed in July 2023. The final phase of building construction will occur in September 2024 with completion estimated for March 2025.

Stantec prepared an emissions estimate using CalEEMod. As shown in Table 1 below, the project's emissions are below the two tons per year offsite mitigation fee threshold for NOx and PM10. Therefore, pursuant to Section 4.3 of Rule 9510, we are requesting that the project be exempt from offsite mitigation fees.

Table 1: Project Emissions

Year	Pollutant	Construction	Operation	Total	Below 2 tons per year?	Exempt from offsite fees?
2022	NO _x	0.5105	0	0.5105		
	PM10	0.0216	0	0.0216		
2023	NO _x	0.7979	0.9615	1.7594	Yes	Yes
	PM10	0.0343	0.6365	0.6708	Yes	Yes
2024	NO _x	0.5006	0.9615	1.4621	Yes	Yes
	PM10	0.0198	0.6365	0.6563	Yes	Yes
2025	NO _x	0.2658	1.4695	1.7353		
	PM10	0.01	1.0249	1.0349		

* PM10 exhaust only

July 19, 2022
Patia Siong, Air Quality Supervisor
Page 2 of 2

Reference: SWS Center

The application, required documents, detailed CalEEMod printouts, and supporting documentation are included in the application package. CalEEMod files are also provided. A letter of authorization from SWS Land Developments Inc. for Stantec to act on their behalf for the project's ISR review process is also included in the submittal.

If you have any questions or concerns regarding this application, please contact me at (559) 355.0580 or via email at elena.nuno@stantec.com. Stantec will expedite any request for additional information or clarification and is available to meet at any time to quickly resolve issues if they arise.

Regards,

Stantec Consulting Services Inc.

A handwritten signature in black ink, appearing to read 'Elena Nuño', with a stylized flourish at the end.

Elena Nuño
Principal Air Quality Specialist
Phone: 559.355.0580
elena.nuno@stantec.com

Attachment: Air Impact Assessment Application Package

Letter of Authorization
SWS Land Developments Inc.
32685 Avenue 7
Madera, CA 93637

7/18/2022

San Joaquin Valley Air Pollution Control District
Attention: Indirect Source Review
1990 E. Gettysburg Avenue
Fresno, CA 93726

Re: Indirect Source Review Compliance for SWS Center

To Whom it May Concern:

This letter authorizes Stantec Consulting Services Inc. (Stantec) to negotiate, discuss and in any other way communicate with San Joaquin Valley Air Pollution Control District (SJVAPCD) in those areas relative to:

- SJVAPCD's Indirect Source Review (ISR) application for the SWS Center Project

Therefore, by the existence of this instrument, SWS Land Developments Inc. hereby authorizes Stantec to submit revisions to the current application and supporting information to the SJVAPCD and other actions as needed to expedite the application process. By my signature, I affirm that I have the authority to make and sign this authorization letter on behalf of SWS Land Developments Inc.

Sincerely,



Rajdeep Singh
Manager
SWS land Development Inc.

AIR IMPACT ASSESSMENT APPLICATION



**San Joaquin Valley Air Pollution Control District
Indirect Source Review (ISR) - Air Impact Assessment (AIA)
Residential/Non-Residential/Mixed-Use Application Form**



A. Applicant Information

Applicant/Business Name: SWS Land Developments Inc.			
Mailing Address: 32685 Avenue 7	City: Madera	State: CA	Zip: 93637
Contact: Rajdeep Singh	Title: Owner		
Is the Applicant a licensed state contractor? <input type="checkbox"/> No <input type="checkbox"/> Yes, please provide State License number:			
Phone:	Fax:	Email: sandhu8114@gmail.com	

B. Agent Information (if applicable): *If an Agent is signing the Air Impact Assessment Application on behalf of the Applicant, a signed letter from the Applicant giving the Agent authorization is required.*

Agent/Business Name: Stantec Consulting Services Inc.			
Mailing Address: 6780 N. West, #103	City: Fresno	State: CA	Zip: 93711
Contact: Elena Nuno	Title: Principal Air Quality Specialist		
Phone: 559.355.0580	Fax:	Email: elena.nuno@stantec.com	

C. Project Information

Project Name: SWS Center		Tract Number(s) (if known):	
Project Location	Street: Road 36 and Highway 145	City: Madera	Zip: 93637
Cross Streets: Road 36 and Highway 145		County: Madera	
Permitting Agency: County of Madera	Planner: Sam Rashe	Contact Number: 559.661.6333	
Mailing Address: 2037 Cleveland Ave	City: Madera	State: CA	Zip: 93637
Permit Type and Number (if known): CUP #2022-003	Subject to Project-Level Discretionary Approval? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Last Project-Level Discretionary Approval Date: <u>In process</u> Last Project-Level Ministerial Approval Date: _____		

D. Project Description

Please briefly describe the project (e.g.: 300 multi family residential units apartments and 35,000 square feet of commercial uses):
Gasoline station with convenience store/sandwich shop (3,150 sf convenience store, 924 sf sandwich shop) and 2,220 sf coffee shop with drive through.

Please check the box next to each applicable land use below:

<input checked="" type="checkbox"/> Commercial / Retail	<input type="checkbox"/> Educational	<input type="checkbox"/> Office	<input type="checkbox"/> Warehouse
<input type="checkbox"/> Residential	<input type="checkbox"/> Government	<input type="checkbox"/> Industrial	<input type="checkbox"/> Distribution Center
<input type="checkbox"/> Recreational (e.g. park)	<input type="checkbox"/> Medical	<input type="checkbox"/> Manufacturing	<input type="checkbox"/> Other: _____

Select land use setting below:
 Urban Rural

E. Notice of Violation **F. Voluntary Emission Reduction Agreement**

Is this application being submitted as a result of receiving a Notice of Violation (NOV) from the District? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, NOV # _____	Is this project part of a larger project for which there is a Voluntary Emission Reduction Agreement (VERA) with the District? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, VERA # _____
---	---

G. Optional Section

Do you want to receive information about the Healthy Air Living Business Partners Program? Yes No

FOR APCD USE ONLY

Filing Fee Received: _____ Date Paid: _____ Applicant #: C303694	Check #: _____ Project #: C20220316	Date Stamp: Finance	Date Stamp: Permit RECEIVED July 19, 2022 Permits Services SJVAPCD Vivianne B.
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H. Parcel and Land Owner Information

	APN (000-000-00 Format)	Gross Acres	Land Owner
1.	051-481-009	1.24	SWS Land Developments Inc.
2.	051-481-010	1.26	SWS Land Developments Inc.
3.			
4.			

Additional sheets for listing APN numbers can be found on the District's website at www.valleyair.org.

I. Project Development and Operation

Will the project require demolition of existing structures? Yes, *complete I-1* No, *complete I-2*

I-1. Demolition

Total square feet of building(s) footprint to be demolished:	Number of Building Stories:
Demolition Start Date (Month/Year):	Number of Days for Demolition:

I-2. Timing

Expected number of work days per week during construction? 5 days 6 days 7 days

Will the project be developed in multiple phases? Yes, *complete I-3* No, *complete I-4*

I-3. Phased Site Development and Building Construction

In addition to the information below the applicant may submit a phase specific activity timeline. The phase specific activity timeline form can be found on the District's website at www.valleyair.org.

1	Start of Construction (Month/Year): 1/2023	Gross Acres: 2.53
	End of Construction (Month/Year): 1/2023	Net Acres (area devoted to buildings/structures): N/A
	First Date of Occupation (Month/Year): N/A	Paved Parking Area (# of Spaces): N/A
	Building Square Footage: N/A	Number of Dwelling Units: N/A
2	Start of Construction (Month/Year): 1/9/2023	Gross Acres: 1.26
	End of Construction (Month/Year): 7/2023	Net Acres (area devoted to buildings/structures): 0.09
	First Date of Occupation (Month/Year): 8/2023	Paved Parking Area (# of Spaces): 10
	Building Square Footage: 4,070	Number of Dwelling Units: N/A
3	Start of Construction (Month/Year): 9/2024	Gross Acres: 1.27
	End of Construction (Month/Year): 3/2025	Net Acres (area devoted to buildings/structures): 0.05
	First Date of Occupation (Month/Year): 4/2025	Paved Parking Area (# of Spaces): 43
	Building Square Footage: 2,220	Number of Dwelling Units: N/A
4	Start of Construction (Month/Year):	Gross Acres:
	End of Construction (Month/Year):	Net Acres (area devoted to buildings/structures):
	First Date of Occupation (Month/Year):	Paved Parking Area (# of Spaces):
	Building Square Footage:	Number of Dwelling Units:

Additional sheets for phasing information can be found on the District's website at www.valleyair.org.

I-4. Single Phase Development

Start of Construction (Month/Year):

Gross Acres:

End of Construction (Month/Year):

Net Acres (area devoted to buildings/structures):

First Date of Occupation (Month/Year):

Paved Parking Area (# of Spaces):

Building Square Footage:

Number of Dwelling Units:

J. On-Site Air Pollution Reductions (Mitigation Measures)

Listed below are categories of possible mitigation measures that will reduce a project's impact on air quality. If a category is applicable to the project, check "Yes", and please complete the corresponding page to identify specific mitigation measures within that category. If a category is not applicable to the project, check "No" and provide justification for not selecting the measure(s).

1. Construction Clean Fleet (making a commitment to using a construction fleet that will achieve the emission reductions required by District Rule 9510)

Yes, please complete mitigation measure 1

No, please provide justification: *Project will use clean fleet for CEQA mitigation, but not claim credit for ISR because of reporting requirements that exceed County's requirements*

2. Land Use/Location (e.g. increased density, improve walkability design, increase transit, etc.)

Yes, please complete applicable mitigation measures 2a through 2f

No, please provide justification: *Project is adjacent to Highway 145, designed for travelers on the roadway*

3. Neighborhood/Site Enhancements (e.g. improve pedestrian network, traffic calming measures, NEV network, etc.)

Yes, please complete applicable mitigation measures 3a through 3c

No, please provide justification: _____

4. Parking Policy/Pricing (e.g. parking cost, on-street market pricing, limit parking supply, etc.)

Yes, please complete applicable mitigation measure 4a through 4e

No, please provide justification: *Project is designed for short-term users, parking supply is already limited.*

5. Commute Trip Reduction Programs (e.g. workplace parking charge, employee vanpool/shuttle, ride sharing program, etc.)

Yes, please complete applicable mitigation measures 5a through 5f

No, please provide justification: *Minimal number of employees*

6. Building Design (e.g. woodstoves or fireplaces)

Yes, please complete mitigation measure 6

No, please provide justification: *Project does not include woodstoves or fireplaces*

7. Building Energy (e.g. exceed title 24, electrical maintenance equipment)

Yes, please complete applicable mitigation measures 7a through 7b

No, please provide justification: *Project will meet Title 24 standards which are increasingly stringent*

8. Solar Panels (e.g. incorporate solar panels in the project)

Yes, please complete applicable mitigation measure 8

No, please provide justification: *Project acreage is limited.*

9. Electric Vehicle (EV) Charger (e.g. incorporate EV charger(s) in the project)

Yes, please complete applicable mitigation measure 9

No, please provide justification: *Project will be EV ready, charging unit information unavailable at this time.*

K. Review Period

You may request a five (5) day period to review a draft of the District's analysis of your project before it is finalized. However, if you choose this option, it will delay the project's finalization by five (5) business days.

I request to review a draft of the District's analysis.

L. Fee Deferral Schedule

If the project's on-site air pollution reductions (mitigation measure) insufficiently reduced air pollution as outlined in Rule 9510, an off-site fee is assessed based on the excess air pollution. The money collected from this fee will be used by the District to reduce air pollution emissions 'off-site' on behalf of the project.

An Applicant may request a deferral of all or part of the 'off-site' fees up to, but not to exceed, the start date of construction. The start of construction is any of the following, whichever occurs first: start of grading, start of demolition, or any other site development activities not mentioned above.

I request a Fee Deferral Schedule, and have enclosed the Fee Deferral Schedule Application.

The Fee Deferral Schedule Application, can be found on the District's website at www.valleyair.org.

M. Change of Project Developer

The Applicant assumes all responsibility for ISR compliance for this project. If the project developer changes, the Applicant must notify the Buyer, and both Buyer and Applicant must file a 'Change of Project Developer' form with the District. If there is a change of project developer, and a 'Change of Project Developer' form is not filed with the District, the Applicant will remain liable for ISR compliance.

The Change of Project Developer form can be found on the District's website at www.valleyair.org.

N. Attachments

Required:

- Tract Map or Project Design Map
- Vicinity Map
- Application Filing Fee
\$841.00 for mixed use and non-residential projects **OR**
\$562.00 for residential projects only

If applicable:

- Letter from Applicant granting Agent authorization
- Fee Deferral Schedule Application
- Monitoring & Reporting Schedule
- Supporting documentation for selected Mitigation Measures

O. Certification Statement

I certify that I have reviewed and completed the entire application and hereby attest that the information relayed within is true and correct to the best of my knowledge. I commit to implementation of those on-site mitigation measures that I have selected above. I am responsible for notifying the District if I will be unable to implement these mitigation measures. If a committed mitigation measure is not implemented, the project may be re-assessed for air quality impacts.

(An authorized Agent may sign the form in lieu of the Applicant if an authorization letter **signed by the Applicant** is provided).

Name (printed): Elena Nuno

Title: Principal Air Quality Specialist

Signature: 

Date: 07/19/2022

Mitigation Measure 1: Construction Clean Fleet

Will the project use a construction fleet to achieve the emission reductions required by District Rule 9510?

(*Note: By checking "no", please provide justification in Section J "On-Site Mitigation" above. By checking "yes" the Applicant could potentially reduce any construction related off-site fees to zero.*)

No

Yes*

***If yes**, daily records of the total hours of operation for each piece of equipment greater than 50-horsepower being used on the project site during construction must be maintained. Within 30-days of completing construction of each project phase, a report summarizing total hours of operation by equipment type, equipment model year and horsepower for each piece of construction equipment greater than 50-horsepower must be submitted to the District. To assist in this recordkeeping, The *Detailed Fleet Template* is available on the District's website at <http://www.valleyair.org/ISR/ISRFormsAndApplications.htm>.

For each project phase, the District will verify that the fleet details achieved the required emission reductions.

Mitigation Measure 2a: Increase Density

Will the Project be located within 1/2 mile radius of increased density? Density is measured in terms of dwelling units or jobs per acre. A project located in areas of increased density may reduce emissions associated with traffic.

*Note: There are approximately 502.4 acres in a 1/2 mile radius.

No, please complete justification in Section J above

Yes, please complete sections below:

1. Number of Dwelling Units within 1/2 radius of Project:

2. Number of Jobs within 1/2 mile radius of Project:

3. Density:

Density is the 'Number of Dwelling Units' or 'Number of Jobs' within 1/2 mile radius divided by 502.4 acres.

Dwelling Units per Acre:

Jobs per Acre:

➤ Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No, (*note: if checked "no" this mitigation measure will require District enforcement*)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Documentation: Please attach supporting documentation (e.g.: map) to justify the provided jobs and housing. Attached

Mitigation Measure 2b: Increase Diversity

This mitigation measure applies to a project in an *Urban Area only*. Will the project be predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential are present within 1/4 mile? Mixed-use development should encourage walking and other non-auto modes of transport and minimize need for external trips.

No, please complete justification in Section J above

Yes, please complete sections below:

➤ Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (*note: if checked "no" this mitigation measure will require District enforcement*)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Documentation: Please attach supporting documentation (e.g.: map) to justify the project is characterized by various uses, such as office, commercial, institutional, and residential are within 1/4 mile that encourage walking and non-auto modes of transport. Attached

Mitigation Measure 2c: Improve Walkability Design

Will the project improve walkability?

- No, please complete justification in Section J above
 Yes, please complete sections below.

1. Square Miles within the Study Area:

a. If the distance from the center of the project out to its farthest boundary is less than or equal to ½ mile then the Square Miles within the Study Area will be 0.79. Enter this value in the blank to the right.
b. If the distance from the center of the project out to its farthest boundary is greater than ½ mile then calculate the area value by: Study Area Square Miles = 3.14 x radius^(squared). (Enter this value in the blank to the right.)

Square Miles

2. Intersection within the Study Area:

Number and type of intersections within the project area:

Number of 3-Way Intersections:

x 3 =

Number of 4-Way Intersections:

x 4 =

Number of 5-Way Intersections:

x 5 =

Total Intersections (sum of above) =

3. Intersection Density within the Study Area:

Intersection Density is the Study Area's 'Total Intersections' value (B.) divided by the 'Square Miles' value (A.):

_____ Intersections / sq. mi.

- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
- No (note: if checked "no" this mitigation measure will require District enforcement)
 Yes, Name of enforcing agency: _____
Source of Requirement: _____

Documentation: Please attach supporting documentation (e.g.: map) to justify number of intersections within ½ mile of the project.

Attached

Mitigation Measure 2d: Improve Destination Accessibility

Will the project be located within 12 miles from downtown or a job center? The location of the project may increase the potential for pedestrians to walk and bike to these destinations and therefore reduce VMT.

- No, please complete justification in Section J above
 Yes, please complete sections below:

- Distance to Downtown/Job Center (miles): _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
- No (note: if checked "no" this mitigation measure will require District enforcement)
 Yes, Name of enforcing agency: _____
Source of Requirement: _____

Documentation: Please attach supporting documentation (e.g: map) to justify the distance of the project to the Downtown/Job Center.

Attached

Mitigation Measure 2e: Increase Transit Accessibility

Will the project be located near a transit station/stop at least within ¼ mile or near a rail at least within ½ mile that will facilitate the use of transit by people traveling to or from the project site?

No, please complete justification in Section J above

Yes, please complete sections below:

- Distance to Rail Station (miles): ½ mile or less between ½ mile and 3 miles
- Distance to Transit Station (miles): ¼ mile
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
 - No (note: if checked "no" this mitigation measure will require District enforcement)
 - Yes, Name of enforcing agency: _____
Source of Requirement: _____

Documentation: Please attach supporting documentation (e.g.: map) to justify the project is located within ¼ mile of a transit station or within ½ mile of a rail from the project site.

Attached

Mitigation measure 2f: Integrate Below Market Rate Housing

Is all or a portion of the residential units designated as deed-restricted below-market-rate (BMR) housing?

No, please complete justification in Section J above

Yes, please complete sections below:

- Percentage of total dwelling units deed-restricted below market rate: _____ %
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
 - No (note: if checked "no" this mitigation measure will require District enforcement)
 - Yes, Name of enforcing agency: _____
Source of Requirement: _____

Documentation: Please attach supporting documentation to justify all or a portion of the residential units that are designated as deed-restricted below-market-rate housing.

Attached

Mitigation Measure 3a: Improve Pedestrian Network

Will the project provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site?

No, please complete justification in Section J above

Yes, please complete sections below:

- Select one of the following areas, where pedestrian accommodations will be provided:
 - within Project Site
 - within Project Site and Connecting Off-Site
 - Project Site is within a Rural setting
- Will this measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
 - No (note: if checked "no" this mitigation measure will require District enforcement)
 - Yes, Name of enforcing agency: _____
Source of Requirement: _____

Mitigation Measure 3b: Provide Traffic Calming Measures

Will this project provide traffic calming measures which encourage people to walk or bike instead of using a vehicle (e.g., marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others)?

No, please complete justification in Section J above

Yes, please complete sections below:

- % Streets with Improvement within ½ mile of project site: 25% 50% 75% 100%
- % Intersections with Improvement within ½ mile of project site: 25% 50% 75% 100%
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
 - No (note: if checked "no" this mitigation measure will require District enforcement)
 - Yes, Name of enforcing agency: _____
Source of Requirement: _____

Mitigation Measure 3c: Implement Neighborhood Electric Vehicle (NEV) Network

Will the project provide a NEV network including the necessary infrastructure such as parking, charging facilities, striping, signage, and educational tools?

*Note: NEVs are classified in the California Vehicle Code as a "low speed vehicle".

No, please complete justification in Section J above

Yes, please complete sections below:

- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
 - No (note: if checked "no" this mitigation measure will require District enforcement)
 - Yes, Name of enforcing agency: _____
Source of Requirement: _____

Mitigation Measure 4a: Limit Parking Supply

Will the project provide fewer parking spaces than the rate provided by the Institute of Transportation and Engineering (ITE) Parking Generation Handbook?

No, please complete justification in Section J above

Yes, please complete sections below:

- % Reduction in Spaces: _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
 - No (note: if checked "no" this mitigation measure will require District enforcement)
 - Yes, Name of enforcing agency: _____
Source of Requirement: _____

Mitigation Measure 4b: Unbundle Parking Cost

Will the project implement a monthly/annual parking charge?

No, please complete justification in Section J above

Yes, please complete sections below:

- Monthly Parking Cost for Project Site (\$): _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?
 - No (note: if checked "no" this mitigation measure will require District enforcement)
 - Yes, Name of enforcing agency: _____
Source of Requirement: _____

Mitigation Measure 4c: On-Street Market Pricing

Will this project and the city (in which the project is located) implement a pricing strategy which will increase the on-street public parking (e.g.: meter parking) by at least 25%?

No, *please complete justification in Section J above*

Yes, *please complete sections below:*

➤ % Increase in Price: 25% 30% 40% 50%

➤ Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (*note: if checked "no" this mitigation measure will require District enforcement*)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 4d: Transit Subsidy

Will the project provide subsidized/discounted daily or monthly public transit passes?

No, *please complete justification in Section J above*

Yes, *please complete sections below:*

➤ % of employees to receive public transit passes: _____

➤ Please select the closest expected Daily Transit Subsidy Amount (\$): \$0.75 \$1.50 \$3 \$6

➤ Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (*note: if checked "no" this mitigation measure will require District enforcement*)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 4e: Implement Employee Parking "Cash-Out"

Will the project require employers to offer employee parking "cash-out"? The term "cash-out" is used to describe the employer providing employees with a choice of forgoing their current subsidized/free parking for a cash payment.

No, *please complete justification in Section J above*

Yes, *please complete sections below:*

➤ % of employees to receive "cash-out": _____

➤ Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (*note: if checked "no" this mitigation measure will require District enforcement*)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 5a: Workplace Parking Charge

Will the project implement workplace parking pricing at its employment centers (e.g., explicitly charging for parking for its employees, not providing employee parking and transportation allowances, educating employees about available alternatives)?

No, *please complete justification in Section J above*

Yes, *please complete sections below:*

➤ % of employees paying for parking: _____

➤ Please select the closest expected Daily Cash out Amount (\$): \$1 \$2 \$3 \$6

➤ Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (*note: if checked "no" this mitigation measure will require District enforcement*)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 5b: Implement School Bus Program

Will the project work with the school district to restore or expand school bus services in the project area and local community?

No, please complete justification in Section J above

Yes, please complete sections below:

- % of families expected to using school bus program (those currently attending the school district): _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 5c: Encourage Telecommuting and Alternative Work Schedules

Will the project include the use of telecommuting or alternative work schedules to reduce the number of commute trips by employees?

No, please complete justification in Section J above

Yes, please complete sections below:

- Percent of employees to participate in a 9/80 work schedule: 1% 3% 5% 10% 25%
- Percent of employees to participate in a 4/40 work schedule: 1% 3% 5% 10% 25%
- Percent of employees to participate in telecommuting 1.5 days: 1% 3% 5% 10% 25%
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 5d: Market Commute Trip Reduction Option

Will the project implement marketing strategies to reduce commute trips (e.g., new employee orientation of trip reduction and alternative mode option, event promotions, publications)? This measure should promote and educate employees on alternative transportation options.

No, please complete justification in Section J above

Yes, please complete sections below:

- % of Employees Eligible: _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 5e: Employee Vanpool/Shuttle

Will this project implement an employer-sponsored vanpool or shuttle? Employer-sponsored vanpool programs entail an employer purchasing or leasing vans for employee use, and often subsidizing the cost of at lease program administration, if not more. Rider charges are normally set on the basis of vehicle and operating cost.

No, please complete justification in Section J above

Yes, please complete sections below:

- % of employees participating in the vanpool program: _____
- % of vehicles for vanpooling: _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 5f: Provide Ride Sharing Program

Will the project include a ride-sharing program?

No, please complete justification in Section J above

Yes, please complete sections below:

- % of Employees participating in the ride-sharing program: _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 6: Hearth

Will the project include any woodstoves or fireplaces?

No, please complete justification in Section J above

Yes, please complete sections below:

- Only natural gas hearth
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 7a: Exceed Title 24

Will the energy efficiency rating of the project's building(s) be greater than California Title 24 requirements?

No, please complete justification in Section J above

Yes, please complete sections below:

- Percent of increase greater than California Title 24 requirements: _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Documentation: Please attach relevant analysis or summary pages of Title 24 documentation

Attached

Mitigation Measure 7b: Landscape Equipment

Will the project provide electrical outlets on the front and rear of all residences, **and /or** provide the use of electrical maintenance equipment including but not limited to electric lawn mowers, electric leaf blowers, etc.? (note 3% is the assumed statewide average for landscape equipment)

No, please complete justification in Section J above

Yes, please complete sections below:

- Percent of electric lawnmower that will be electrically powered: _____
- Percent of leaf blower that will be electrically powered: _____
- Percent of electric chainsaw that will be electrically powered: _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Documentation: Please attach supporting documentation if claiming greater than 3%.

Attached

Mitigation Measure 8: Solar Panels

Will the project include the installation of solar panels?

No, please complete justification in Section J above

Yes, please complete sections below:

- Total power output of solar panels to be installed: _____ kW (e.g.: 200 homes x 3kW=600kW.)
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

Mitigation Measure 9: Electric Vehicle (EV) Charger

Will the project include the installation of electric vehicle (EV) charger(s)?

No, please complete justification in Section J above

Yes, please complete sections below:

- Number of charging outlet(s) to be installed (Note: a charger may have one or more charging outlets): _____
- Charging level (e.g.: Level 1, Level 2, or DC Fast Charge): _____
- Will this mitigation measure be required as a condition of approval by the land use agency, by other county or municipal codes, or other?

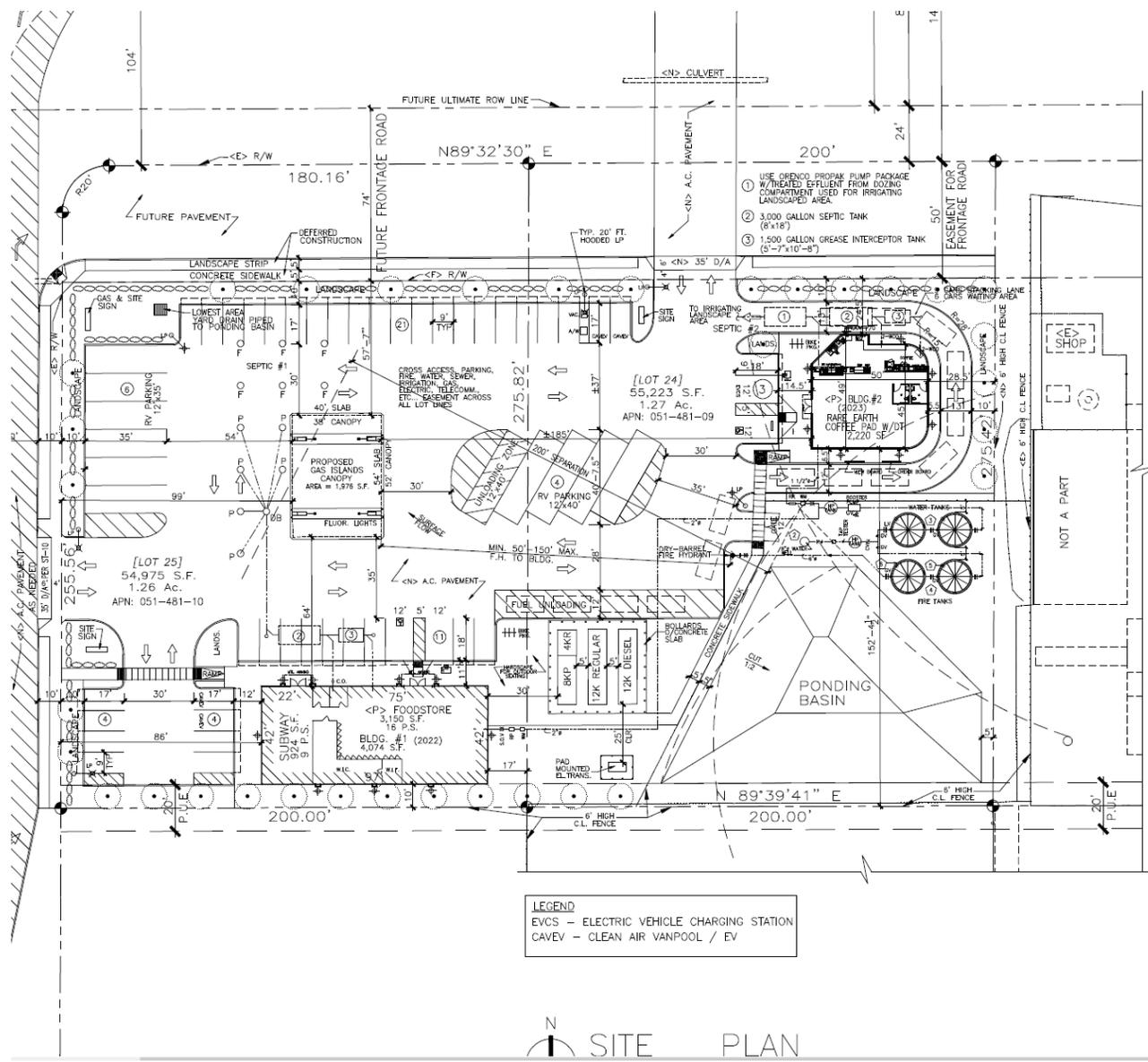
No (note: if checked "no" this mitigation measure will require District enforcement)

Yes, Name of enforcing agency: _____

Source of Requirement: _____

REQUIRED ATTACHMENTS





LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA IN COUNTY OF MADERA, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

LOT NO. 24 & 25 OF TRACT NO. 151, BONADELLE RANCHOS NO. 8, ACCORDING TO THE MAP THEREOF RECORDED MAY 18, 1965, IN BOOK 11, PAGES 120 TO 135, ET SEQ., OF MAPS, MADERA COUNTY RECORDS.

APN: 051-481-009 , LOT 24
 APN: 051-481-010 , LOT 25

PROJECT DATA

AGENCY OF JURISDICTION: COUNTY OF MADERA
 ASSESSOR PARCEL NO.: 051-481-009 & 10
 PROJ. ADDRESS:

PROPOSED USE: FOODSTORE & SUBWAY, GAS STATION W/ABOVE GROUND FUEL TANKS, COFFEE SHOP

CURRENT ZONING: CC, PDD (PLANNED DEVELOPMENT DISTRICT)

SITE GROSS AREA: ±110,196 S.F. = 2.53 ACRES

FRONTAGE ROAD EASEMENT: 5,160 S.F.

DEVELOPED AREA: ±105,036 S.F. = 2.41 ACRES

PROPOSED AREA FOR DEVELOPMENT:

LOT 24 AREA: ±55,223 S.F. = 1.27 ACRES

LOT 25 AREA: ±54,975 S.F. = 1.26 ACRES

PARKING REQUIRED: C-STORE 1PS/200 S.F.
 RESTAURANT 1/100 FOR EA PKG.
 COMPACT 30%

PARKING STALLS:

REQUIRED
 COFFEE SHOP PKG : 2,220/100= 22 P.S.
 SUBWAY: 924/100= 9 P.S.
 FOODSTORE : 3,150/200= 16 P.S.

PROVIDED
 43 CAR P.S. 3 EVCS
 10 RV P.S. 4 CAVEV
 53 P.S. (2% COMPACT)
 47 P.S.
 (7% COMPACT)

BLDG. AREAS:

SQ. FT.	BLDG. #1	BLDG. #2	FUEL CANOPY
4,074	3,150 S.F.	2,220 S.F.	1,976 S.F.
OCCUPANCY:	M	B	M
OCCUPANT LOAD:	55 (2 EXITS)	29	8

BLDG. COVERAGE: 7.5%

TYPE OF CONSTRUCTION: VB, 2B

<N> BUILDING COVERAGE: 8,270 S.F./105,036 S.F.= 0.079%X100= 7.90%

REQ'D YARDS

FRONT = 20' RESIDENCES
 SIDE = 10'
 REAR BLDG. = 10'
 STREET SIDE = 10'

PHASED DEVELOPMENT:

2022 FOODSTORE B#1
 2024 COFFEE SHOP B#2

OWNER/APPLICANT:

RAJDEEP SINGH
 SWS LAND DEVELOPMENTS INC.
 32685 AVE. 7
 MADERA CA. 93637
 PHONE#: 559-776-8125

REVISIONS
JAN. 18, 2022
JAN. 5, 2022
JAN. 3, 2022
DEC. 29, 2021
DEC. 7, 2021
DEC. 2, 2021
DEC. 1, 2021
NOV. 29, 2021

THIS IS AN ORIGINAL UNPUBLISHED WORK AND MAY NOT BE REPRODUCED, DUPLICATED, PUBLISHED OR OTHERWISE USED IN WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF ELIAS SALIBA, AIA, ARCHITECT

PROJECT/LOCATION
SWS CENTER
SR 145 & RD 36 SEC

DRAWN BY
AESTHETICS DESIGNS
PLANNING CONSULTANTS/RESIDENTIAL COMMERCIAL
ELIAS SALIBA ARCHITECT AIA, AIA, C.P.E., NCF

LEGEND
 EVCS - ELECTRIC VEHICLE CHARGING STATION
 CAVEV - CLEAN AIR VANPOOL / EV



**Figure 2: Site Map
 SWS Project
 Air Impact Assessment Application**

MODELING RESULTS

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Mit SWS Center - Site Prep and Grading
Madera County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.76	Acre	1.76	76,665.60	0
Parking Lot	53.00	Space	0.48	21,200.00	0
Fast Food Restaurant with Drive Thru	2.22	1000sqft	0.05	2,220.00	0
User Defined Recreational	6.50	User Defined Unit	0.15	6,500.00	0
Convenience Market with Gas Pumps	4.07	1000sqft	0.09	4,074.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.9	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Uses for Grading the Entire Site Area
- Construction Phase - Client provided schedule
- Trips and VMT - No offsite for construction emissions
- Grading -
- Vehicle Trips - Site Prep and Grading Only
- Construction Off-road Equipment Mitigation - Tier 4

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	6397	7535
tblAreaCoating	Area_Nonresidential_Interior	19191	22604
tblAreaCoating	Area_Parking	5872	5741
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	6.00	50.00
tblConstructionPhase	NumDays	3.00	10.00
tblGrading	AcresOfGrading	50.00	6.00
tblGrading	AcresOfGrading	15.00	4.50
tblGrading	MaterialExported	0.00	723.00
tblLandUse	LandUseSquareFeet	0.00	6,500.00
tblLandUse	LandUseSquareFeet	4,070.00	4,074.00
tblLandUse	LotAcreage	0.00	0.15
tblVehicleTrips	ST_TR	624.20	0.00
tblVehicleTrips	ST_TR	616.12	0.00
tblVehicleTrips	SU_TR	624.20	0.00
tblVehicleTrips	SU_TR	472.58	0.00
tblVehicleTrips	WD_TR	624.20	0.00
tblVehicleTrips	WD_TR	470.95	0.00

2.0 Emissions Summary

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-12-2022	9-30-2022	0.0733	0.0071
		Highest	0.0733	0.0071

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	0.0688	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003
Energy	2.7500e-003	0.0250	0.0210	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	36.6706	36.6706	2.0500e-003	6.8000e-004	36.9259
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	7.6731	0.0000	7.6731	0.4535	0.0000	19.0097
Water						0.0000	0.0000		0.0000	0.0000	0.3094	0.5621	0.8715	0.0319	7.6000e-004	1.8952
Total	0.0716	0.0250	0.0216	1.5000e-004	0.0000	1.9000e-003	1.9000e-003	0.0000	1.9000e-003	1.9000e-003	7.9825	37.2339	45.2164	0.4874	1.4400e-003	57.8321

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0688	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003
Energy	2.7500e-003	0.0250	0.0210	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	36.6706	36.6706	2.0500e-003	6.8000e-004	36.9259
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	7.6731	0.0000	7.6731	0.4535	0.0000	19.0097
Water						0.0000	0.0000		0.0000	0.0000	0.3094	0.5621	0.8715	0.0319	7.6000e-004	1.8952
Total	0.0716	0.0250	0.0216	1.5000e-004	0.0000	1.9000e-003	1.9000e-003	0.0000	1.9000e-003	1.9000e-003	7.9825	37.2339	45.2164	0.4874	1.4400e-003	57.8321

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/12/2022	9/23/2022	5	10	
2	Grading	Grading	10/13/2022	12/21/2022	5	50	

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 2.24

Residential Indoor: 0; Residential Outdoor: 0; 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
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	90.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8900e-003	0.0783	0.0503	1.2000e-004		2.9800e-003	2.9800e-003		2.7400e-003	2.7400e-003	0.0000	10.7735	10.7735	3.4800e-003	0.0000	10.8606
Total	6.8900e-003	0.0783	0.0503	1.2000e-004	2.3900e-003	2.9800e-003	5.3700e-003	2.6000e-004	2.7400e-003	3.0000e-003	0.0000	10.7735	10.7735	3.4800e-003	0.0000	10.8606

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	1.5000e-004	1.0000e-004	1.2200e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2736	0.2736	1.0000e-005	1.0000e-005	0.2764
Total	1.5000e-004	1.0000e-004	1.2200e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2736	0.2736	1.0000e-005	1.0000e-005	0.2764

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-003	6.5200e-003	0.0593	1.2000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	10.7735	10.7735	3.4800e-003	0.0000	10.8606
Total	1.5000e-003	6.5200e-003	0.0593	1.2000e-004	2.3900e-003	2.0000e-004	2.5900e-003	2.6000e-004	2.0000e-004	4.6000e-004	0.0000	10.7735	10.7735	3.4800e-003	0.0000	10.8606

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	1.5000e-004	1.0000e-004	1.2200e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2736	0.2736	1.0000e-005	1.0000e-005	0.2764
Total	1.5000e-004	1.0000e-004	1.2200e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2736	0.2736	1.0000e-005	1.0000e-005	0.2764

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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					0.1538	0.0000	0.1538	0.0831	0.0000	0.0831	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0385	0.4246	0.2305	5.1000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	45.2568	45.2568	0.0146	0.0000	45.6227
Total	0.0385	0.4246	0.2305	5.1000e-004	0.1538	0.0186	0.1724	0.0831	0.0171	0.1002	0.0000	45.2568	45.2568	0.0146	0.0000	45.6227

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	1.7000e-004	6.8100e-003	1.3300e-003	3.0000e-005	7.7000e-004	7.0000e-005	8.4000e-004	2.1000e-004	7.0000e-005	2.8000e-004	0.0000	2.6202	2.6202	1.0000e-005	4.1000e-004	2.7431
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	9.4000e-004	6.4000e-004	7.6500e-003	2.0000e-005	1.9900e-003	1.0000e-005	2.0000e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.7099	1.7099	6.0000e-005	5.0000e-005	1.7275
Total	1.1100e-003	7.4500e-003	8.9800e-003	5.0000e-005	2.7600e-003	8.0000e-005	2.8400e-003	7.4000e-004	8.0000e-005	8.2000e-004	0.0000	4.3300	4.3300	7.0000e-005	4.6000e-004	4.4706

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

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					0.1538	0.0000	0.1538	0.0831	0.0000	0.0831	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3000e-003	0.0273	0.2727	5.1000e-004		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	45.2567	45.2567	0.0146	0.0000	45.6227
Total	6.3000e-003	0.0273	0.2727	5.1000e-004	0.1538	8.4000e-004	0.1546	0.0831	8.4000e-004	0.0840	0.0000	45.2567	45.2567	0.0146	0.0000	45.6227

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	1.7000e-004	6.8100e-003	1.3300e-003	3.0000e-005	7.7000e-004	7.0000e-005	8.4000e-004	2.1000e-004	7.0000e-005	2.8000e-004	0.0000	2.6202	2.6202	1.0000e-005	4.1000e-004	2.7431
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	9.4000e-004	6.4000e-004	7.6500e-003	2.0000e-005	1.9900e-003	1.0000e-005	2.0000e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.7099	1.7099	6.0000e-005	5.0000e-005	1.7275
Total	1.1100e-003	7.4500e-003	8.9800e-003	5.0000e-005	2.7600e-003	8.0000e-005	2.8400e-003	7.4000e-004	8.0000e-005	8.2000e-004	0.0000	4.3300	4.3300	7.0000e-005	4.6000e-004	4.4706

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700
Fast Food Restaurant with Drive Thru	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700
Other Asphalt Surfaces	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700
Parking Lot	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700
User Defined Recreational	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.4786	9.4786	1.5300e-003	1.9000e-004	9.5724
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.4786	9.4786	1.5300e-003	1.9000e-004	9.5724
NaturalGas Mitigated	2.7500e-003	0.0250	0.0210	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	27.1920	27.1920	5.2000e-004	5.0000e-004	27.3536
NaturalGas Unmitigated	2.7500e-003	0.0250	0.0210	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	27.1920	27.1920	5.2000e-004	5.0000e-004	27.3536

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Convenience Market with Gas Pumps	43225.1	2.3000e-004	2.1200e-003	1.7800e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.3067	2.3067	4.0000e-005	4.0000e-005	2.3204
Fast Food Restaurant with Drive Thru	466333	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0332
Other Asphalt Surfaces	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
Parking Lot	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
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.7400e-003	0.0250	0.0210	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	27.1920	27.1920	5.2000e-004	5.0000e-004	27.3536

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market with Gas Pumps	43225.1	2.3000e-004	2.1200e-003	1.7800e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.3067	2.3067	4.0000e-005	4.0000e-005	2.3204
Fast Food Restaurant with Drive Thru	466333	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0332
Other Asphalt Surfaces	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
Parking Lot	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
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.7400e-003	0.0250	0.0210	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	27.1920	27.1920	5.2000e-004	5.0000e-004	27.3536

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	32266.1	2.9854	4.8000e-004	6.0000e-005	3.0149
Fast Food Restaurant with Drive Thru	62759.4	5.8067	9.4000e-004	1.1000e-004	5.8642
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7420	0.6865	1.1000e-004	1.0000e-005	0.6933
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		9.4787	1.5300e-003	1.8000e-004	9.5724

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	32266.1	2.9854	4.8000e-004	6.0000e-005	3.0149
Fast Food Restaurant with Drive Thru	62759.4	5.8067	9.4000e-004	1.1000e-004	5.8642
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7420	0.6865	1.1000e-004	1.0000e-005	0.6933
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		9.4787	1.5300e-003	1.8000e-004	9.5724

6.0 Area Detail

6.1 Mitigation Measures Area

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0688	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003
Unmitigated	0.0688	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003

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	0.0125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0563					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003
Total	0.0688	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0563					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003
Total	0.0688	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.8715	0.0319	7.6000e-004	1.8952
Unmitigated	0.8715	0.0319	7.6000e-004	1.8952

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.301475 / 0.184775	0.3064	9.8600e-003	2.4000e-004	0.6232
Fast Food Restaurant with Drive Thru	0.673845 / 0.0430114	0.5651	0.0220	5.3000e-004	1.2720
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.8715	0.0319	7.7000e-004	1.8952

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.301475 / 0.184775	0.3064	9.8600e-003	2.4000e-004	0.6232
Fast Food Restaurant with Drive Thru	0.673845 / 0.0430114	0.5651	0.0220	5.3000e-004	1.2720
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.8715	0.0319	7.7000e-004	1.8952

8.0 Waste Detail

8.1 Mitigation Measures Waste

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.6731	0.4535	0.0000	19.0097
Unmitigated	7.6731	0.4535	0.0000	19.0097

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market with Gas Pumps	12.23	2.4826	0.1467	0.0000	6.1505
Fast Food Restaurant with Drive Thru	25.57	5.1905	0.3068	0.0000	12.8592
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		7.6731	0.4535	0.0000	19.0097

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market with Gas Pumps	12.23	2.4826	0.1467	0.0000	6.1505
Fast Food Restaurant with Drive Thru	25.57	5.1905	0.3068	0.0000	12.8592
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		7.6731	0.4535	0.0000	19.0097

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

Mit SWS Center - Site Prep and Grading - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop
Madera County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.08	Acre	1.08	47,044.80	0
Parking Lot	10.00	Space	0.09	4,000.00	0
Fast Food Restaurant w/o Drive Thru	0.92	1000sqft	0.02	924.00	0
Convenience Market with Gas Pumps	3.15	1000sqft	0.07	3,150.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.9	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Phase 1 land uses - Fuel Station with Convenience Store and Sandwich shop
- Construction Phase - Applicant provided construction schedule
- Trips and VMT - No offsite trips
- Construction Off-road Equipment Mitigation - Tier 4
- Fleet Mix - removed HHD

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	200.00	125.00
tblLandUse	LandUseSquareFeet	920.00	924.00

2.0 Emissions Summary

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-9-2023	4-8-2023	0.4432	0.2428
2	4-9-2023	7-8-2023	0.4288	0.2393
3	7-9-2023	9-30-2023	0.0622	0.0520
		Highest	0.4432	0.2428

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	0.0231	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Energy	1.2300e-003	0.0112	9.3700e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	16.9958	16.9958	1.0200e-003	3.2000e-004	17.1160
Mobile	0.8753	0.9503	5.0023	7.5200e-003	0.6274	8.2700e-003	0.6356	0.1681	7.7500e-003	0.1759	0.0000	696.0793	696.0793	0.0759	0.0571	715.0006
Waste						0.0000	0.0000		0.0000	0.0000	4.0740	0.0000	4.0740	0.2408	0.0000	10.0932
Water						0.0000	0.0000		0.0000	0.0000	0.1626	0.3087	0.4713	0.0168	4.0000e-004	1.0095
Total	0.8997	0.9615	5.0118	7.5900e-003	0.6274	9.1200e-003	0.6365	0.1681	8.6000e-003	0.1767	4.2367	713.3841	717.6208	0.3344	0.0579	743.2196

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0231	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Energy	1.2300e-003	0.0112	9.3700e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	16.9958	16.9958	1.0200e-003	3.2000e-004	17.1160
Mobile	0.8753	0.9503	5.0023	7.5200e-003	0.6274	8.2700e-003	0.6356	0.1681	7.7500e-003	0.1759	0.0000	696.0793	696.0793	0.0759	0.0571	715.0006
Waste						0.0000	0.0000		0.0000	0.0000	4.0740	0.0000	4.0740	0.2408	0.0000	10.0932
Water						0.0000	0.0000		0.0000	0.0000	0.1626	0.3087	0.4713	0.0168	4.0000e-004	1.0095
Total	0.8997	0.9615	5.0118	7.5900e-003	0.6274	9.1200e-003	0.6365	0.1681	8.6000e-003	0.1767	4.2367	713.3841	717.6208	0.3344	0.0579	743.2196

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/9/2023	6/30/2023	5	125	
2	Paving	Paving	7/1/2023	7/14/2023	5	10	
3	Architectural Coating	Architectural Coating	7/15/2023	7/28/2023	5	10	

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.17

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 6,111; Non-Residential Outdoor: 2,037; Striped Parking Area: 3,063 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	23.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Use Cleaner Engines for Construction Equipment

3.2 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	0.0952	0.7319	0.7882	1.3800e-003		0.0322	0.0322		0.0311	0.0311	0.0000	113.4995	113.4995	0.0193	0.0000	113.9813
Total	0.0952	0.7319	0.7882	1.3800e-003		0.0322	0.0322		0.0311	0.0311	0.0000	113.4995	113.4995	0.0193	0.0000	113.9813

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0248	8.3700e-003	1.2000e-004	3.7200e-003	1.6000e-004	3.8800e-003	1.0800e-003	1.6000e-004	1.2300e-003	0.0000	11.0038	11.0038	4.0000e-005	1.6100e-003	11.4841
Worker	4.9200e-003	3.2300e-003	0.0400	1.0000e-004	0.0115	7.0000e-005	0.0115	3.0400e-003	6.0000e-005	3.1100e-003	0.0000	9.5147	9.5147	3.2000e-004	2.8000e-004	9.6071
Total	5.5900e-003	0.0281	0.0484	2.2000e-004	0.0152	2.3000e-004	0.0154	4.1200e-003	2.2000e-004	4.3400e-003	0.0000	20.5185	20.5185	3.6000e-004	1.8900e-003	21.0912

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Building Construction - 2023

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	0.0631	0.3744	0.8490	1.3800e-003		0.0150	0.0150		0.0147	0.0147	0.0000	113.4993	113.4993	0.0193	0.0000	113.9812
Total	0.0631	0.3744	0.8490	1.3800e-003		0.0150	0.0150		0.0147	0.0147	0.0000	113.4993	113.4993	0.0193	0.0000	113.9812

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0248	8.3700e-003	1.2000e-004	3.7200e-003	1.6000e-004	3.8800e-003	1.0800e-003	1.6000e-004	1.2300e-003	0.0000	11.0038	11.0038	4.0000e-005	1.6100e-003	11.4841
Worker	4.9200e-003	3.2300e-003	0.0400	1.0000e-004	0.0115	7.0000e-005	0.0115	3.0400e-003	6.0000e-005	3.1100e-003	0.0000	9.5147	9.5147	3.2000e-004	2.8000e-004	9.6071
Total	5.5900e-003	0.0281	0.0484	2.2000e-004	0.0152	2.3000e-004	0.0154	4.1200e-003	2.2000e-004	4.3400e-003	0.0000	20.5185	20.5185	3.6000e-004	1.8900e-003	21.0912

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Paving - 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	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	1.5300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.7500e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.5000e-004	1.8100e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4302	0.4302	1.0000e-005	1.0000e-005	0.4344
Total	2.2000e-004	1.5000e-004	1.8100e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4302	0.4302	1.0000e-005	1.0000e-005	0.4344

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Paving - 2023

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	2.5000e-003	0.0237	0.0454	7.0000e-005		1.1900e-003	1.1900e-003		1.0900e-003	1.0900e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	1.5300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.0300e-003	0.0237	0.0454	7.0000e-005		1.1900e-003	1.1900e-003		1.0900e-003	1.0900e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.5000e-004	1.8100e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4302	0.4302	1.0000e-005	1.0000e-005	0.4344
Total	2.2000e-004	1.5000e-004	1.8100e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4302	0.4302	1.0000e-005	1.0000e-005	0.4344

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Architectural Coating - 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					
Archit. Coating	0.0390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	0.0399	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785

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	9.0000e-005	6.0000e-005	7.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1655	0.1655	1.0000e-005	0.0000	0.1671
Total	9.0000e-005	6.0000e-005	7.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1655	0.1655	1.0000e-005	0.0000	0.1671

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Architectural Coating - 2023

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	0.0390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	0.0391	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785

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	9.0000e-005	6.0000e-005	7.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1655	0.1655	1.0000e-005	0.0000	0.1671
Total	9.0000e-005	6.0000e-005	7.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1655	0.1655	1.0000e-005	0.0000	0.1671

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8753	0.9503	5.0023	7.5200e-003	0.6274	8.2700e-003	0.6356	0.1681	7.7500e-003	0.1759	0.0000	696.0793	696.0793	0.0759	0.0571	715.0006
Unmitigated	0.8753	0.9503	5.0023	7.5200e-003	0.6274	8.2700e-003	0.6356	0.1681	7.7500e-003	0.1759	0.0000	696.0793	696.0793	0.0759	0.0571	715.0006

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	1,966.23	1,966.23	1966.23	1,054,694	1,054,694
Fast Food Restaurant w/o Drive Thru	318.53	640.32	460.00	620,373	620,373
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	2,284.76	2,606.55	2,426.23	1,675,067	1,675,067

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Fast Food Restaurant w/o Drive	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700
Fast Food Restaurant w/o Drive Thru	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700
Other Asphalt Surfaces	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700
Parking Lot	0.500104	0.052860	0.172660	0.158983	0.033384	0.008488	0.010945	0.028437	0.000810	0.000210	0.026444	0.001975	0.004700

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.8547	4.8547	7.9000e-004	1.0000e-004	4.9027
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.8547	4.8547	7.9000e-004	1.0000e-004	4.9027
NaturalGas Mitigated	1.2300e-003	0.0112	9.3700e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.1412	12.1412	2.3000e-004	2.2000e-004	12.2133
NaturalGas Unmitigated	1.2300e-003	0.0112	9.3700e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.1412	12.1412	2.3000e-004	2.2000e-004	12.2133

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market with Gas Pumps	33421.5	1.8000e-004	1.6400e-003	1.3800e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7835	1.7835	3.0000e-005	3.0000e-005	1.7941
Fast Food Restaurant w/o Drive Thru	194095	1.0500e-003	9.5100e-003	7.9900e-003	6.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004	0.0000	10.3577	10.3577	2.0000e-004	1.9000e-004	10.4192
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		1.2300e-003	0.0112	9.3700e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	12.1412	12.1412	2.3000e-004	2.2000e-004	12.2133

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market with Gas Pumps	33421.5	1.8000e-004	1.6400e-003	1.3800e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7835	1.7835	3.0000e-005	3.0000e-005	1.7941
Fast Food Restaurant w/o Drive Thru	194095	1.0500e-003	9.5100e-003	7.9900e-003	6.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004	0.0000	10.3577	10.3577	2.0000e-004	1.9000e-004	10.4192
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		1.2300e-003	0.0112	9.3700e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	12.1412	12.1412	2.3000e-004	2.2000e-004	12.2133

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	24948	2.3083	3.7000e-004	5.0000e-005	2.3311
Fast Food Restaurant w/o Drive Thru	26121.5	2.4169	3.9000e-004	5.0000e-005	2.4408
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	1400	0.1295	2.0000e-005	0.0000	0.1308
Total		4.8547	7.8000e-004	1.0000e-004	4.9027

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	24948	2.3083	3.7000e-004	5.0000e-005	2.3311
Fast Food Restaurant w/o Drive Thru	26121.5	2.4169	3.9000e-004	5.0000e-005	2.4408
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	1400	0.1295	2.0000e-005	0.0000	0.1308
Total		4.8547	7.8000e-004	1.0000e-004	4.9027

6.0 Area Detail

6.1 Mitigation Measures Area

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0231	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Unmitigated	0.0231	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0192					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Total	0.0231	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	3.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0192					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Total	0.0231	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.4713	0.0168	4.0000e-004	1.0095
Unmitigated	0.4713	0.0168	4.0000e-004	1.0095

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.233328 / 0.143008	0.2372	7.6300e-003	1.8000e-004	0.4823
Fast Food Restaurant w/o Drive Thru	0.279251 / 0.0178245	0.2342	9.1200e-003	2.2000e-004	0.5271
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.4713	0.0168	4.0000e-004	1.0095

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.233328 / 0.143008	0.2372	7.6300e-003	1.8000e-004	0.4823
Fast Food Restaurant w/o Drive Thru	0.279251 / 0.0178245	0.2342	9.1200e-003	2.2000e-004	0.5271
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.4713	0.0168	4.0000e-004	1.0095

8.0 Waste Detail

8.1 Mitigation Measures Waste

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.0740	0.2408	0.0000	10.0932
Unmitigated	4.0740	0.2408	0.0000	10.0932

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market with Gas Pumps	9.47	1.9223	0.1136	0.0000	4.7625
Fast Food Restaurant w/o Drive Thru	10.6	2.1517	0.1272	0.0000	5.3308
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		4.0740	0.2408	0.0000	10.0932

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market with Gas Pumps	9.47	1.9223	0.1136	0.0000	4.7625
Fast Food Restaurant w/o Drive Thru	10.6	2.1517	0.1272	0.0000	5.3308
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		4.0740	0.2408	0.0000	10.0932

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Mitigated - SWS Center - Phase 1 Fuel Station/Conv Store with Sandwich Shop - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number
----------------	--------

11.0 Vegetation

SWS - Coffee Shop - Madera County, Annual

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

**SWS - Coffee Shop
Madera County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.83	Acre	0.83	36,154.80	0
Parking Lot	43.00	Space	0.39	17,200.00	0
Fast Food Restaurant with Drive Thru	2.22	1000sqft	0.05	2,220.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.9	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Applicant provided schedule

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	130.00

2.0 Emissions Summary

SWS - Coffee Shop - Madera County, 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					
2024	0.0654	0.5006	0.5763	1.1100e-003	0.0106	0.0198	0.0303	2.8700e-003	0.0191	0.0219	0.0000	93.1355	93.1355	0.0134	1.2800e-003	93.8527
2025	0.0623	0.2658	0.3373	6.3000e-004	5.9400e-003	0.0100	0.0160	1.6100e-003	9.6100e-003	0.0112	0.0000	53.6339	53.6339	8.4300e-003	6.3000e-004	54.0331
Maximum	0.0654	0.5006	0.5763	1.1100e-003	0.0106	0.0198	0.0303	2.8700e-003	0.0191	0.0219	0.0000	93.1355	93.1355	0.0134	1.2800e-003	93.8527

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					
2024	0.0654	0.5006	0.5763	1.1100e-003	0.0106	0.0198	0.0303	2.8700e-003	0.0191	0.0219	0.0000	93.1354	93.1354	0.0134	1.2800e-003	93.8526
2025	0.0623	0.2658	0.3373	6.3000e-004	5.9400e-003	0.0100	0.0160	1.6100e-003	9.6100e-003	0.0112	0.0000	53.6338	53.6338	8.4300e-003	6.3000e-004	54.0331
Maximum	0.0654	0.5006	0.5763	1.1100e-003	0.0106	0.0198	0.0303	2.8700e-003	0.0191	0.0219	0.0000	93.1354	93.1354	0.0134	1.2800e-003	93.8526

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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	9-2-2024	12-1-2024	0.4231	0.4231
2	12-2-2024	3-1-2025	0.4003	0.4003
3	3-2-2025	6-1-2025	0.0624	0.0624
		Highest	0.4231	0.4231

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	0.0148	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004
Energy	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	31.2490	31.2490	1.5100e-003	5.8000e-004	31.4599
Mobile	0.4065	0.4851	2.5565	4.3100e-003	0.3821	4.6100e-003	0.3867	0.1024	4.3200e-003	0.1067	0.0000	407.7912	407.7912	0.0362	0.0296	417.5217
Waste						0.0000	0.0000		0.0000	0.0000	5.1905	0.0000	5.1905	0.3068	0.0000	12.8592
Water						0.0000	0.0000		0.0000	0.0000	0.2138	0.3513	0.5651	0.0220	5.3000e-004	1.2720
Total	0.4238	0.5080	2.5762	4.4500e-003	0.3821	6.3500e-003	0.3884	0.1024	6.0600e-003	0.1084	5.4043	439.3924	444.7966	0.3664	0.0307	463.1136

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0148	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004
Energy	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	31.2490	31.2490	1.5100e-003	5.8000e-004	31.4599
Mobile	0.4065	0.4851	2.5565	4.3100e-003	0.3821	4.6100e-003	0.3867	0.1024	4.3200e-003	0.1067	0.0000	407.7912	407.7912	0.0362	0.0296	417.5217
Waste						0.0000	0.0000		0.0000	0.0000	5.1905	0.0000	5.1905	0.3068	0.0000	12.8592
Water						0.0000	0.0000		0.0000	0.0000	0.2138	0.3513	0.5651	0.0220	5.3000e-004	1.2720
Total	0.4238	0.5080	2.5762	4.4500e-003	0.3821	6.3500e-003	0.3884	0.1024	6.0600e-003	0.1084	5.4043	439.3924	444.7966	0.3664	0.0307	463.1136

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	9/2/2024	2/28/2025	5	130	
2	Paving	Paving	3/1/2025	3/14/2025	5	10	
3	Architectural Coating	Architectural Coating	3/15/2025	3/28/2025	5	10	

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

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.22

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,330; Non-Residential Outdoor: 1,110; Striped Parking Area: 3,201 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	23.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 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	0.0618	0.4813	0.5445	9.6000e-004		0.0196	0.0196		0.0189	0.0189	0.0000	79.0009	79.0009	0.0132	0.0000	79.3298
Total	0.0618	0.4813	0.5445	9.6000e-004		0.0196	0.0196		0.0189	0.0189	0.0000	79.0009	79.0009	0.0132	0.0000	79.3298

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5000e-004	0.0173	5.5900e-003	8.0000e-005	2.5900e-003	1.1000e-004	2.7000e-003	7.5000e-004	1.1000e-004	8.6000e-004	0.0000	7.5414	7.5414	3.0000e-005	1.1000e-003	7.8701
Worker	3.1700e-003	1.9900e-003	0.0262	7.0000e-005	7.9700e-003	5.0000e-005	8.0200e-003	2.1200e-003	4.0000e-005	2.1600e-003	0.0000	6.5932	6.5932	2.0000e-004	1.8000e-004	6.6527
Total	3.6200e-003	0.0193	0.0318	1.5000e-004	0.0106	1.6000e-004	0.0107	2.8700e-003	1.5000e-004	3.0200e-003	0.0000	14.1346	14.1346	2.3000e-004	1.2800e-003	14.5228

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3.2 Building Construction - 2024

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	0.0618	0.4813	0.5445	9.6000e-004		0.0196	0.0196		0.0189	0.0189	0.0000	79.0008	79.0008	0.0132	0.0000	79.3297
Total	0.0618	0.4813	0.5445	9.6000e-004		0.0196	0.0196		0.0189	0.0189	0.0000	79.0008	79.0008	0.0132	0.0000	79.3297

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5000e-004	0.0173	5.5900e-003	8.0000e-005	2.5900e-003	1.1000e-004	2.7000e-003	7.5000e-004	1.1000e-004	8.6000e-004	0.0000	7.5414	7.5414	3.0000e-005	1.1000e-003	7.8701
Worker	3.1700e-003	1.9900e-003	0.0262	7.0000e-005	7.9700e-003	5.0000e-005	8.0200e-003	2.1200e-003	4.0000e-005	2.1600e-003	0.0000	6.5932	6.5932	2.0000e-004	1.8000e-004	6.6527
Total	3.6200e-003	0.0193	0.0318	1.5000e-004	0.0106	1.6000e-004	0.0107	2.8700e-003	1.5000e-004	3.0200e-003	0.0000	14.1346	14.1346	2.3000e-004	1.2800e-003	14.5228

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3.2 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0285	0.2239	0.2675	4.7000e-004		8.4400e-003	8.4400e-003		8.1400e-003	8.1400e-003	0.0000	39.0509	39.0509	6.3800e-003	0.0000	39.2103
Total	0.0285	0.2239	0.2675	4.7000e-004		8.4400e-003	8.4400e-003		8.1400e-003	8.1400e-003	0.0000	39.0509	39.0509	6.3800e-003	0.0000	39.2103

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	2.2000e-004	8.5100e-003	2.6800e-003	4.0000e-005	1.2800e-003	6.0000e-005	1.3400e-003	3.7000e-004	5.0000e-005	4.2000e-004	0.0000	3.6625	3.6625	1.0000e-005	5.3000e-004	3.8218
Worker	1.4500e-003	8.7000e-004	0.0120	3.0000e-005	3.9400e-003	2.0000e-005	3.9600e-003	1.0500e-003	2.0000e-005	1.0700e-003	0.0000	3.1786	3.1786	9.0000e-005	8.0000e-005	3.2058
Total	1.6700e-003	9.3800e-003	0.0147	7.0000e-005	5.2200e-003	8.0000e-005	5.3000e-003	1.4200e-003	7.0000e-005	1.4900e-003	0.0000	6.8411	6.8411	1.0000e-004	6.1000e-004	7.0276

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3.2 Building Construction - 2025

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	0.0285	0.2239	0.2675	4.7000e-004		8.4400e-003	8.4400e-003		8.1400e-003	8.1400e-003	0.0000	39.0509	39.0509	6.3800e-003	0.0000	39.2103
Total	0.0285	0.2239	0.2675	4.7000e-004		8.4400e-003	8.4400e-003		8.1400e-003	8.1400e-003	0.0000	39.0509	39.0509	6.3800e-003	0.0000	39.2103

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	2.2000e-004	8.5100e-003	2.6800e-003	4.0000e-005	1.2800e-003	6.0000e-005	1.3400e-003	3.7000e-004	5.0000e-005	4.2000e-004	0.0000	3.6625	3.6625	1.0000e-005	5.3000e-004	3.8218
Worker	1.4500e-003	8.7000e-004	0.0120	3.0000e-005	3.9400e-003	2.0000e-005	3.9600e-003	1.0500e-003	2.0000e-005	1.0700e-003	0.0000	3.1786	3.1786	9.0000e-005	8.0000e-005	3.2058
Total	1.6700e-003	9.3800e-003	0.0147	7.0000e-005	5.2200e-003	8.0000e-005	5.3000e-003	1.4200e-003	7.0000e-005	1.4900e-003	0.0000	6.8411	6.8411	1.0000e-004	6.1000e-004	7.0276

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

3.3 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334
Paving	1.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334

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	1.9000e-004	1.1000e-004	1.5700e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4178	0.4178	1.0000e-005	1.0000e-005	0.4214
Total	1.9000e-004	1.1000e-004	1.5700e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4178	0.4178	1.0000e-005	1.0000e-005	0.4214

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3.3 Paving - 2025

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	2.8700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334
Paving	1.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334

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	1.9000e-004	1.1000e-004	1.5700e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4178	0.4178	1.0000e-005	1.0000e-005	0.4214
Total	1.9000e-004	1.1000e-004	1.5700e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4178	0.4178	1.0000e-005	1.0000e-005	0.4214

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3.4 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0266					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.0274	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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	7.0000e-005	4.0000e-005	6.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1607	0.1607	0.0000	0.0000	0.1621
Total	7.0000e-005	4.0000e-005	6.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1607	0.1607	0.0000	0.0000	0.1621

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3.4 Architectural Coating - 2025

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	0.0266					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.0274	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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	7.0000e-005	4.0000e-005	6.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1607	0.1607	0.0000	0.0000	0.1621
Total	7.0000e-005	4.0000e-005	6.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1607	0.1607	0.0000	0.0000	0.1621

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4065	0.4851	2.5565	4.3100e-003	0.3821	4.6100e-003	0.3867	0.1024	4.3200e-003	0.1067	0.0000	407.7912	407.7912	0.0362	0.0296	417.5217
Unmitigated	0.4065	0.4851	2.5565	4.3100e-003	0.3821	4.6100e-003	0.3867	0.1024	4.3200e-003	0.1067	0.0000	407.7912	407.7912	0.0362	0.0296	417.5217

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	1,045.51	1,367.79	1049.13	1,020,344	1,020,344
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	1,045.51	1,367.79	1,049.13	1,020,344	1,020,344

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936	0.004446
Other Asphalt Surfaces	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936	0.004446
Parking Lot	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936	0.004446

5.0 Energy Detail

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	6.3637	6.3637	1.0300e-003	1.2000e-004	6.4267
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6.3637	6.3637	1.0300e-003	1.2000e-004	6.4267
NaturalGas Mitigated	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0332
NaturalGas Unmitigated	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0332

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	466333	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0332
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0332

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

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	466333	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0332
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0332

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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			
Fast Food Restaurant with Drive Thru	62759.4	5.8067	9.4000e-004	1.1000e-004	5.8642
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	6020	0.5570	9.0000e-005	1.0000e-005	0.5625
Total		6.3637	1.0300e-003	1.2000e-004	6.4267

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	62759.4	5.8067	9.4000e-004	1.1000e-004	5.8642
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	6020	0.5570	9.0000e-005	1.0000e-005	0.5625
Total		6.3637	1.0300e-003	1.2000e-004	6.4267

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0148	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004
Unmitigated	0.0148	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0121					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004
Total	0.0148	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0121					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004
Total	0.0148	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.5651	0.0220	5.3000e-004	1.2720
Unmitigated	0.5651	0.0220	5.3000e-004	1.2720

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.673845 / 0.0430114	0.5651	0.0220	5.3000e-004	1.2720
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.5651	0.0220	5.3000e-004	1.2720

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.673845 / 0.0430114	0.5651	0.0220	5.3000e-004	1.2720
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.5651	0.0220	5.3000e-004	1.2720

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.1905	0.3068	0.0000	12.8592
Unmitigated	5.1905	0.3068	0.0000	12.8592

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	25.57	5.1905	0.3068	0.0000	12.8592
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		5.1905	0.3068	0.0000	12.8592

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	25.57	5.1905	0.3068	0.0000	12.8592
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		5.1905	0.3068	0.0000	12.8592

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

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

11.0 Vegetation

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	3.15	1000sqft	0.07	3,150.00	0
Fast Food Restaurant w/o Drive Thru	0.92	1000sqft	0.02	924.00	0
Fast Food Restaurant with Drive Thru	2.22	1000sqft	0.05	2,220.00	0
Parking Lot	53.00	Space	0.48	21,200.00	0
Other Non-Asphalt Surfaces	6.50	1000sqft	0.15	6,500.00	0
Other Asphalt Surfaces	1.76	Acre	1.76	76,665.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.9	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	12/11/2025	12/13/2024
tblConstructionPhase	PhaseStartDate	11/28/2025	12/1/2024

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

2.0 Emissions Summary

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	0.0379	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003
Energy	3.7400e-003	0.0340	0.0286	2.0000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	48.2449	48.2449	2.5200e-003	9.0000e-004	48.5759
Mobile	1.2328	1.3923	7.3425	0.0116	1.0103	0.0126	1.0228	0.2707	0.0118	0.2825	0.0000	1,097.0615	1,097.0615	0.1072	0.0845	1,124.9257
Waste						0.0000	0.0000		0.0000	0.0000	9.2645	0.0000	9.2645	0.5475	0.0000	22.9524
Water						0.0000	0.0000		0.0000	0.0000	0.3764	0.6600	1.0364	0.0388	9.3000e-004	2.2814
Total	1.2745	1.4263	7.3716	0.0118	1.0103	0.0152	1.0254	0.2707	0.0144	0.2850	9.6409	1,145.9676	1,155.6085	0.6960	0.0863	1,198.7367

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	0.0379	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003

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

Energy	3.7400e-003	0.0340	0.0286	2.0000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	48.2449	48.2449	2.5200e-003	9.0000e-004	48.5759
Mobile	1.2328	1.3923	7.3425	0.0116	1.0103	0.0126	1.0228	0.2707	0.0118	0.2825	0.0000	1,097.0615	1,097.0615	0.1072	0.0845	1,124.9257
Waste						0.0000	0.0000		0.0000	0.0000	9.2645	0.0000	9.2645	0.5475	0.0000	22.9524
Water						0.0000	0.0000		0.0000	0.0000	0.3764	0.6600	1.0364	0.0388	9.3000e-004	2.2814
Total	1.2745	1.4263	7.3716	0.0118	1.0103	0.0152	1.0254	0.2707	0.0144	0.2850	9.6409	1,145.9676	1,155.6085	0.6960	0.0863	1,198.7367

	ROG	NOx	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	Architectural Coating	Architectural Coating	12/1/2024	12/13/2024	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,441; Non-Residential Outdoor: 3,147; Striped Parking Area: 6,262 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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

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
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 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	0.0655					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.0664	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.1800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2966	0.2966	1.0000e-005	1.0000e-005	0.2992
Total	1.4000e-004	9.0000e-005	1.1800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2966	0.2966	1.0000e-005	1.0000e-005	0.2992

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	0.0655					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.0664	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.1800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2966	0.2966	1.0000e-005	1.0000e-005	0.2992
Total	1.4000e-004	9.0000e-005	1.1800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2966	0.2966	1.0000e-005	1.0000e-005	0.2992

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2328	1.3923	7.3425	0.0116	1.0103	0.0126	1.0228	0.2707	0.0118	0.2825	0.0000	1,097.0615	1,097.0615	0.1072	0.0845	1,124.9257
Unmitigated	1.2328	1.3923	7.3425	0.0116	1.0103	0.0126	1.0228	0.2707	0.0118	0.2825	0.0000	1,097.0615	1,097.0615	0.1072	0.0845	1,124.9257

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	1,966.23	1,966.23	1966.23	1,054,694	1,054,694
Fast Food Restaurant w/o Drive Thru	319.92	643.10	462.00	623,070	623,070

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

Fast Food Restaurant with Drive Thru	1,045.51	1,367.79	1049.13	1,020,344	1,020,344
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	3,331.66	3,977.12	3,477.36	2,698,109	2,698,109

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Fast Food Restaurant w/o Drive	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS
Convenience Market with Gas	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936
Fast Food Restaurant w/o Drive	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936
Fast Food Restaurant with Drive	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936
Other Asphalt Surfaces	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936
Other Non-Asphalt Surfaces	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936
Parking Lot	0.508332	0.052835	0.171831	0.153658	0.031826	0.008212	0.011069	0.028857	0.000820	0.000211	0.025967	0.001936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Total		3.7400e-003	0.0340	0.0286	2.1000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	37.0265	37.0265	7.1000e-004	6.8000e-004	37.2
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Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market with Gas	33421.5	1.8000e-004	1.6400e-003	1.3800e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7835	1.7835	3.0000e-005	3.0000e-005	1.79
Fast Food Restaurant w/o Drive Thru	194095	1.0500e-003	9.5100e-003	7.9900e-003	6.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004	0.0000	10.3577	10.3577	2.0000e-004	1.9000e-004	10.4
Fast Food Restaurant with Drive Thru	466333	2.5100e-003	0.0229	0.0192	1.4000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	24.8853	24.8853	4.8000e-004	4.6000e-004	25.0
Other Asphalt Surfaces	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	0.00
Other Non-Asphalt Surfaces	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	0.00
Parking Lot	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	0.00
Total		3.7400e-003	0.0340	0.0286	2.1000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	37.0265	37.0265	7.1000e-004	6.8000e-004	37.2

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	24948	2.3083	3.7000e-004	5.0000e-005	2.3311
Fast Food Restaurant w/o Drive Thru	26121.5	2.4169	3.9000e-004	5.0000e-005	2.4408
Fast Food Restaurant with Drive Thru	62759.4	5.8067	9.4000e-004	1.1000e-004	5.8642
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7420	0.6865	1.1000e-004	1.0000e-005	0.6933
Total		11.2184	1.8100e-003	2.2000e-004	11.3293

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	24948	2.3083	3.7000e-004	5.0000e-005	2.3311
Fast Food Restaurant w/o Drive Thru	26121.5	2.4169	3.9000e-004	5.0000e-005	2.4408
Fast Food Restaurant with Drive Thru	62759.4	5.8067	9.4000e-004	1.1000e-004	5.8642
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7420	0.6865	1.1000e-004	1.0000e-005	0.6933

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

Landscaping	6.0000e-005	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003
Total	0.0379	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003

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	6.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0313					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003
Total	0.0379	1.0000e-005	6.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2100e-003	1.2100e-003	0.0000	0.0000	1.2900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	MT/yr			
Mitigated	1.0364	0.0388	9.3000e-004	2.2814
Unmitigated	1.0364	0.0388	9.3000e-004	2.2814

7.2 Water by Land Use

Unmitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.233328 / 0.143008	0.2372	7.6300e-003	1.8000e-004	0.4823
Fast Food Restaurant w/o	0.279251 / 0.0178245	0.2342	9.1200e-003	2.2000e-004	0.5271
Fast Food Restaurant with	0.673845 / 0.0430114	0.5651	0.0220	5.3000e-004	1.2720
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		1.0364	0.0388	9.3000e-004	2.2814

Mitigated

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

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.233328 / 0.143008	0.2372	7.6300e-003	1.8000e-004	0.4823
Fast Food Restaurant w/o	0.279251 / 0.0178245	0.2342	9.1200e-003	2.2000e-004	0.5271
Fast Food Restaurant with	0.673845 / 0.0430114	0.5651	0.0220	5.3000e-004	1.2720
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		1.0364	0.0388	9.3000e-004	2.2814

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.2645	0.5475	0.0000	22.9524

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

Unmitigated	9.2645	0.5475	0.0000	22.9524
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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market with Gas Drive-Thru	9.47	1.9223	0.1136	0.0000	4.7625
Fast Food Restaurant w/o Drive-Thru	10.6	2.1517	0.1272	0.0000	5.3308
Fast Food Restaurant with Drive-Thru	25.57	5.1905	0.3068	0.0000	12.8592
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		9.2645	0.5475	0.0000	22.9524

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	tons	MT/yr			
Convenience Market with Gas Drive-Thru	9.47	1.9223	0.1136	0.0000	4.7625
Fast Food Restaurant w/o Drive-Thru	10.6	2.1517	0.1272	0.0000	5.3308
Fast Food Restaurant with Drive-Thru	25.57	5.1905	0.3068	0.0000	12.8592
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		9.2645	0.5475	0.0000	22.9524

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation



**Traffic Impact Study
Madera County CUP 22-003
APN 051-481-009 & 010**

Yosemite Commercial Center



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Date:
April 25, 2024

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 Appendix E: Signal Warrants
 Appendix F: Fresno COG “Model Steering Committee Recommended Procedures for Using Traffic Projections from the Fresno COG Travel Model dated December 2002”

← add Appendix G
back in

1.0 Summary

1.1 Introduction

Vang Inc. Consulting Engineers prepared the Traffic Impact Study (TIS) for Madera County CUP 22-003 to examine the impacts of the development on the surrounding transportation network. The project (i.e., Yosemite Commercial Center) is located on the east side of Road 36, and the south side of State Route 145 (SR-145), in the un-incorporated area of Madera County, identified as APN 051-481-009 & 010, refer to Figure 1, page 19. The project consists of a 4,634 square feet (SF) convenience market with 8 fueling pumps for cars, two fueling pumps for trucks and 924 SF fast food restaurant with drive thru. The site plan is shown in Figure 2, page 20.

The County of Madera and Caltrans were consulted for the scope of the study. The following intersections were identified for Level of Service analysis:

1. Road 36 / SR 145
2. Road 36/Avenue 15
3. Road 36 / proposed driveway A
4. SR 145/ proposed driveway B

The following study scenarios were identified, pursuant to the County of Madera and Caltrans TIS guidelines:

- A. Existing (2022) Conditions
- B. Existing Plus Project
- C. Cumulative (2035)
- D. Cumulative (2035) Plus Project

1.2 Trip Generation

Trip generation calculations and comparison for the proposed land uses is based on Institute of Transportation Engineer's (ITE) "*Trip Generation Manual*", 11th Edition. According to Table 1 below, the project would generate **3,135** weekday car trips, **200** truck trips, **204** net new AM peak hour project trips, and **183** net new PM peak hour project trips, refer to Exhibit 1 page 18 for detailed trip generation calculations. The Trip Distribution are shown on Figure 5 page 21.

Table 1 Project Trip Generation

Land Use	ITE Code	Quantity	Weekday	Peak Hour	Enter	Exit	Total
Convenience Market Gas	945	8 Pumps	2121	AM	64	64	128
				PM	74	73	147
Truck Fueling	PCE	2 Pumps	200	AM	36	36	72
				PM	18	18	36
Fast Food Restaurant w/o Drive Thru	933	920 sf	414	AM	23	17	40
				PM	15	16	31
Total Base trips			2735	AM	123	117	240
				PM	107	107	214
Internal Capture Trips					0	0	0
Pass-by Trips (15% reduction)				AM	(-18)	(-18)	(-36)
				PM	(-15)	(-16)	(-31)
Total Net New Trips			2735	AM	105	99	204
				PM	92	91	183

AM and PM Peak Hour Rates are peak hours of adjacent street traffic for AM (7:00-9:00) and PM (4:00-6:00)
 KSF: 1000 square feet of gross floor area

← missed these comments

1.3 Level of Service and Queuing

Table 2 shows the intersection Level of Service (LOS) based on Highway Capacity Manual (HCM) 6th Edition methodologies. SR 145/Road 36 and Driveway B which are Caltrans facilities operates at LOS C or better for all scenarios. Road 36/Avenue 15 intersection and Road 36/Driveway A are located in Madera County, and are at LOS C or better.

Table 2: Intersection Level of Service

Intersection	Time Period	Existing	Existing Plus Project	Cumulative	Cumulative Plus Project
1: Rd 36/ SR145	AM	B(12.5)	C(22.0)	B(11.3)	C(17.0)
	PM	B(11.8)	C(15.9)	B(11.4)	C(15.4)
2: Rd 36/Avenue 15	AM	B(12.3)	B(13.6)	B(10.6)	B(11.4)
	PM	A(10.0)	B(10.5)	C(19.4)	C(19.4)
3: Rd 36 Driveway A	AM	-	B(12.6)	-	B(12.0)
	PM	-	B(10.8)	-	B(10.5)
4: SR145 Driveway B	AM	-	A(9.8)	-	A(9.2)
	PM	-	B(10.1)	-	A(9.4)

LOS (Delay: Seconds Per Vehicle)
 Overall intersection delay is reported for All-way STOP
 Stop controlled delay is reported for 1-way STOP
 Sources: Synchro 11, Highway Capacity Manual (6th Edition)

Table 3 shows the 95th percentile queue lengths based on HCM 6th Edition methodologies.

Table 3 : Queuing

	Existing Storage Length (ft)		Queuing AM PM		Queuing AM PM		Queuing AM PM		Queuing AM PM		Recommended Storage Length (ft)
			Existing		Existing Plus Project		Cumulative		Cumulative Plus Project		
1: Rd 36/ SR145	-	-	-	-	-	-	-	-	-	-	-
	NBL	-	25	25	75	25	25	25	50	25	75
4. SR145/ Drwy B	NBL		-	-	25	25	-	-	25	25	25

95th Percentile Queue Length in Feet
Source: Synchro 12

1.4 Signal Warrant Analysis

A Traffic Signal Warrant Analysis was conducted at intersection locations 1, and 2, to gauge the need for signalization based on California Manual of Uniform Traffic Control Devices (CAMUTCD 2014) methodologies. Table 4 shows the results of the signal warrant analysis based on existing conditions and anticipated traffic volumes. Based on the analysis the Peak Hour Signal Warrants were satisfied for Avenue 15/Road 36 for cumulative and cumulative plus project scenarios. Satisfaction of the Peak Hour warrants in itself is not justification for installation of a traffic signal. Both intersections are operating within acceptable levels of services. The County and Caltrans should continue to monitor traffic operations at both intersection intersections and make the necessary improvements when deemed necessary.

Table 4 : Signal Warrant Analysis

Intersection	8Hr Warrant 1 Met	4 Hr Warrant 2 Met	Peak Hr Warrant 3 Met
<u>Existing</u>			
1. Road 36 / SR 145	NO	NO	NO
2. Road 36/Avenue 15	NO	NO	NO
<u>Existing + Project</u>			
1. Road 36 / SR 145	NO	NO	NO
2. Road 36/Avenue 15	NO	NO	YES
<u>Cumulative</u>			
1. Road 36 / SR 145	NO	NO	NO
2. Road 36/Avenue 15	NO	NO	YES
<u>Cumulative + Project</u>			
1. Road 36 / SR 145	NO	NO	NO
2. Road 36/Avenue 15	NO	NO	YES

Refer to Appendix E, for detailed analysis.

1.5 Existing Scenario Results

The Caltrans maintained Road 36/SR 145 intersection is currently an unsignalized intersection with stop control on Road 36. SR 145 is free flowing with one lane in each direction. Rd 36/SR 145 which is a Caltrans facility operates at LOS B. Road 36/Avenue 15 intersection is located in Madera County jurisdiction, and is operating at LOS C or better. Storage at all intersections is adequate to accommodate the existing queues.

1.6 Existing Plus Project Scenario Results

Table 1 shows the vehicle trip generation based on the Institute of Transportation Engineers (ITE) Trip Generation Eleventh Edition (2021) rates. With these project trips added to the existing volumes, Rd 36/SR 145 which is maintained by Caltrans continues to operate at LOS C or better. Road 36/Avenue 15 intersection and Road 36/Driveway A is expected to continue to operate at LOS C or better. Storage at all intersections are adequate to accommodate the expected queues.

Madera County has not adopted a Vehicle Miles Travelled (VMT) threshold. However, the Project is not expected to have a significant California Environment Quality Act (CEQA) impact as it pertains to VMT.

1.7 Cumulative Scenario Results

Under Cumulative conditions, the Caltrans maintained intersections (Rd 36/SR 145 and Driveway B) are expected to operate at LOS B. Road 36/Avenue 15 intersection and Driveway A, are expected to operate at LOS C or better. Storage at all intersections are adequate to accommodate the expected queues.

The County and Caltrans should continue monitoring Rd 36/SR 145 intersection.

1.8 Cumulative Plus Project Scenario Results

Under Cumulative plus project conditions, the Caltrans maintained intersections (Rd 36/SR 145 and Driveway B) are expected to operate at LOS C. Road 36/Avenue 15 intersection and Driveway B, are expected to operate at LOS C or better. Storage at all intersections is adequate to accommodate the expected queues.

The County and Caltrans should continue monitoring Rd 36/SR 145 intersection.

1.9 Conditions of Approval

The following is a list of suggested Conditions of Approval:

1. Construct site frontage improvements along Road 36 which include, road widening, sidewalk, and street lighting.
2. To mitigate potential rear end collisions for westbound SR 145 traffic stopped at the through lane while waiting to make a left turn to southbound Road 36 to access the proposed project, it is recommended that a standard left-turn lane from westbound SR 145 to southbound Road 36 be implemented by the project proponent prior to project opening. Please note that the Highway Design Manual requires that standard shoulder width be constructed when a highway segment is widened.

3. To mitigate potential safety issues from traffic queues on SR 145 and the proposed project driveway, it is recommended that the project driveway on SR 145 be made right-in, right-out only. Manual on Uniform Traffic Control Devices (MUTCD) R5-1 “Do Not Enter” signs should be installed at the driveway facing westbound SR 145 traffic.
4. Provide adequate wayfinding, signage, and illumination on-site to optimize safety and to reduce conflicts among delivery trucks, motorists, cyclists, and pedestrians.
5. Provide adequate ingress and egress to and from the project site as represented in the Site Plan with driveways.
6. Provide pedestrian accessibility to all proposed onsite buildings
7. The project should implement the following Travel Demand Management measures
 - a. Provide onsite pedestrian sidewalk connections to all proposed buildings onsite.
 - b. Install ~~4~~ onsite electric charging station. ← as required by CBC and title 24
 - c. Encourage alternative work schedules for employees.
 - d. Encourage employees to carpool.
8. The project shall pay its fair share of the County-wide traffic impact fee.

2.0 Introduction

This transportation impact report presents the results of a transportation impact study for the proposed gas station, convenience market, drive through fast food and restaurant located at the southeast corner of Road 36 and SR 145, in Madera, California. The project consists of a 4,634 SF convenience market with 8 fueling pumps for cars, two fueling pumps for trucks and 924 SF fast food restaurant. The site plan is shown in Figure 2, page 18.

This report is prepared according to the Caltrans “Guide for the preparation of Traffic Impact Studies” (December 2002). The study examines the development’s impacts on the surrounding transportation network. The County of Madera is the lead agency under the California Environmental Quality Act (CEQA).

2.1 Scope

Per correspondence with the County of Madera and Caltrans, the following intersections were identified for Level of Service analysis:

1. Road 36 / SR 145
2. Road 36/Avenue 15
3. Road 36 / proposed driveway A
4. SR 145/ proposed driveway B

The following study scenarios were identified, pursuant to the County of Madera and Caltrans TIS guidelines:

- A. Existing (2022) Conditions
- B. Existing Plus Project
- C. Cumulative (2035)
- D. Cumulative (2035) Plus Project

The County of Madera General Plan Policy Document was adopted on October 24, 2005. Therefore, this document is used as the basis for the threshold for operational analysis.

Senate Bill (SB) 743, signed in 2013, and codified in the (CEQA) Guidelines in January 2019, changes the way transportation impacts are analyzed in the CEQA process. Vehicle miles traveled (VMT) replaces auto delay and level of service (LOS) as the metric for transportation impact determination. SB 743 went into effect statewide on July 1, 2020. The Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018, provided by Office of Planning and Research, Technical Assistance, provides a guidance for screening thresholds for Land Use projects that should be expected to have less than significant impacts without conducting detailed VMT analysis. Small projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact. Based on the projects trip generation as shown in Table 1, the project is expected to generate more than 110 trips per day. Therefore, a qualitative VMT analysis is required.

Figure 1, page 19, is a Vicinity Map showing the location of the site, the transportation network, and the study intersections.

2.2 Level of Service Standards

Level of Service (LOS) is a qualitative measure of transportation flow conditions and their perceptions by transportation system users. Vehicle LOS at intersections and along roadway segments is scaled from “A” (free flow) to “F” (congested, stop and go) according to the Transportation Research Board’s (TRB’s) Highway Capacity Manual 6th Edition.

Specific Vehicle LOS characteristics are defined in terms of average vehicle delay (seconds per vehicle) for un-signalized and signalized intersections as follows:

- A (0-10.0 sec. for un-signalized and signalized)
- B (10.1–15.0 sec. for un-signalized, 10.0-20.0 sec. for signalized)
- C (15.1-25.0 sec. for un-signalized, 20.1-35.0 sec. for signalized)
- D (25.1-35.0 sec. for un-signalized, 35.1-55.0 sec. for signalized)
- E (35.1 to 50.0 sec. for un-signalized, 55.1-80.0 sec. for signalized)
- F (50.1+ sec. for un-signalized, 80.1+ sec. for signalized)

The “Transportation and Circulation” element of the General Plan indicates the County’s goals are to maintain LOS D or better for motorized vehicles on all roadway segments and a LOS of D or better for motorized vehicles at all roadway intersections.

The SR 145, and Road 36 intersection is currently operated and maintained by Caltrans. Caltrans goal is to maintain an LOS C or better on its highway facilities.

2.3 Project Description

The proposed project is on a 2.53-acre site located on the east side of Road 36, and the south side of State Route 145, in the un-incorporated area of Madera County, identified as APN 051-481-009 & 010, refer to Figure 1, page 19. The nearest metropolitan area is the City of Madera, which is 9.8 miles to the west. The site is bordered by ~~residential~~ **SF** land uses to the south and east, and agricultural land uses to the north and west. **SF**

The project proposes to construct a 4,634 sf convenience market with 8 fueling pumps for cars, two fueling pumps for trucks and 924 sf fast food restaurant. Figure 2, page 20, is a site plan layout showing **proposed** on of the site, the on-site access drive aisles and connections to the surrounding transportation network. The project proposes one access onto Road 36, and one access onto SR 145.

The site access and on-site circulation system was reviewed by Vang Inc. Consulting Engineers, and deemed safe and compliant with standard transportation planning practices. Motorists would be able to circulate both clockwise and counterclockwise around the parking lot, and access the fueling island. Pedestrian access will be provided by a series of sidewalks and walkways connecting all the proposed buildings. Bicycle racks/lockers will be provided onsite to encourage multi-modal access to the project site. Additionally, the circulation throughout the site was designed to minimize conflicts with bicyclists, pedestrians, and other motorists.

3.0 Existing Conditions

3.1 Transportation Setting

The project study area is in the south central area of Madera County, and east of the City of Madera. This study area includes the primary roadways of State Route 145 (SR 145), Road 36, and Avenue 15. SR 145 is a highway facility maintained by Caltrans.

Madera County General Plan identifies Road 36 and Avenue 15 as a Collector. SR 145 east of City of Madera is an undivided 2 lane rural highway.

The following intersections to be analyzed were field verified. The following characteristics were noted:

- 1 Road 36 / SR 145 is a three-legged un-signalized intersection, with stop control on Road 36.
- 2 Road 36/Avenue 15 is a four-legged four way stop controlled intersection with one lane in each direction.

Figure 3, page 21, shows the Existing Conditions including roadway and intersection lane configurations, roadway speed limits, and intersection controls for the two study intersections along Road 36. Figure 4, page 22, shows the Existing (2022) Traffic Volumes obtained from manual AM (7:00-9:00) and PM (4:00-6:00) peak hour turning movement counts. Traffic counts were conducted by Metro Traffic Data at all study intersections on Thursday, June 2, 2022 (Appendix A).

3.2 Operational Analysis

The operational analysis was conducted according to the Caltrans Transportation Impact Study Guide 2020 to evaluate compliance with County of Madera and Caltrans requirements under existing without project conditions.

The Level of Service (LOS) for intersections (signed, All Way Stop, and One Way Stop) was analyzed using Synchro 12 based on Highway Capacity Manual 7th Edition methodologies.

- Peak Hour Factor (PHF) is based on actual intersection counts.

Rd 36/SR 145 operates at LOS B. Road 36/Avenue 15 intersection is operating at LOS C

3.3 Queuing Analysis

A Queuing Analysis was conducted on Synchro based on 95th percentile queue lengths to assess the adequacy of the lane storage lengths. Storage at all intersections are adequate to accommodate the existing queues.

3.4 Signal Warrant Analysis

A Traffic Signal Warrant Analysis was conducted for the study intersections 1 (SR 145 and Road 36) and intersection 2 (Road 36 and Ave 15) to gauge the need for signalization based on California Manual of Uniform Traffic Control Devices (CAMUTCD 2014) methodologies. Table 4 shows the results of the



signal warrant analysis based on existing conditions and existing traffic volumes. Based on the analysis the Signal Warrants were not satisfied for both intersections. For detailed analysis refer to Appendix E.

4.0 Project Impacts

4.1 Trip Generation

The project consists of a 4,634 SF convenience market with 8 fueling pumps for cars, two fueling pumps for trucks, 924 SF fast food restaurant, (i.e., Subway) with drive through. The site plan of Yosemite Commercial Center is shown in Figure 2, page 20.

Trip generation calculations for the proposed Project is based on the Institute of Transportation Engineer's (ITE) "*Trip Generation Manual*", 11th Edition. The project generates primary, internal capture, pass-by, and net new trips. The Project trips for each land use are summarized in Table 1. Internal captured trips are that are shared among on-site land uses. In essence the trip is generated by the project, and then visits multiple land uses during the same trip, therefore should not be counted twice for the entire site, and a reduction should be provided for these internally captured trips. For the purposes of this report no internal trip reductions will be utilized.

Pass-by trips are trips not generated by the project and therefore are already on the roadway and makes an intermediate stop on their way to a primary destination. For pass-by trips, the *ITE Trip Generation Handbook, Third Edition* (September 2017) suggests pass-by rates of 62% (AM) and 56% (PM) for Gasoline/Service Station with Convenience Market (945); and 34% (PM) for Fast Food Restaurant without Drive-Through Window (933). For the purposes of this report pass-by trip reduction will be limited to 15% pursuant to the Caltrans Traffic Impact Study (TIS) guidelines.

Land Use Codes 945 and 933 from the ITE Trip Generation are representative of the proposed Project. The trip generation for the two truck fueling positions was provided by the County's consulting traffic engineer. A Passenger Car Equivalent (PCE) of 3 was used for the truck trips. According to Table 1, the Project would generate **2,735** new weekday car and **200** truck trips. The Project is expected to generate approximately **204** and **183** net new PCE trips during the AM and PM peak hour, respectively.

4.2 Onsite Circulation and Safety

Figure 2, page 20, is a site plan layout showing the configuration of the site, the on-site access drive aisles. The project proposes one driveway access onto Road 36 and one driveway access onto SR 145. Landscaping along Road 36 and SR 145 shall be limited and restricted so as to provide 12' visibility triangle at the driveways.

Pedestrian access within the project site are provided by sidewalks and walkways connecting the proposed buildings, with minimal conflicts with vehicular traffic. Bicycle racks/lockers would be provided onsite to encourage multi-modal access to the project site.

4.3 SB 743 VMT Analysis

Senate Bill 743 (SB 743) was approved September 27, 2013, and statewide implementation was targeted for July 1, 2020. SB 743 requires land use projects under CEQA analyze the projects impacts and mitigation measures based on Vehicle Miles Traveled (VMT). This report provides an analysis of VMT for the purpose of determining SB 743 compliance for the Project. With the passage of SB 743, has become an important indicator for determining if a new development will result in a "significant transportation impact" as defined by CEQA. Based on the Project's land use information, the Project is

categorized as “retail”. Madera County has not adopted a VMT threshold therefore the California Governor’s Office of Planning and Research Technical and Advisory (December 2018) was used as the basis of the analysis. The Project is assumed to be locally serving retail that primarily caters to nearby residents and drivers already on SR 145. The assumption is that customers will frequent the Project because of its proximity (thus reducing the length of their current trip for services). Therefore, the Project is not expected to generate a substantial amount of new demand. With regards to the Project's employee trips, the Project is expected to reduce the average commuter trip lengths of residents, thus resulting in a net decrease in regional VMT. Other site related trips (e.g., employee meal breaks off site, supply deliveries, etc.) are expected to be relatively infrequent and usually short in distance. Therefore, their overall impact on VMT is likely to be minimal and less than the customer and employee trips. Since the Project is expected to serve primarily drivers already on SR 145, if this site was not developed, then another property probably would be developed elsewhere to meet existing demand. Thus, it is reasonable to assume that the alternative to the Project would not eliminate any related VMT. In conclusion, the Project is not expected to have a significant CEQA impact as it pertains to SB 743. Consequently, VMT reducing measures are not required.

5.0 Existing Plus Project Conditions

5.1 Transportation Setting

The project proposes one driveway access onto Road 36 and one driveway access onto SR 145. Figure 6, page 24, shows the Existing plus Project volumes. Project improvements to Road 36 includes pavement widening and proposed driveway.

5.2 Operational Analysis

Rd 36/SR 145 and Sr 145/Driveway B which are Caltrans facilities are expected to operate at LOS C or better. Road 36/Avenue 15 intersection and Road 35/Driveway A are located in Madera County jurisdiction, are expected to operate at LOS C or better.

5.3 Queuing Analysis

A queuing analysis was conducted using Synchro 11 to determine the 95th percentile projected queue lengths at STOP controlled approaches. Storage at all intersections are adequate to accommodate the expected queues.

5.4 Traffic Signal Warrant Analysis

A Traffic Signal Warrant Analysis was conducted for the study intersections 1 (SR 145 and Road 36) and intersection 2 (Road 36 and Ave 15), to gauge the need for signalization based on California Manual of Uniform Traffic Control Devices (CAMUTCD 2014) methodologies. Table 4 shows the results of the signal warrant analysis based on existing conditions and existing plus project traffic volumes. For detailed analysis refer to Appendix E. Satisfaction of the Peak Hour warrants in itself is not justification for installation of a traffic signal. Both intersections are operating within acceptable levels of services. The County should continue to monitor traffic operations at Road 36 and Ave 15 and make the necessary improvements when deemed necessary.

will be expanded to a 4 lane divided highway

6.0 Cumulative Conditions

6.1 Transportation Setting

It is assumed that under cumulative conditions, SR 145 ~~will remain a 2-lane undivided highway~~. Figure 8, page 26, shows the intersection conditions, lane configurations and traffic controls. Figure 9, page 27, shows the Cumulative traffic volumes. These volumes reflect the revised transportation network elements and associated traffic pattern revisions, and cumulative developments expected to come online by the full build-out of the 2035 General Plan. The traffic volumes were calculated based on data obtained from Madera County Transportation Commission (MCTC) travel demand models, using the increment method (avoiding negative growth) and TURNSW32. Figure 11, page 29, shows the Cumulative plus project the traffic volumes used in the analysis. By 2035 all planned multi-modal transportation infrastructure should be in place in conjunction with the project site improvements to provide the local residents with the luxury of healthy lifestyles through encouraging bicycling or walking, while facilitating first and last mile connections to the transportation network.

6.2 Operational Analysis

The Cumulative Plus Project Level of Service was calculated using Synchro 11 (Appendix D) based on Highway Capacity Manual 6th Edition methodologies using the following assumptions:

- Peak Hour Factor is based on HCM default of 0.92.

As shown in Table 2, under Cumulative conditions, the Caltrans maintained intersections (Rd 36/SR 145) are expected to operate at LOS B. Road 36/Avenue 15 intersection and Road 36/Driveway A are located in Madera County, expected to operate at LOS D or better.

6.3 Queuing Analysis

A queuing analysis was conducted using Synchro 11 to determine the 95th percentile projected queue lengths to assess the adequacy of the stop-controlled approaches. Storage at all intersections are adequate to accommodate the future queues.

6.4 Traffic Signal Warrant Analysis

A Traffic Signal Warrant Analysis was conducted for the study intersections 1 (SR 145 and Road 36) and intersection 2 (Road 36 and Ave 15) to gauge the need for signalization based on California Manual of Uniform Traffic Control Devices (CAMUTCD 2014) methodologies. Table 4 shows the results of the signal warrant analysis based on cumulative conditions and cumulative traffic volumes. Road 36 and Ave 15 is expected to satisfy the peak hour signal warrant.

7.0 Cumulative Plus Project Conditions

7.1 Transportation Setting

Figure 10, page 28, shows the cumulative plus project intersection conditions. Figure 11, page 29, shows the cumulative plus project traffic volumes.

7.2 Operational Analysis

Under Cumulative plus project conditions, the Caltrans maintained intersections (Rd 36/SR 145 and Driveway B) will operate at LOS C. Road 36/Avenue 15 intersection and Driveway B are located in Madera County jurisdiction, will operate at LOS C or better, refer to Table 2 for summary of intersection LOS.

7.3 Queuing Analysis

A queuing analysis was conducted using Synchro 11 to determine the 95th percentile projected queue lengths to assess the adequacy of the stop-controlled approaches. Storage at all study intersections are adequate to accommodate the future queues.

7.4 Traffic Signal Warrant Analysis

A Traffic Signal Warrant Analysis was conducted for the study intersections 1 (SR 145 and Road 36) and intersection 2 (Road 36 and Ave 15) to gauge the need for signalization based on California Manual of Uniform Traffic Control Devices (CAMUTCD 2014) methodologies. Table 4 shows the results of the signal warrant analysis based on cumulative conditions and cumulative plus project traffic volumes. Based on the analysis the Peak Hour Signal Warrants were satisfied for the Avenue 15/Road 36 intersection. For detailed analysis refer to Appendix E. Satisfaction of the Peak Hour warrants in itself is not justification for installation of a traffic signal. Both intersections are operating within acceptable levels of services. The County and Caltrans should continue to monitor traffic operations at both intersections and make the necessary improvements when deemed necessary.

8.0 Conclusions and Recommendations

8.1 Summary of Impacts

The Traffic Impact Study for the CUP 22-003 was prepared to examine the multi-modal transportation impacts of the proposed development on the surrounding transportation network, and recommend measures to conditions of approval.

With the project trips added to the existing volumes, Rd 36/SR 145 and SR 145/Driveway B continue to operate at LOS C or better. Road 36/Avenue 15 intersection and Driveway A are located in Madera County, are expected to continue to operate at LOS C or better. Storage at all intersections are adequate to accommodate the existing queues.

The Project is not expected to have a significant CEQA transportation impact as it pertains to SIS

Under Cumulative plus project conditions, the Caltrans maintained intersection (Rd 36/SR 145) are expected operate at LOS C. Road 36/Avenue 15 intersection and Driveway B are located in Madera County, expected to operate at LOS C or better.

8.2 Recommendations

It is recommended the project implement the following improvements:

1. Construct site frontage improvements along Road 36 which include, road widening, sidewalk, and street lighting.
2. To mitigate potential rear end collisions for westbound SR 145 traffic stopped at the through lane while waiting to make a left turn to southbound Road 36 to access the proposed project, it is recommended that a standard left-turn lane from westbound SR 145 to southbound Road 36 be implemented by the project proponent prior to project opening. Please note that the Highway Design Manual requires that standard shoulder width be constructed when a highway segment is widened.
3. To mitigate potential safety issues from traffic queues on SR 145 and the proposed project driveway, it is recommended that the project driveway on SR 145 be made right-in, right-out only. Manual on Uniform Traffic Control Devices (MUTCD) R5-1 “Do Not Enter” signs should be installed at the driveway facing westbound SR 145 traffic.
4. Provide adequate wayfinding, signage, and illumination on-site to optimize safety and to reduce conflicts among delivery trucks, motorists, cyclists, and pedestrians.
5. Provide adequate ingress and egress to and from the project site as represented in the Site Plan with driveways.
6. Provide pedestrian accessibility to all proposed onsite buildings
7. The project should implement the following Transportation Demand Management measures
 - a. Provide onsite pedestrian sidewalk connections to all proposed buildings onsite.
 - b. Install onsite electric charging station/parking stalls.
 - c. Encourage alternative work schedules for employees.
 - d. Encourage employees to carpool.
8. The project shall pay its fair share of the County-wide traffic impact fee.

Exhibit 1 Trip Generation Calculations

Vehicle Trip Generation															
Land Use	Building SF	Code	Unit	Average Weekday				AM Peak Hour				PM Peak Hour			
				Rate	In	Out	Total	Rate	In	Out	Total	Rate	In	Out	Total
Convenience Market with Gasoline Pumps	3697	945			50%	50%			50%	50%			50%	50%	
Trip Generation per Fueling Position			8	265.1	1061	1060	2121	16.06	64	64	128	18.42	74	73	147
Pass-By Trips ⁽²⁾								15%	10	10	20	15%	11	11	22
Truck Fueling					50%	50%			50%	50%			50%	50%	
Trip Generation per Fueling Position ⁽⁵⁾	Trucks ⁽⁵⁾		2	100	100	100	200	11.8	12	12	24	5.8	6	6	12
Pass-By Trips ⁽²⁾	PCE ^(6,7)				300	300	600	3	36	36	72	3	18	18	36
Fast Food Restaurant without drive thru	920	933			50%	50%			58%	42%			50%	50%	
Trip Generation per 1,000 sf of leasable area			0.92	450.5	207	207	414	43.18	23	17	40	33.21	15	16	31
Pass-By Trips ⁽²⁾								15%	3	3	6	15%	2	2	4
Total Unadjusted Volume					1568	1567	3135		123	117	240		107	107	214
Internal Trip Capture ⁽¹⁾					0	0	0		0	0	0		0	0	0
Pass-By Trips ⁽²⁾					0	0	0		18	18	36		15	16	31
Total Trip Adjustments/Reductions					0	0	0		18	18	36		15	16	31
Total Net New Trips added to adjacent Streets					1568	1567	3135		105	99	204		92	91	183

Remarks:

(2) Pass by Trips Reductions limited to 15% per Caltrans

(5) Truck Trip Generation based Fueling Positions provided by the County of Madera, (Lum 10/4/2023)

(6) PCE = Passenger Car Equivalent

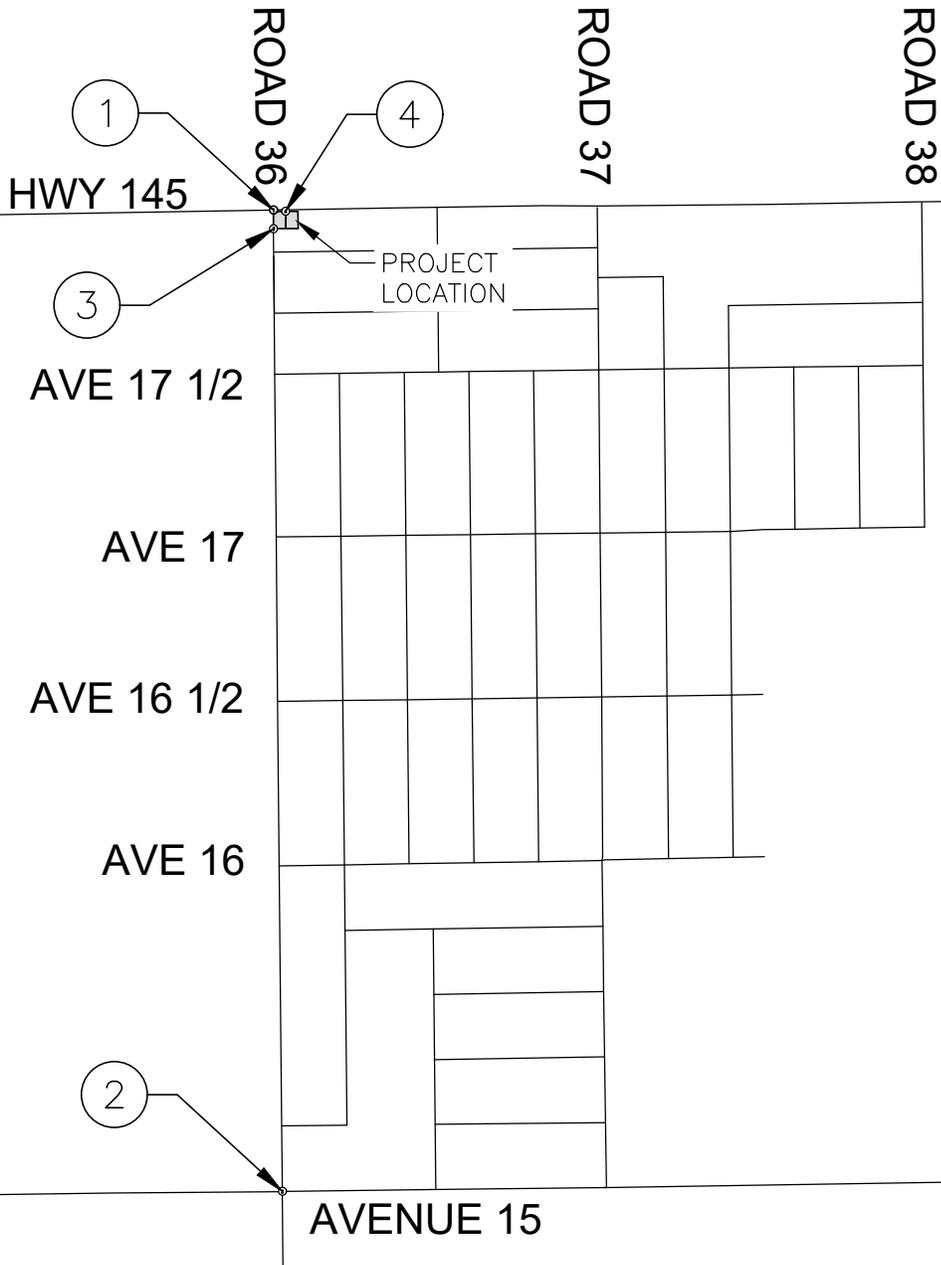
(7) Truck to PCE conversion factor 3.0 provided by the County of Madera, (Lum 10/4/2023)

AM and PM Peak Hour Rates are peak hours of adjacent street traffic for AM (7:00-9:00) and PM (4:00-6:00)

KSF: 1000 square feet of gross floor area

Source: Institute of Transportation Engineers *Trip Generation, Eleventh Edition* (2021)

Figure 1 – Vicinity Map



NOT TO SCALE



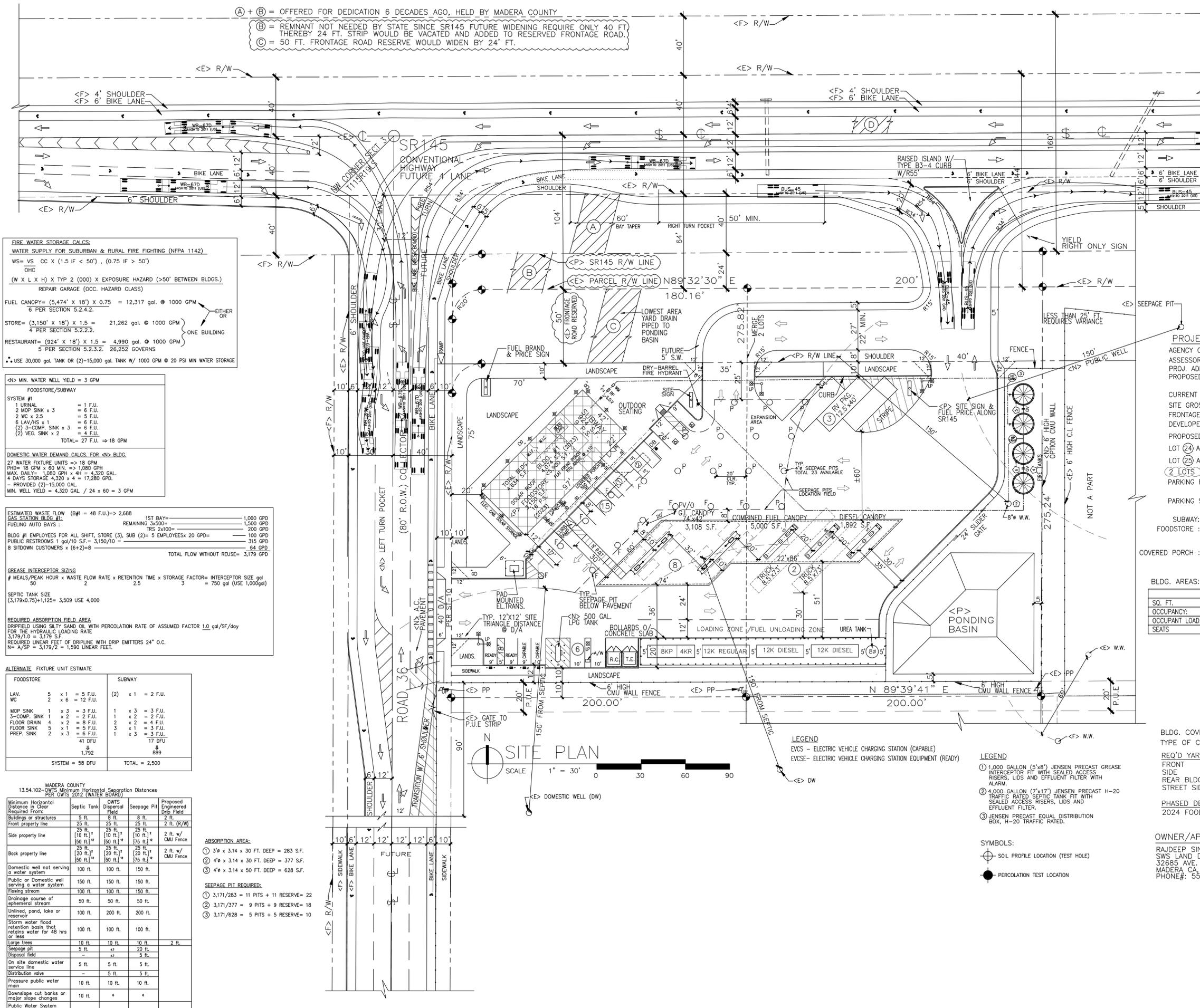
**SR 145/ ROAD 36 GAS
STATION
VICINITY MAP**

PREPARED FOR:
RAJDEEP SINGH SWS
LAND DEVELOPMENT
INC. 32655 AVENUE 7
MADERA, 93637
DATE: 7/25/22
PROJECT: 22-037

**FIGURE
1**

5/6/2024 9:00 AM

Figure 2 – Site Plan



FIRE WATER STORAGE CALCS:
 WATER SUPPLY FOR SUBURBAN & RURAL FIRE FIGHTING (NFPA 1142)
 WS = VS CC X (1.5 IF < 50'), (0.75 IF > 50')
 OHC
 (W X L X H) X TYP 2 (000) X EXPOSURE HAZARD (>50' BETWEEN BLDGS.)
 REPAIR GARAGE (OCC. HAZARD CLASS)
 FUEL CANOPY = (5,474' x 18') X 0.75 = 12,317 gal. @ 1000 GPM
 6 PER SECTION 5.2.4.2.
 STORE = (3,150' x 18') X 1.5 = 21,262 gal. @ 1000 GPM
 4 PER SECTION 5.2.2.2.
 RESTAURANT = (924' x 18') X 1.5 = 4,990 gal. @ 1000 GPM
 5 PER SECTION 5.2.3.2. 26,252 GALLONS
 * USE 30,000 gal. TANK OR (2)-15,000 gal. TANK W/ 1000 GPM @ 20 PSI MIN WATER STORAGE

DOMESTIC WATER DEMAND CALCS FOR <N> BLDG.
 27 WATER FIXTURE UNITS => 18 GPM
 PRD = 15 GPM x 60 MIN => 1,080 GPH
 MAX. DAILY = 1,080 GPH x 4H = 4,320 GAL.
 4 DAYS STORAGE 4,320 x 4 = 17,280 GPD.
 PROVIDED (2)-15,000 GAL.
 MIN. WELL YIELD = 4,320 GAL. / 24 x 60 = 3 GPM

ESTIMATED WASTE FLOW (BFI = 48 F.U.) => 2,688
 GAS STATION BLDG #1 1,000 GPD
 FUELING AUTO BAYS 1,500 GPD
 BLDG #1 EMPLOYEES FOR ALL SHIFT, STORE (3), SUB (2) = 5 EMPLOYEES x 20 GPD = 100 GPD
 PUBLIC RESTROOMS 1 gal/10 S.F. = 3,150/10 = 315 GPD
 8 SITDOWN CUSTOMERS x (6+2) = 64 GPD
 TOTAL FLOW WITHOUT REUSE = 3,179 GPD

GREASE INTERCEPTOR SIZING
 # MEALS/PEAK HOUR x WASTE FLOW RATE x RETENTION TIME x STORAGE FACTOR = INTERCEPTOR SIZE gal
 50 2 2.5 3 = 750 gal (USE 1,000 gal)

REQUIRED ABSORPTION FIELD AREA
 DRIPFIELD USING SILTY SAND OIL WITH PERCOLATION RATE OF ASSUMED FACTOR 1.0 gal/SF/day
 3,179/10 = 317.9 S.F.
 REQUIRED LINEAR FEET OF DRIFIELD WITH DRIP EMITTERS 24" O.C.
 N = A/SF = 3,179/2 = 1,590 LINEAR FEET.

ALTERNATE FIXTURE UNIT ESTIMATE

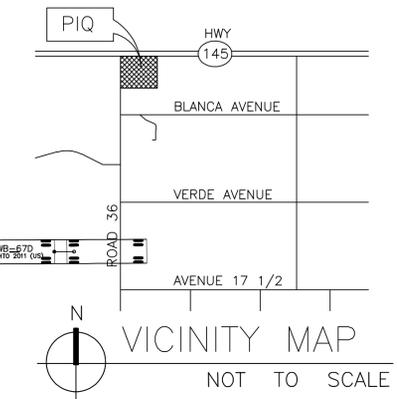
FOODSTORE	SUBWAY
LAV. 5 x 1 = 5 F.U.	(2) x 1 = 2 F.U.
WC 2 x 6 = 12 F.U.	
MOP SINK 1 x 3 = 3 F.U.	1 x 3 = 3 F.U.
3-COMP. SINK 1 x 2 = 2 F.U.	1 x 2 = 2 F.U.
FLOOR DRAIN 4 x 2 = 8 F.U.	2 x 2 = 4 F.U.
FLOOR SINK 5 x 1 = 5 F.U.	3 x 1 = 3 F.U.
PREP. SINK 2 x 3 = 6 F.U.	1 x 3 = 3 F.U.
41 DFU	17 DFU
1,792	899
SYSTEM = 58 DFU	TOTAL = 2,500

MADERA COUNTY
 13.54-102-OWTS Minimum Horizontal Separation Distances
 PER OWS 2012 WATER BOARD

Minimum Horizontal Distance in Clear Required From:	Septic Tank	OWTS Dispersal Field	Seepage Pit Field	Proposed Engineered Strip Field
Buildings or structures	5 ft.	6 ft.	8 ft.	2 ft.
Front property line	25 ft.	25 ft.	25 ft.	2 ft. w/ CMU Fence
Side property line	25 ft.	25 ft.	25 ft.	2 ft. w/ CMU Fence
Back property line	25 ft.	25 ft.	25 ft.	2 ft. w/ CMU Fence
Domestic well not serving a water system	100 ft.	100 ft.	150 ft.	
Public or Domestic well serving a water system	150 ft.	150 ft.	150 ft.	
Flowing stream	100 ft.	100 ft.	150 ft.	
Drainage course of ephemeral stream	50 ft.	50 ft.	50 ft.	
Unlined pond, lake or reservoir	100 ft.	200 ft.	200 ft.	
Storm water flood retention basin that retains water for 48 hrs or less	100 ft.	100 ft.	100 ft.	
Large trees	10 ft.	10 ft.	10 ft.	2 ft.
Seepage pit	5 ft.	5 ft.	5 ft.	
Disposal field	-	5 ft.	5 ft.	
On site domestic water service line	5 ft.	5 ft.	5 ft.	
Distribution valve	-	5 ft.	5 ft.	
Pressure public water main	10 ft.	10 ft.	10 ft.	
Downslope cut banks or major slope changes	10 ft.	-	-	
Public Water System Surface Water Intake	-	-	-	

ABSORPTION AREA:
 ① 3' x 3.14 x 30 FT. DEEP = 283 S.F.
 ② 4' x 3.14 x 30 FT. DEEP = 377 S.F.
 ③ 4' x 3.14 x 50 FT. DEEP = 628 S.F.

SEEPAGE PIT REQUIRED:
 ① 3,171/283 = 11 PITS + 11 RESERVE = 22
 ② 3,171/377 = 9 PITS + 9 RESERVE = 18
 ③ 3,171/628 = 5 PITS + 5 RESERVE = 10



LEGAL DESCRIPTION:
 THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA IN COUNTY OF MADERA, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:
 LOT NO. 24 & 25 OF TRACT NO. 151, BONADELLE RANCHOS NO. 8, ACCORDING TO THE MAP THEREOF RECORDED MAY 18, 1965, IN BOOK 11, PAGES 120 TO 135, ET SEQ., OF MAPS, MADERA COUNTY RECORDS.
 APN: 051-481-009 , LOT 24
 APN: 051-481-010 , LOT 25

PROJECT DATA
 AGENCY OF JURISDICTION: COUNTY OF MADERA
 ASSESSOR PARCEL NO.: 051-481-009 & 10
 PROJ. ADDRESS:
 PROPOSED USE: FOODSTORE & SUBWAY, GAS STATION W/ABOVE GROUND FUEL TANKS
 CURRENT ZONING: CC, PDD (PLANNED DEVELOPMENT DISTRICT)
 SITE GROSS AREA: ±110,196 S.F. = 2.53 ACRES
 FRONTAGE ROAD RESERVE 5,160 S.F.
 DEVELOPED AREA: ±105,036 S.F. = 2.41 ACRES
 PROPOSED AREA FOR DEVELOPMENT:
 LOT 24 AREA: ±55,223 S.F. = 1.27 ACRES
 LOT 25 AREA: ±54,975 S.F. = 1.26 ACRES
 2 LOTS TO BE MERGED AS ONE
 PARKING REQUIRED: FOODSTORE 1PS/200 S.F. RESTAURANT 1/100 FOR EA PKG. COMPACT 30%
 PARKING STALLS: REQUIRED PROVIDED
 SUBWAY: 924 S.F./100 = 9 P.S. 22 P.S.
 FOODSTORE: 3,150 S.F./200 = 16 P.S. 25 P.S.
 4,074 S.F. 8 P.S. (G.I. CANOPY)
 COVERED PORCH: 560 S.F. 2 P.S. (DIESEL CANOPY)
 4,634 S.F. 3 P.S. (RV PKG.) 35 P.S.

BLDG. AREAS:

SQ. FT.	BLDG. #1	G.I. CANOPY	DIESEL CANOPY
4,634 S.F.	4,634 S.F.	3,108 S.F.	1,892 S.F.
OCCUPANCY:	M	M	M
OCCUPANT LOAD:	55 (2 EXITS)	N/A	2
SEATS	10	N/A	N/A
FOODSTORE: 3,150 S.F.	4 MPD'S	2 FUELING POSITIONS	
SUBWAY: 924 S.F.	8 FUELING POSITIONS		
PORCH: 560 S.F.			
BLDG. AREA: 4,634 S.F.			
WASTE WATER: 800 GPD			
#CUSTOMERS: 300 P/D			
EMPLOYEES: 5			

BLDG. COVERAGE: 5.88%
 TYPE OF CONSTRUCTION: 2B (CANOPY + BLDG<5,900 S.F.)
 REQ'D YARDS
 FRONT = 20', RESIDENCES
 REAR BLDG. = 10'
 STREET SIDE = 10'
 PHASED DEVELOPMENT:
 2024 FOODSTORE #B1

OWNER/APPLICANT:
 RAJDEEP SINGH
 SWS LAND DEVELOPMENTS INC.
 32685 AVE. 7
 MADERA CA. 93637
 PHONE#: 559-776-8125

REVISIONS

NOV. 27, 2023
OCT. 13, 2023
SEP. 26, 2023
AUG. 8, 2023
JULY 31, 2023
MAY 10, 2023
JAN. 4, 2023
NOV. 29, 2021

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PROJECT/LOCATION
 YOSEMITE COMMERCIAL CENTER
 SR 145 & RD 36 SEC

DRAWN BY
 AESTHETICS DESIGNS
 ELIAS SALIBA ARCHITECT
 AIA, C.S.I., C.S.F., NSF
 4668 W. FINE AVE., FRESNO, CA 93722
 (559) 278-0479
 elias@saliba4668@COMCAST.NET

SHEET CONTENTS
 SITE PLAN,

SHEET NO.
 SP1

LEGEND
 EVCS - ELECTRIC VEHICLE CHARGING STATION (CAPABLE)
 EVCS-E - ELECTRIC VEHICLE CHARGING STATION EQUIPMENT (READY)

LEGEND
 ① 1,000 GALLON (5'x8') JENSEN PRECAST GREASE INTERCEPTOR FIT WITH SEALED ACCESS RISERS, LIDS AND EFFLUENT FILTER WITH ALARM.
 ② 4,000 GALLON (7'x17') JENSEN PRECAST H-20 TRAFFIC RATED SEPTIC TANK FIT WITH SEALED ACCESS RISERS, LIDS AND EFFLUENT FILTER.
 ③ JENSEN PRECAST EQUAL DISTRIBUTION BOX, H-20 TRAFFIC RATED.

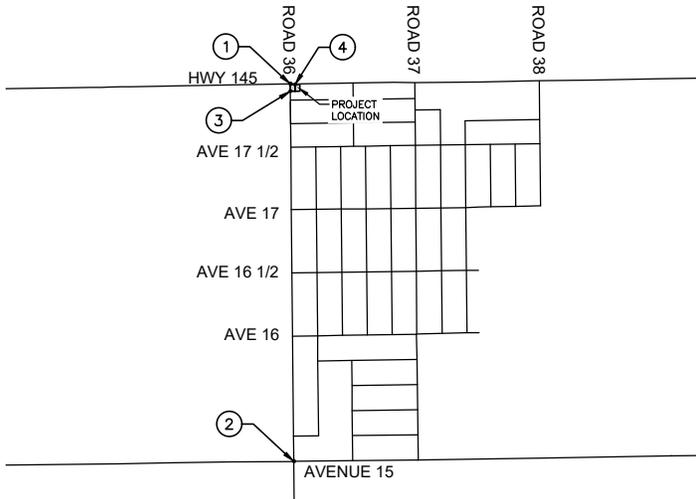
SYMBOLS:
 ⊕ SOIL PROFILE LOCATION (TEST HOLE)
 ● PERCOLATION TEST LOCATION



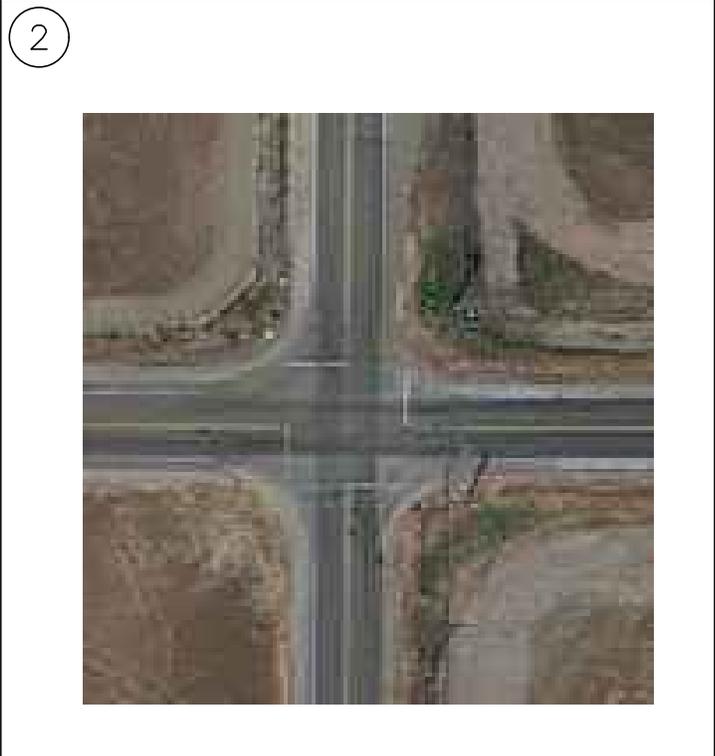
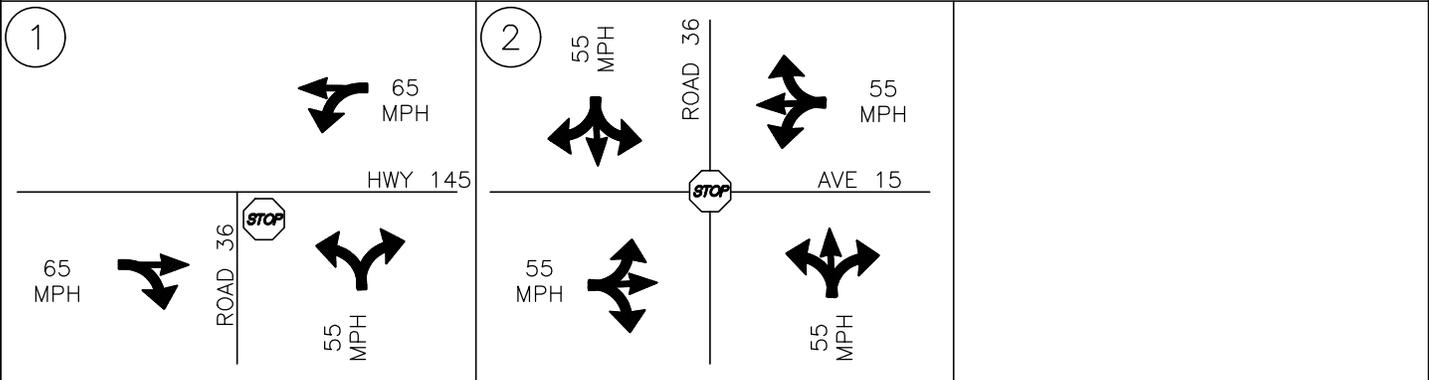
Figure 3 – Existing Conditions

LEGEND

-  DIRECTION OF TRAVEL
-  UNSIGNALIZED INTERSECTION
-  INTERSECTION NUMBER



NOT TO SCALE



SR 145/ ROAD 36 GAS STATION
EXISTING TRAFFIC CONDITIONS

PREPARED FOR:
 RAJDEEP SINGH SWS
 LAND DEVELOPMENT
 INC. 32655 AVENUE 7
 MADERA, 93637

DATE: 7/25/22
 PROJECT: 22-037

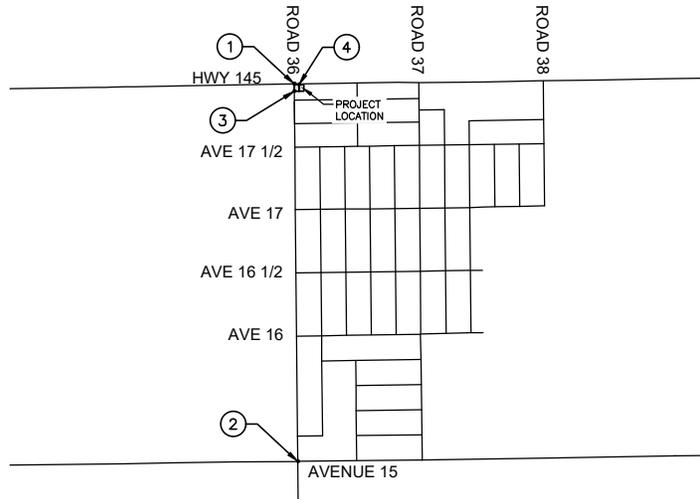
FIGURE 3

5/6/2024 9:01 AM

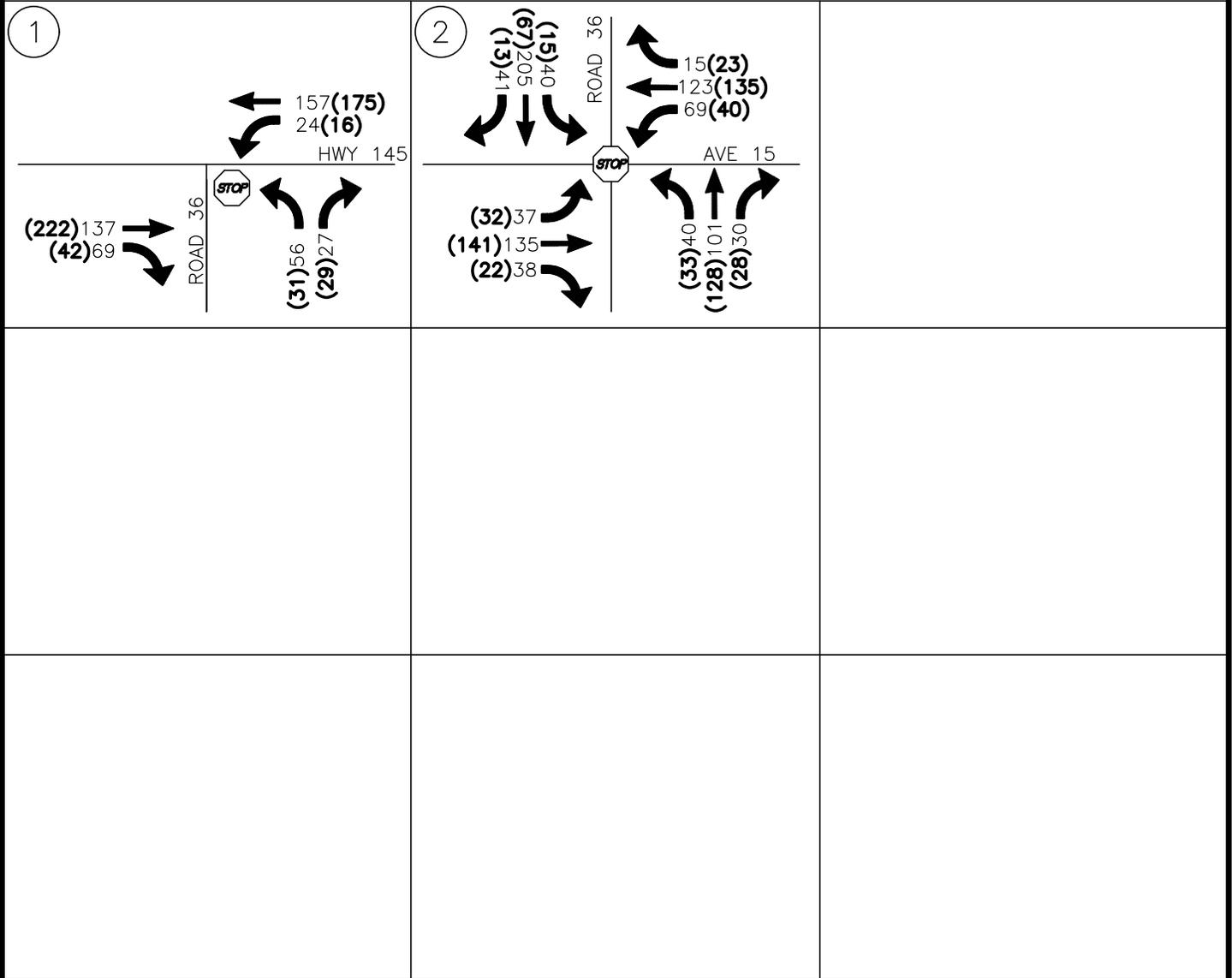
Figure 4 – Existing Traffic Volume

LEGEND

- ## AM PEAK HOUR VOLUME
- (##) PM PEAK HOUR VOLUME
- ➔ DIRECTION OF TRAVEL
- ◻ SIGNALIZED INTERSECTION
- STOP UNSIGNALIZED INTERSECTION
- ⊕ # INTERSECTION NUMBER



NOT TO SCALE



**SR 145/ ROAD 36 GAS STATION
EXISTING TRAFFIC VOLUMES**

PREPARED FOR:
RAJDEEP SINGH SWS LAND DEVELOPMENT INC. 32655 AVENUE 7 MADERA, 93637
DATE: 7/25/22
PROJECT: 22-037

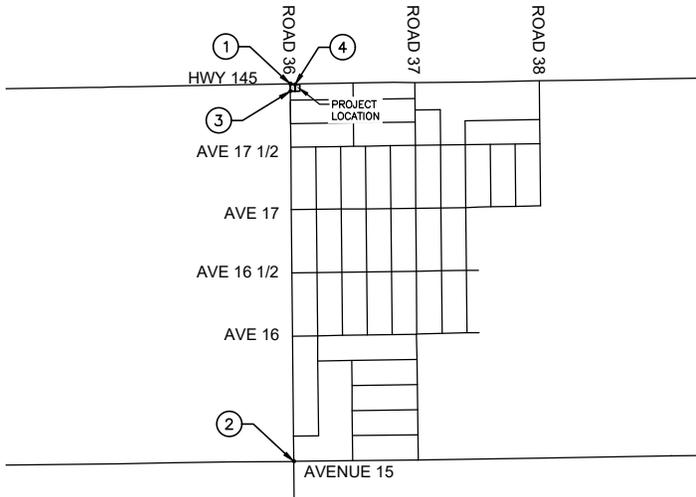
FIGURE 4

Figure 5 - Project Trip Distribution

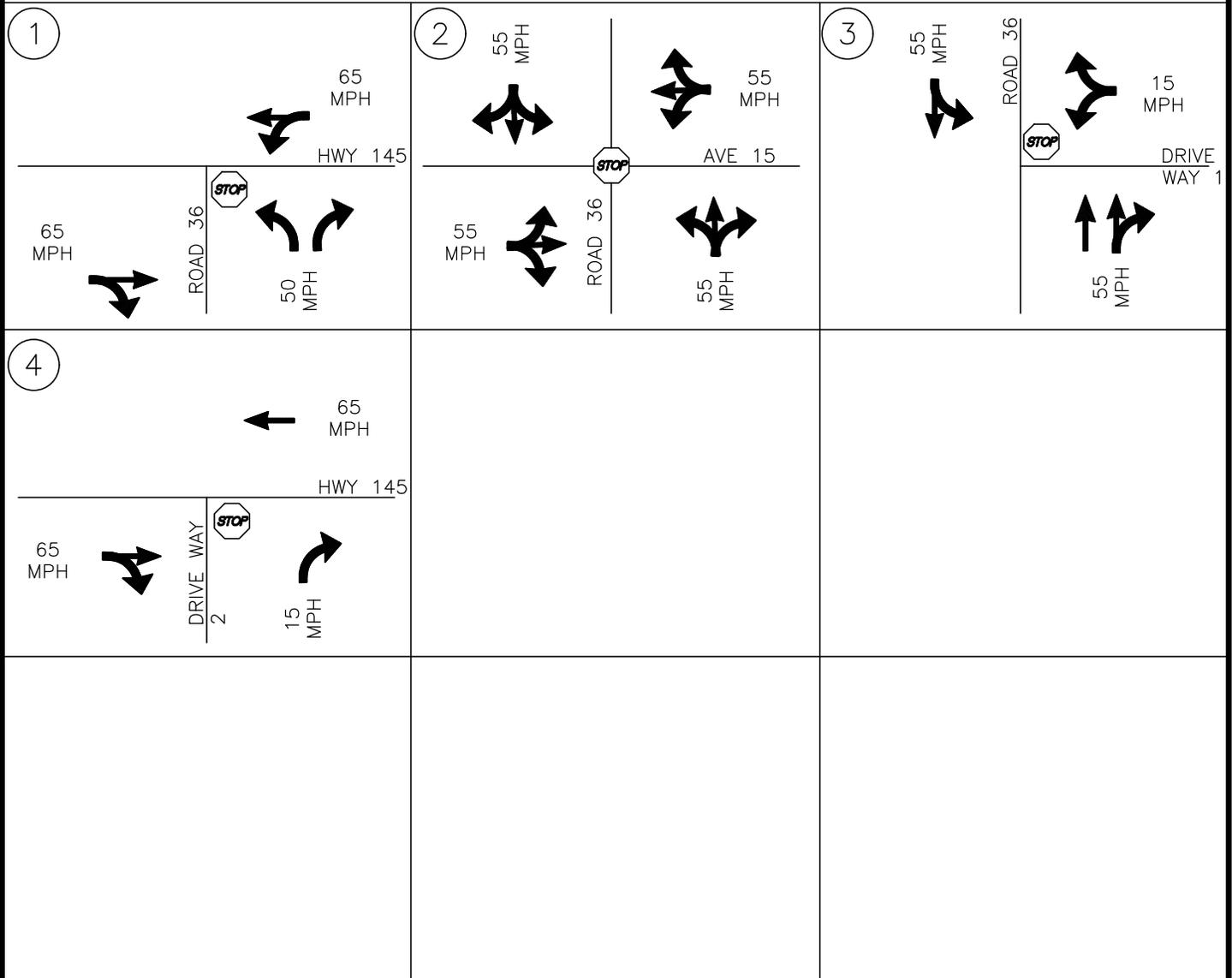
Figure 6 – Existing Plus Project Conditions

LEGEND

-  DIRECTION OF TRAVEL
-  UNSIGNALIZED INTERSECTION
-  INTERSECTION NUMBER



NOT TO SCALE



SR 145/ ROAD 36 GAS STATION
EXISTING PLUS PROJECT
TRAFFIC CONDITIONS

PREPARED FOR:
 RAJDEEP SINGH SWS
 LAND DEVELOPMENT
 INC. 32655 AVENUE 7
 MADERA, 93637

DATE: 7/25/22
 PROJECT: 22-037

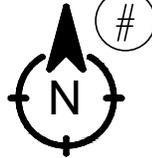
FIGURE
6

5/6/2024 9:01 AM

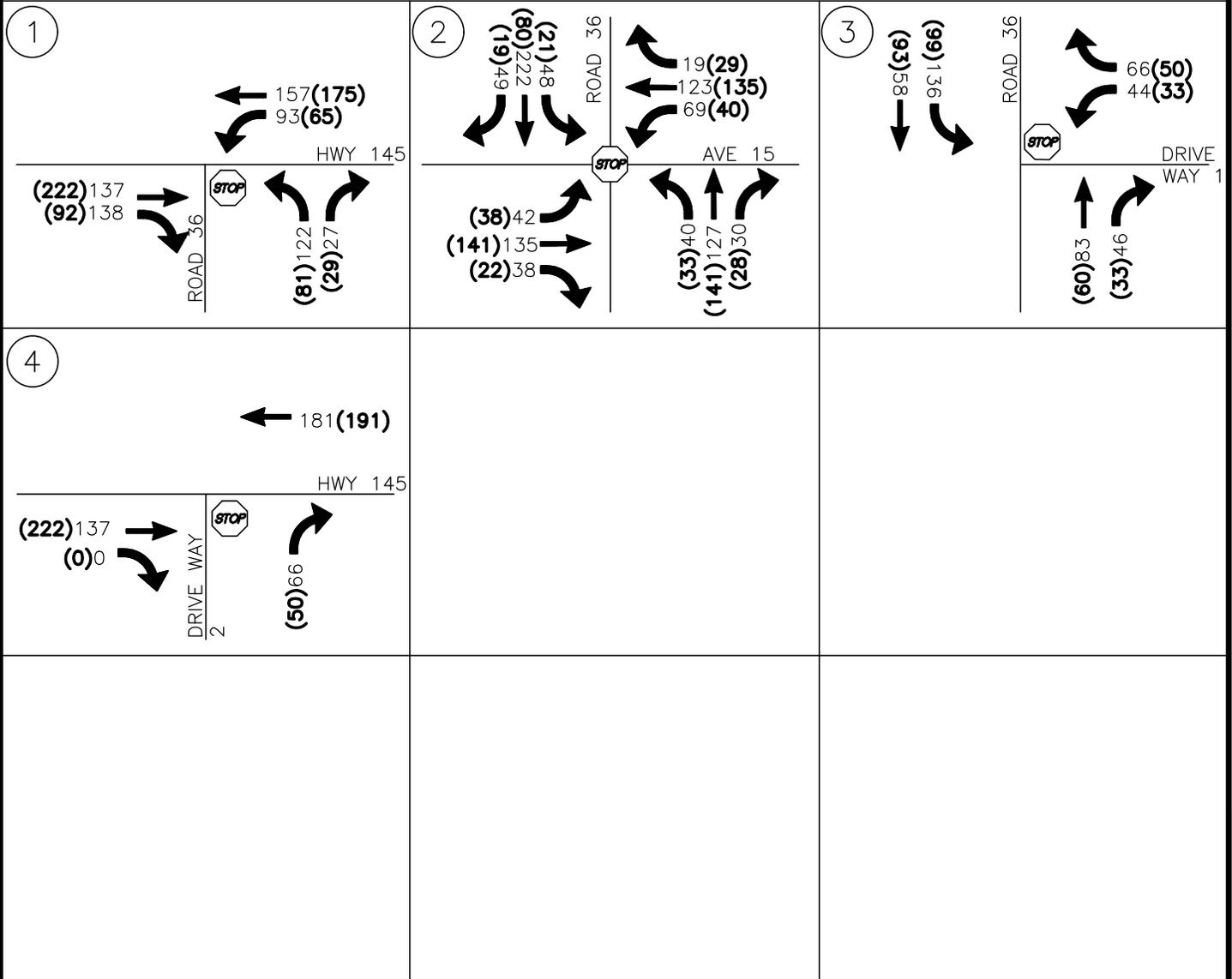
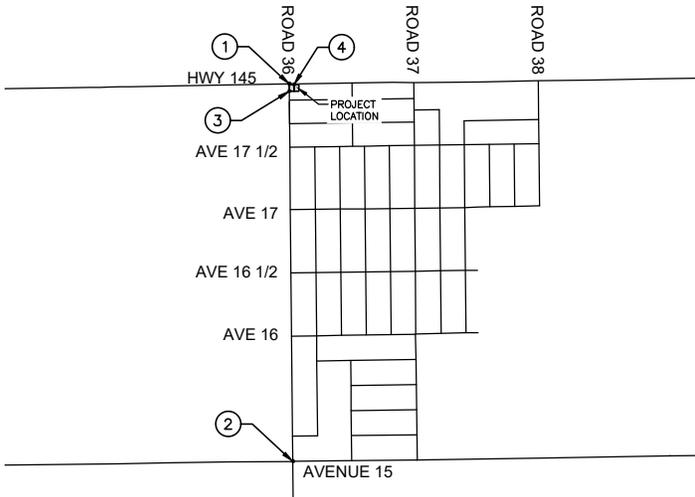
Figure 7 – Existing Plus Project Traffic Volumes

LEGEND

- ## AM PEAK HOUR VOLUME
- (##) PM PEAK HOUR VOLUME
- ➔ DIRECTION OF TRAVEL
- ⊠ SIGNALIZED INTERSECTION
- STOP UNSIGNALIZED INTERSECTION
- # INTERSECTION NUMBER



NOT TO SCALE



SR 145/ ROAD 36 GAS STATION
EXISTING PLUS PROJECT
TRAFFIC VOLUME

PREPARED FOR:
 RAJDEEP SINGH SWS
 LAND DEVELOPMENT
 INC. 32655 AVENUE 7
 MADERA, 93637

DATE: 7/25/22
 PROJECT: 22-037

FIGURE
7

5/6/2024 9:01 AM

Figure 8 – Cumulative Intersection Conditions

LEGEND



DIRECTION OF TRAVEL



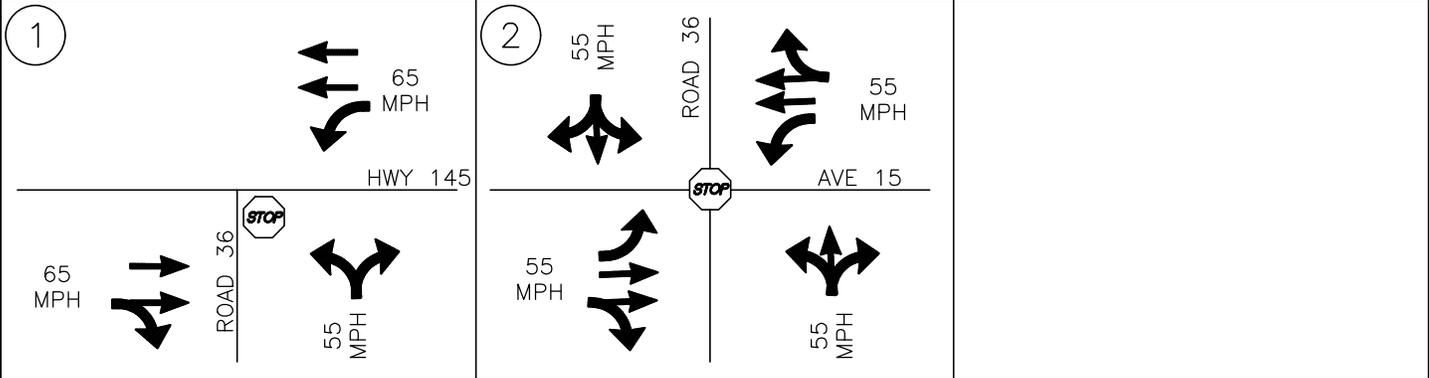
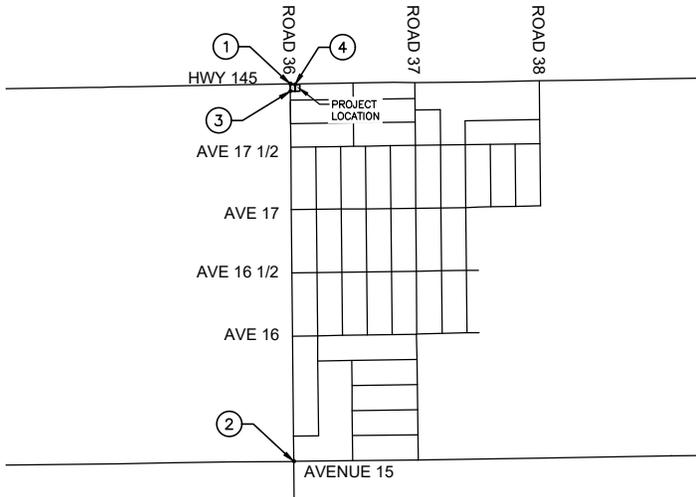
UNSIGNALIZED INTERSECTION



INTERSECTION NUMBER



NOT TO SCALE



SR 145/ ROAD 36 GAS STATION
CUMULATIVE TRAFFIC CONDITIONS

PREPARED FOR:
 RAJDEEP SINGH SWS
 LAND DEVELOPMENT
 INC. 32655 AVENUE 7
 MADERA, 93637
 DATE: 7/25/22
 PROJECT: 22-037

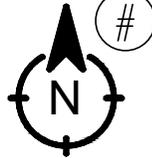
FIGURE 8

5/6/2024 9:03 AM

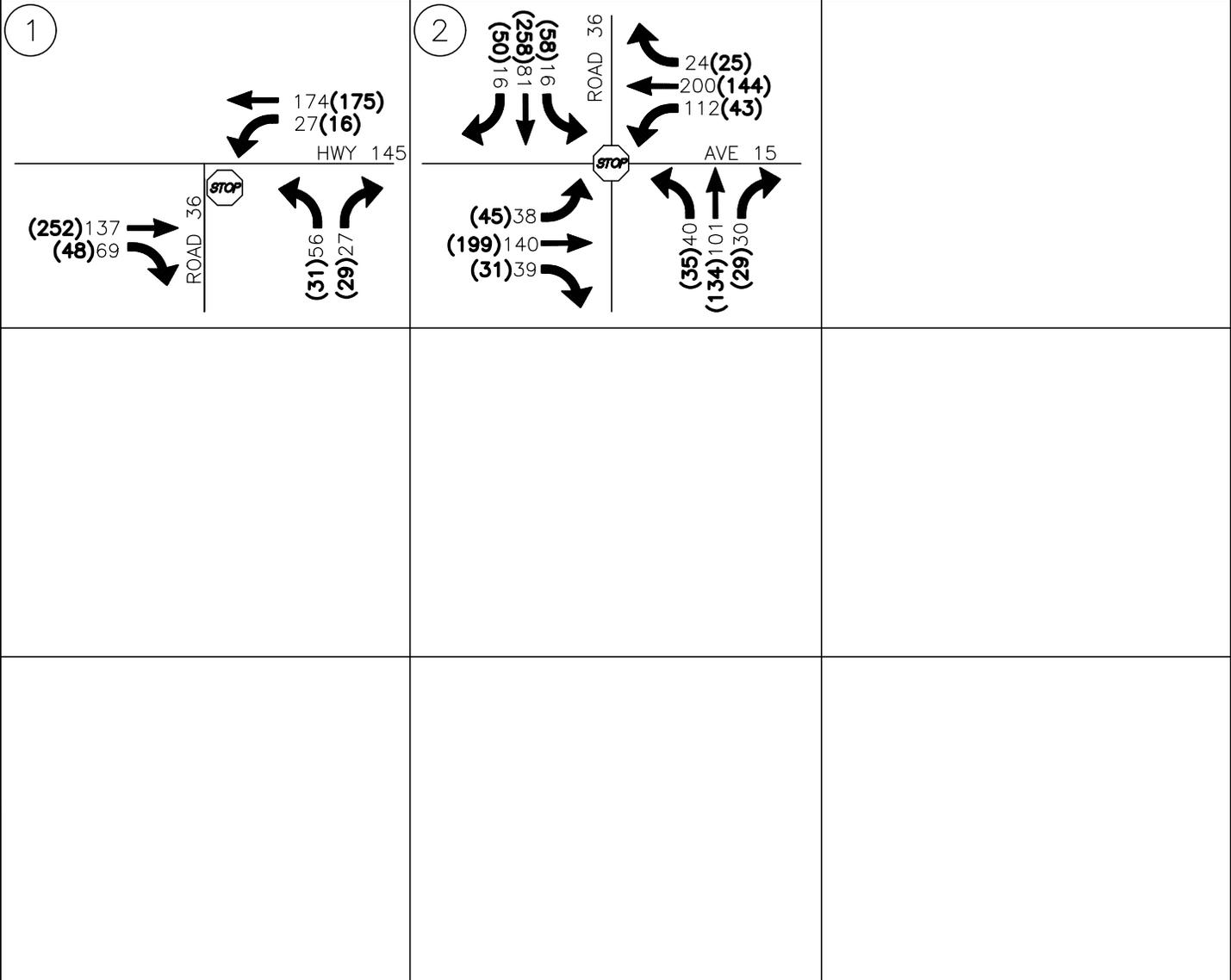
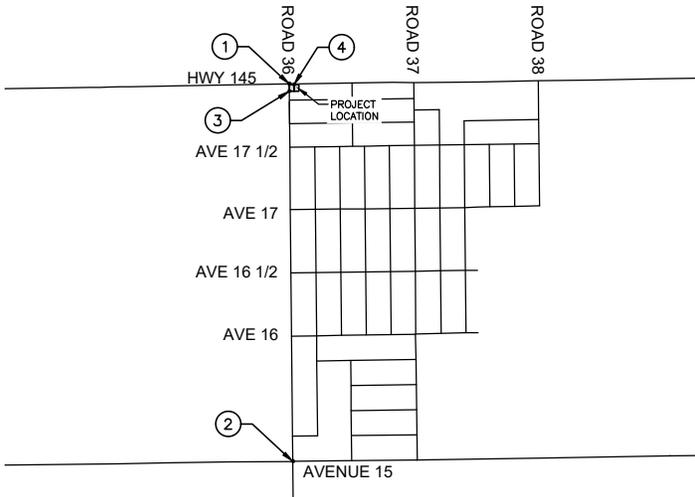
Figure 9 – Cumulative Traffic Volumes

LEGEND

- ## AM PEAK HOUR VOLUME
- (##) PM PEAK HOUR VOLUME
- ➔ DIRECTION OF TRAVEL
- ◻ SIGNALIZED INTERSECTION
- STOP UNSIGNALIZED INTERSECTION
- # INTERSECTION NUMBER



NOT TO SCALE



SR 145/ ROAD 36 GAS STATION CUMULATIVE TRAFFIC VOLUMES

PREPARED FOR:
 RAJDEEP SINGH SWS
 LAND DEVELOPMENT
 INC. 32655 AVENUE 7
 MADERA, 93637

DATE: 7/25/22
 PROJECT: 22-037

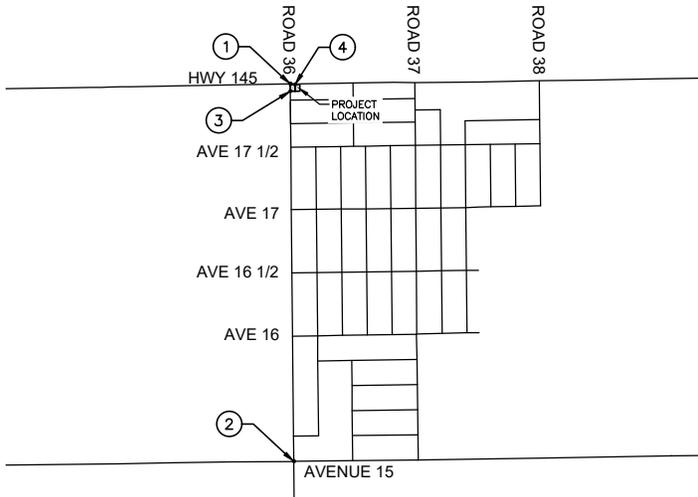
FIGURE 9

5/6/2024 9:03 AM

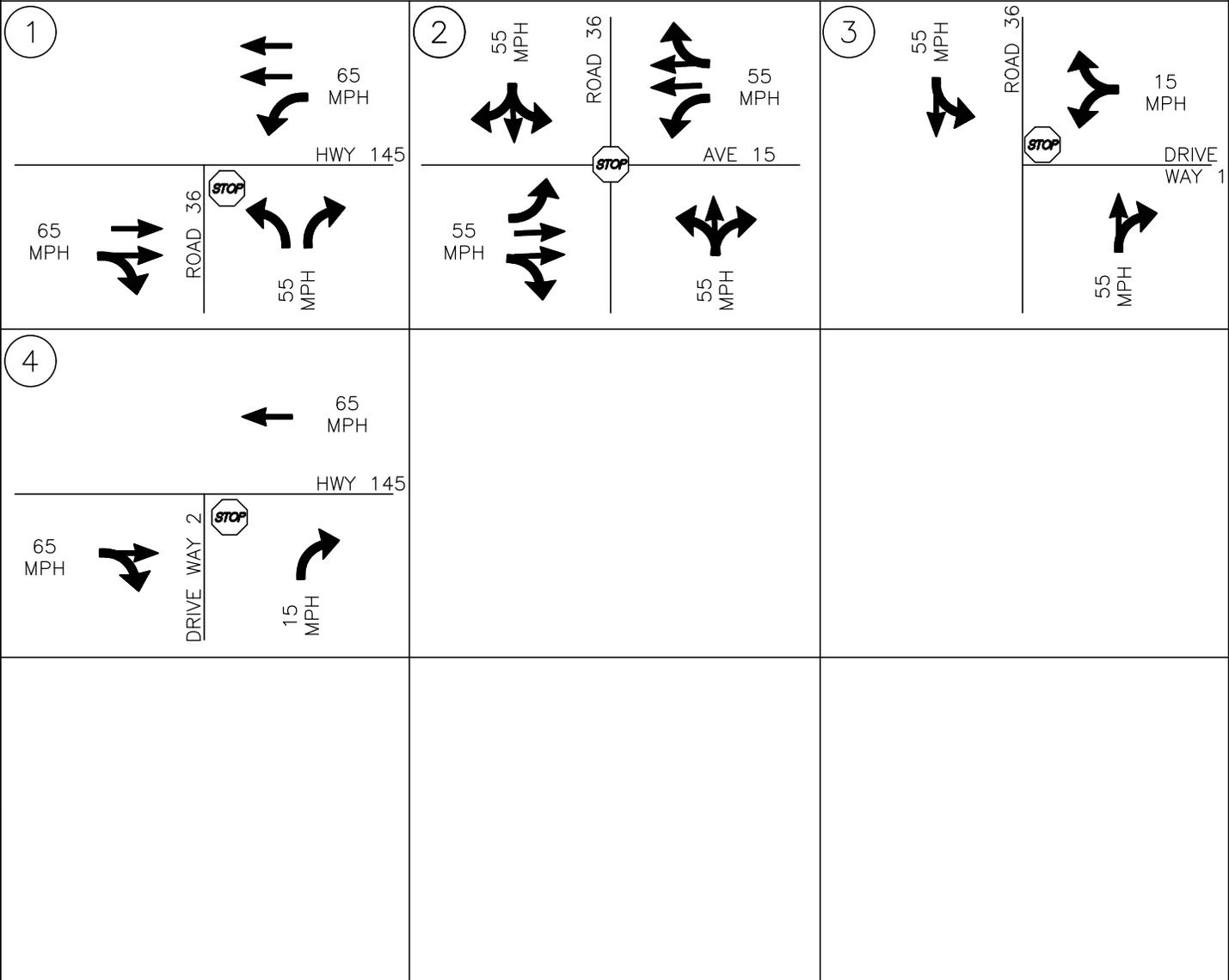
Figure 10 – Cumulative Plus Project Intersection Conditions

LEGEND

-  DIRECTION OF TRAVEL
-  UNSIGNALIZED INTERSECTION
-  INTERSECTION NUMBER



NOT TO SCALE



SR 145/ ROAD 36 GAS STATION
CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

PREPARED FOR:
 RAJDEEP SINGH SWS
 LAND DEVELOPMENT
 INC. 32655 AVENUE 7
 MADERA, 93637

DATE: 7/25/22
 PROJECT: 22-037

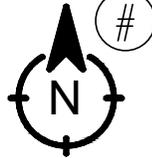
FIGURE 10

5/6/2024 9:06 AM

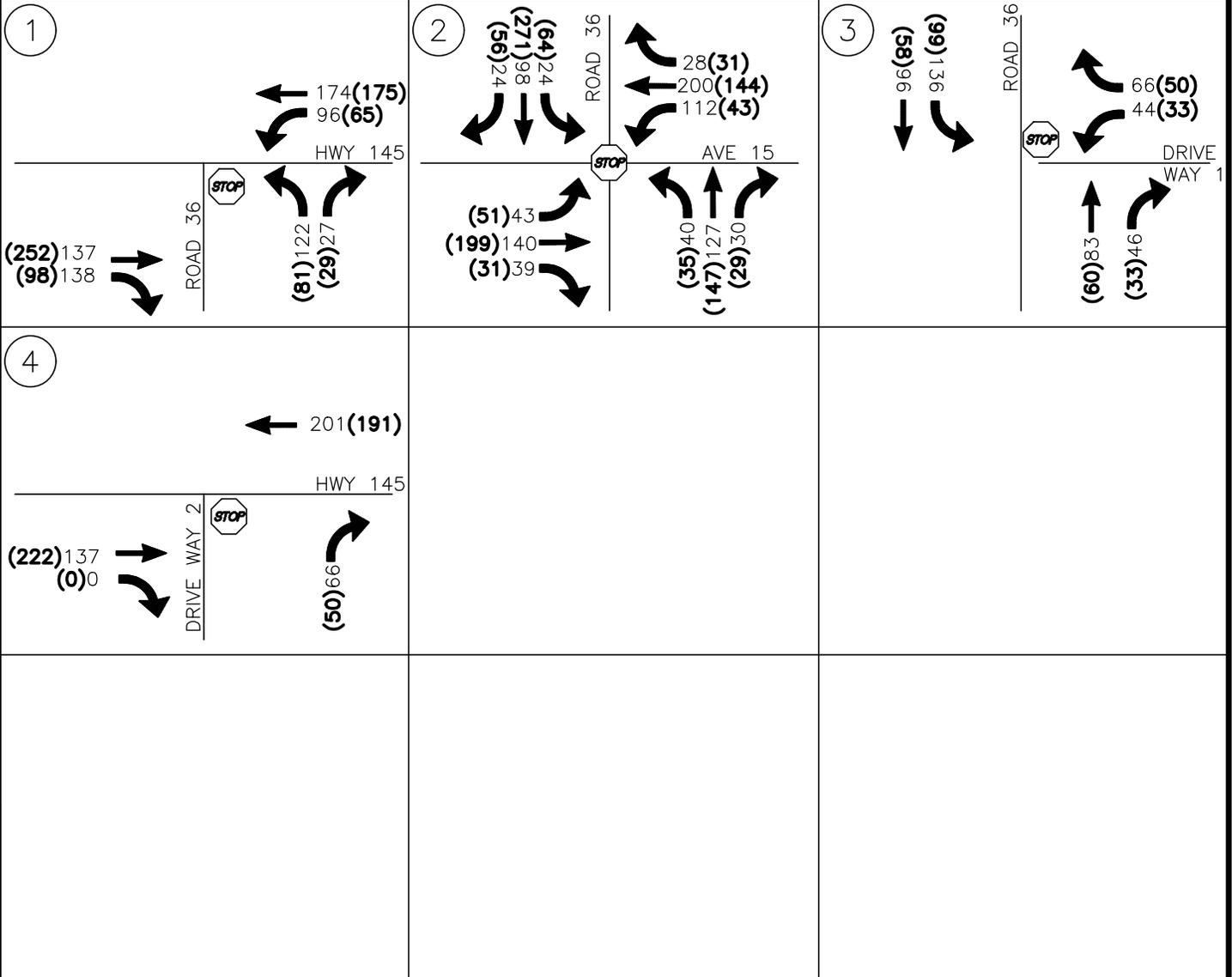
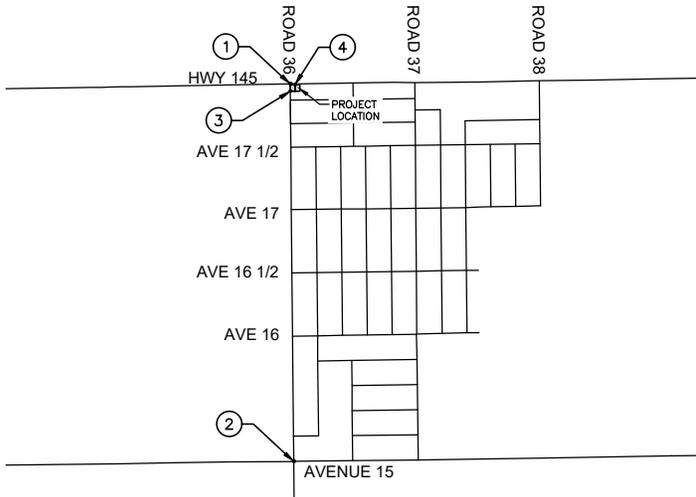
Figure 11 – Cumulative Plus Project Traffic Volumes

LEGEND

- ## AM PEAK HOUR VOLUME
- (##) PM PEAK HOUR VOLUME
- ➔ DIRECTION OF TRAVEL
- ◻ SIGNALIZED INTERSECTION
- STOP UNSIGNALIZED INTERSECTION
- # INTERSECTION NUMBER



NOT TO SCALE



SR 145/ ROAD 36 GAS STATION
CUMULATIVE PLUS PROJECT TRAFFIC VOLUME

PREPARED FOR:
 RAJDEEP SINGH SWS
 LAND DEVELOPMENT
 INC. 32655 AVENUE 7
 MADERA, 93637

DATE: 7/25/22
 PROJECT: 22-037

FIGURE
1 1

5/6/2024 9:06 AM



Appendix A: Traffic Counts



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:

VICE
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

LOCATION Rd 36 @ SR 145

LATITUDE 37.0103

COUNTY Madera

LONGITUDE -119.8937

COLLECTION DATE Thursday, June 2, 2022

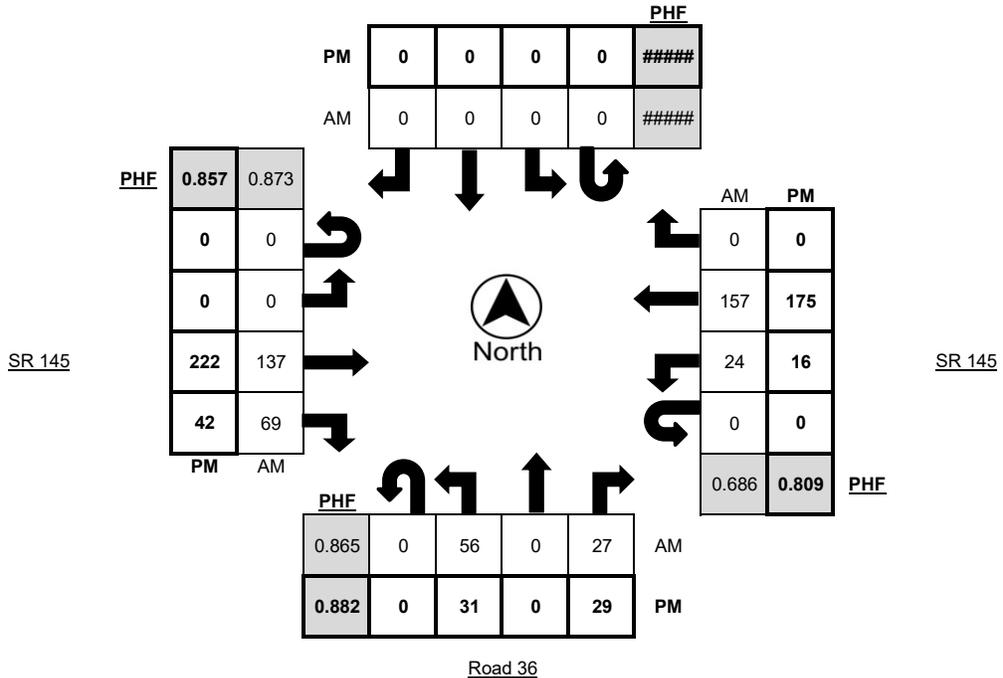
WEATHER Clear

Time	Northbound					Southbound					Eastbound					Westbound				
	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 - 7:15 AM	0	9	0	7	6	0	0	0	0	0	0	0	30	9	2	0	2	30	0	0
7:15 AM - 7:30 AM	0	12	0	6	0	0	0	0	0	0	0	0	47	12	2	0	8	58	0	4
7:30 AM - 7:45 AM	0	12	0	10	0	0	0	0	0	0	0	0	30	18	4	0	6	39	0	3
7:45 AM - 8:00 AM	0	16	0	3	1	0	0	0	0	0	0	0	29	23	3	0	7	34	0	3
8:00 AM - 8:15 AM	0	16	0	8	5	0	0	0	0	0	0	0	31	16	3	0	3	26	0	4
8:15 AM - 8:30 AM	0	7	0	6	0	0	0	0	0	0	0	0	28	10	2	0	3	22	0	2
8:30 AM - 8:45 AM	0	12	0	4	1	0	0	0	0	0	0	0	37	8	3	0	4	33	0	2
8:45 AM - 9:00 AM	0	9	0	3	2	0	0	0	0	0	0	0	19	11	3	0	0	34	0	2
TOTAL	0	93	0	47	15	0	0	0	0	0	0	0	251	107	22	0	33	276	0	20

Time	Northbound					Southbound					Eastbound					Westbound				
	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	7	0	6	1	0	0	0	0	0	0	0	47	11	2	0	8	28	0	2
4:15 PM - 4:30 PM	0	7	0	9	0	0	0	0	0	0	0	0	65	12	1	0	4	38	0	2
4:30 PM - 4:45 PM	0	9	0	6	2	0	0	0	0	0	0	0	55	12	1	0	5	54	0	1
4:45 PM - 5:00 PM	0	6	0	6	1	0	0	0	0	0	0	0	50	13	2	0	5	46	0	2
5:00 PM - 5:15 PM	0	9	0	8	0	0	0	0	0	0	0	0	52	5	0	0	2	37	0	0
5:15 PM - 5:30 PM	0	4	0	6	0	0	0	0	0	0	0	0	50	13	0	0	2	42	0	1
5:30 PM - 5:45 PM	0	7	0	8	1	0	0	0	0	0	0	0	50	16	0	0	4	41	0	2
5:45 PM - 6:00 PM	0	7	0	6	1	0	0	0	0	0	0	0	41	7	0	0	4	41	0	1
TOTAL	0	56	0	55	6	0	0	0	0	0	0	0	410	89	6	0	34	327	0	11

PEAK HOUR	Northbound					Southbound					Eastbound					Westbound				
	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:15 AM - 8:15 AM	0	56	0	27	6	0	0	0	0	0	0	0	137	69	12	0	24	157	0	14
4:15 PM - 5:15 PM	0	31	0	29	3	0	0	0	0	0	0	0	222	42	4	0	16	175	0	5

	PHF	Trucks
AM	0.822	6.8%
PM	0.913	2.3%





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:

VICE
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93729

LOCATION Rd 36 @ SR 145
 COUNTY Madera
 COLLECTION DATE Thursday, June 2, 2022

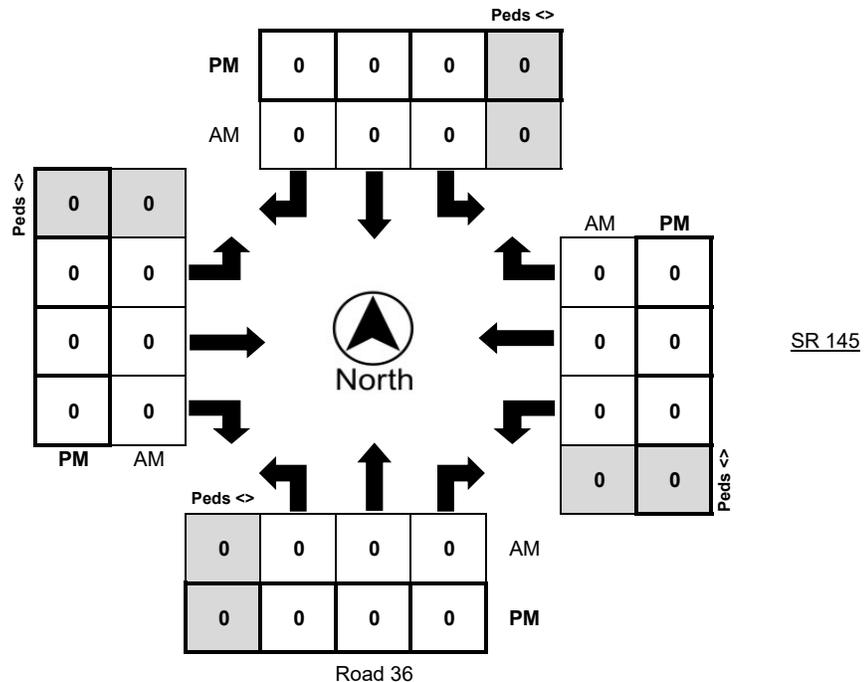
LATITUDE 37.0103
 LONGITUDE -119.8937
 WEATHER Clear

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PEAK HOUR	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	0	0





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 Hanford, CA 93230
 800-975-6938 Phone/Fax
 www.metrotrafficdata.com

Turning Movement Report

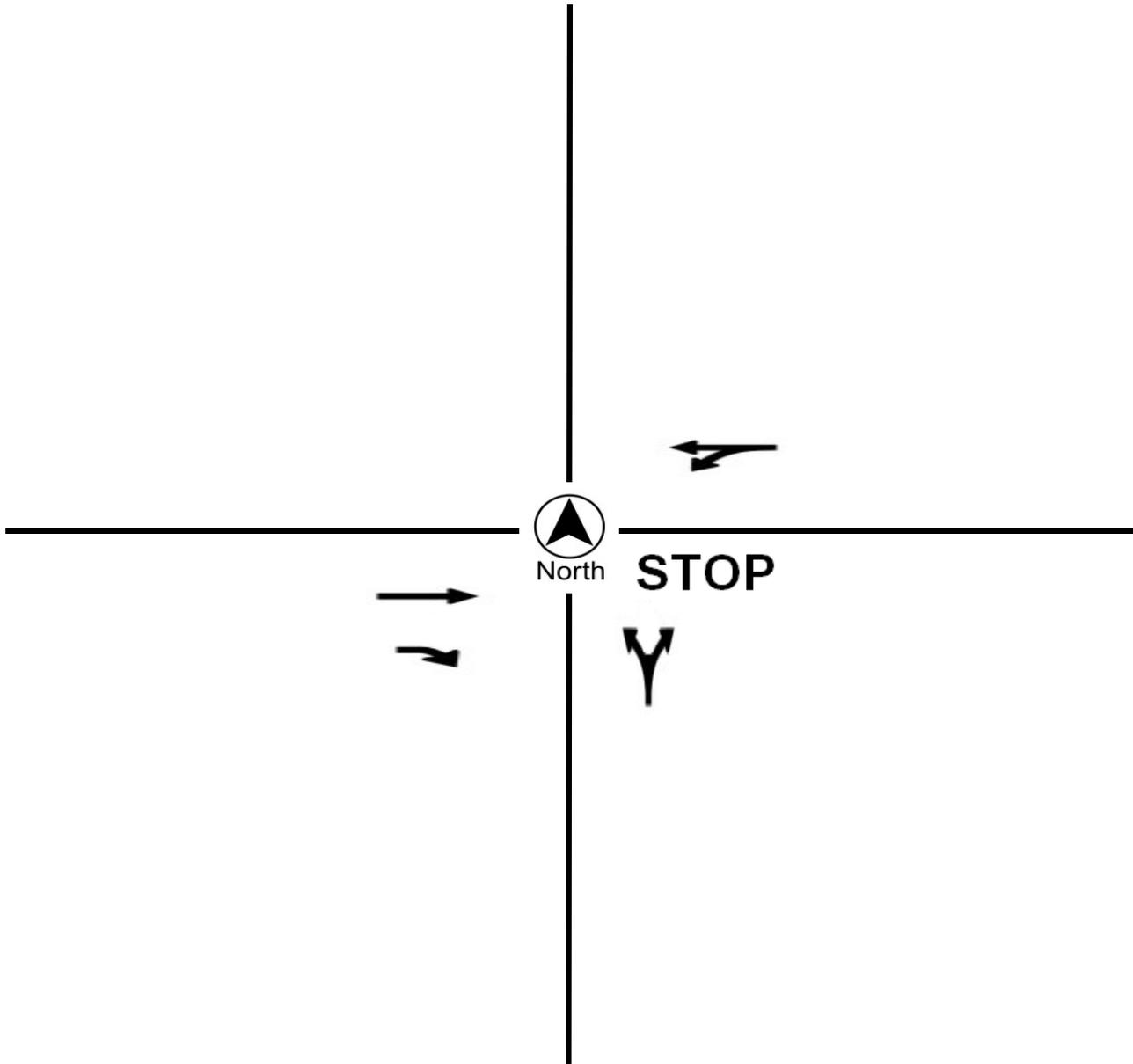
Prepared For:

VICE
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

LOCATION Rd 36 @ SR 145
COUNTY Madera
COLLECTION DATE Thursday, June 2, 2022
CYCLE TIME N/A

N/S STREET Road 36
E/W STREET SR 145
WEATHER Clear
CONTROL TYPE One-Way Stop

COMMENTS





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 Hanford, CA 93230
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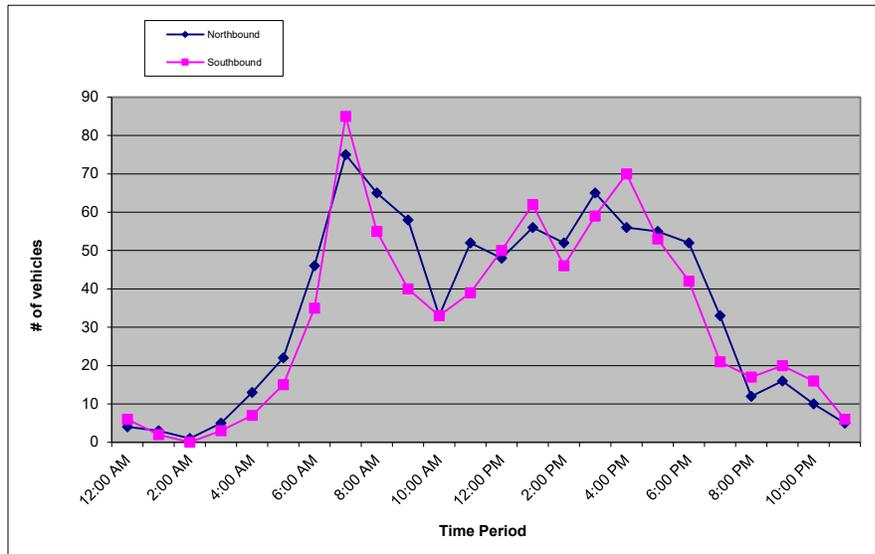
24 Hour Count Report

Prepared For: **VICE**
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

STREET Road 36 **LATITUDE** 37.0102996
SEGMENT South of SR 145 **LONGITUDE** -119.8936597
COLLECTION DATE Thursday, June 2, 2022 **WEATHER** Clear
NUMBER OF LANES 2

Hour	Northbound					Southbound					Hourly Totals
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	2	1	0	1	4	3	2	1	0	6	10
1:00 AM	0	2	1	0	3	0	2	0	0	2	5
2:00 AM	0	0	1	0	1	0	0	0	0	0	1
3:00 AM	1	1	1	2	5	2	1	0	0	3	8
4:00 AM	1	4	7	1	13	1	0	2	4	7	20
5:00 AM	6	5	3	8	22	3	2	4	6	15	37
6:00 AM	11	9	12	14	46	7	9	8	11	35	81
7:00 AM	16	18	22	19	75	11	20	24	30	85	160
8:00 AM	24	13	16	12	65	19	13	12	11	55	120
9:00 AM	19	10	14	15	58	6	12	13	9	40	98
10:00 AM	9	7	9	8	33	10	7	8	8	33	66
11:00 AM	10	19	13	10	52	7	8	15	9	39	91
12:00 PM	11	13	12	12	48	9	12	13	16	50	98
1:00 PM	6	31	12	7	56	22	11	14	15	62	118
2:00 PM	11	7	10	24	52	10	17	7	12	46	98
3:00 PM	21	12	15	17	65	10	16	20	13	59	124
4:00 PM	13	16	15	12	56	19	16	17	18	70	126
5:00 PM	17	10	15	13	55	7	15	20	11	53	108
6:00 PM	17	10	14	11	52	12	13	10	7	42	94
7:00 PM	13	11	4	5	33	3	5	2	11	21	54
8:00 PM	4	4	2	2	12	5	8	1	3	17	29
9:00 PM	5	3	4	4	16	3	4	6	7	20	36
10:00 PM	3	3	2	2	10	5	7	1	3	16	26
11:00 PM	0	2	3	0	5	0	3	2	1	6	11
Total	51.7%				837	48.3%				782	1619

AM% 43.1% **AM Peak** 176 **7:15 am to 8:15 am** **AM P.H.F.** 0.90
PM% 56.9% **PM Peak** 129 **3:30 pm to 4:30 pm** **PM P.H.F.** 0.92





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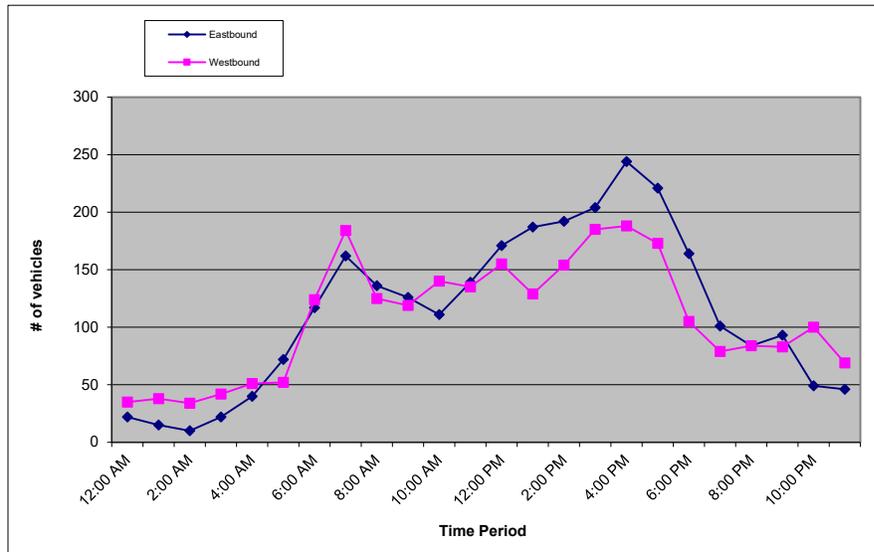
24 Hour Count Report

Prepared For: **VICE**
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

STREET SR 145 **LATITUDE** 37.0102996
SEGMENT East of Road 36 **LONGITUDE** -119.8936597
COLLECTION DATE Thursday, June 2, 2022 **WEATHER** Clear
NUMBER OF LANES 2

Hour	Eastbound					Westbound					Hourly Totals
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	7	5	3	7	22	6	13	8	8	35	57
1:00 AM	5	5	4	1	15	8	10	12	8	38	53
2:00 AM	2	2	3	3	10	7	11	11	5	34	44
3:00 AM	4	4	7	7	22	4	15	13	10	42	64
4:00 AM	3	12	10	15	40	9	10	22	10	51	91
5:00 AM	14	19	18	21	72	15	9	11	17	52	124
6:00 AM	19	30	38	30	117	22	29	33	40	124	241
7:00 AM	37	53	40	32	162	32	66	45	41	184	346
8:00 AM	39	34	41	22	136	29	25	37	34	125	261
9:00 AM	32	28	38	28	126	17	31	37	34	119	245
10:00 AM	27	36	23	25	111	41	27	42	30	140	251
11:00 AM	37	38	30	34	139	35	24	48	28	135	274
12:00 PM	38	48	42	43	171	43	42	34	36	155	326
1:00 PM	37	48	50	52	187	40	27	30	32	129	316
2:00 PM	40	50	49	53	192	42	34	40	38	154	346
3:00 PM	47	46	53	58	204	47	50	39	49	185	389
4:00 PM	53	74	61	56	244	36	42	59	51	188	432
5:00 PM	60	56	58	47	221	39	44	45	45	173	394
6:00 PM	51	42	45	26	164	25	36	24	20	105	269
7:00 PM	35	22	19	25	101	17	23	22	17	79	180
8:00 PM	20	20	17	27	84	17	30	15	22	84	168
9:00 PM	31	27	21	14	93	16	18	22	27	83	176
10:00 PM	19	10	10	10	49	32	27	21	20	100	149
11:00 PM	17	11	8	10	46	14	22	17	16	69	115
Total	51.4%				2728	48.6%				2583	
5311											

AM% 38.6% **AM Peak** 346 **7:00 am to 8:00 am** **AM P.H.F.** 0.73
PM% 61.4% **PM Peak** 442 **4:15 pm to 5:15 pm** **PM P.H.F.** 0.92





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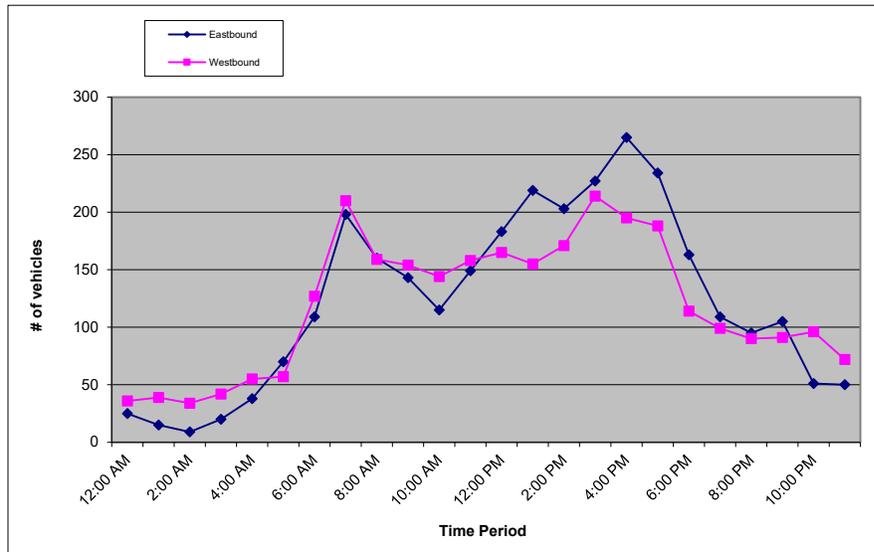
24 Hour Count Report

Prepared For: **VICE**
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

STREET SR 145 **LATITUDE** 37.0102996
SEGMENT West of Road 36 **LONGITUDE** -119.8936597
COLLECTION DATE Thursday, June 2, 2022 **WEATHER** Clear
NUMBER OF LANES 2

Hour	Eastbound					Westbound					Hourly Totals
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	9	6	4	6	25	7	13	8	8	36	61
1:00 AM	5	5	4	1	15	8	10	13	8	39	54
2:00 AM	2	2	2	3	9	7	11	11	5	34	43
3:00 AM	4	4	6	6	20	3	15	13	11	42	62
4:00 AM	4	10	8	16	38	10	12	25	8	55	93
5:00 AM	13	18	19	20	70	17	11	11	18	57	127
6:00 AM	17	28	39	25	109	24	27	38	38	127	236
7:00 AM	39	59	48	52	198	39	70	51	50	210	408
8:00 AM	47	38	45	30	160	42	29	45	43	159	319
9:00 AM	35	38	42	28	143	33	39	42	40	154	297
10:00 AM	27	36	25	27	115	40	27	45	32	144	259
11:00 AM	39	38	34	38	149	40	35	50	33	158	307
12:00 PM	38	49	49	47	183	45	44	40	36	165	348
1:00 PM	52	48	58	61	219	39	47	36	33	155	374
2:00 PM	45	56	50	52	203	48	30	44	49	171	374
3:00 PM	50	56	65	56	227	61	56	46	51	214	441
4:00 PM	58	77	67	63	265	35	45	63	52	195	460
5:00 PM	57	63	66	48	234	46	46	48	48	188	422
6:00 PM	50	46	42	25	163	29	37	25	23	114	277
7:00 PM	36	24	20	29	109	28	31	25	15	99	208
8:00 PM	23	25	17	30	95	19	31	16	24	90	185
9:00 PM	32	31	24	18	105	19	21	23	28	91	196
10:00 PM	19	12	9	11	51	30	25	21	20	96	147
11:00 PM	17	12	10	11	50	14	22	20	16	72	122
Total	50.8%				2955	49.2%				2865	
5820											

AM% 38.9% **AM Peak** 419 **7:15 am to 8:15 am** **AM P.H.F.** 0.81
PM% 61.1% **PM Peak** 470 **4:15 pm to 5:15 pm** **PM P.H.F.** 0.90





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Turning Movement Report

Prepared For:

VICE
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

LOCATION Rd 36 @ Ave 15

LATITUDE 36.9666

COUNTY Madera

LONGITUDE -119.8938

COLLECTION DATE Thursday, June 2, 2022

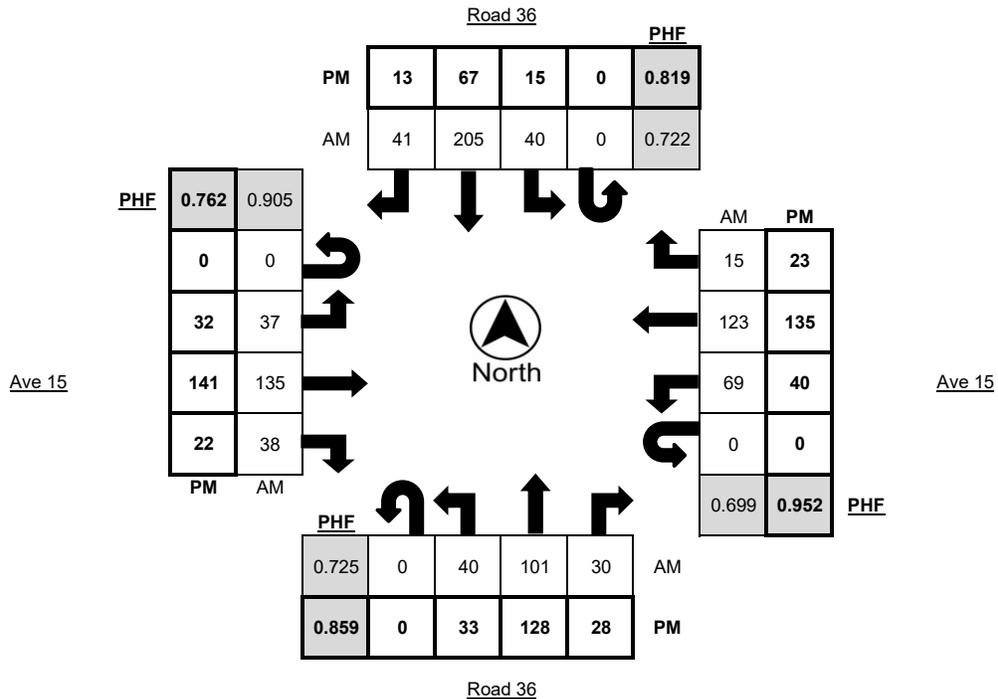
WEATHER Clear

Time	Northbound					Southbound					Eastbound					Westbound				
	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 - 7:15 AM	0	3	15	5	0	0	18	34	9	1	0	9	36	7	8	0	11	23	5	0
7:15 AM - 7:30 AM	0	13	26	5	1	0	11	30	11	1	0	8	39	11	2	0	11	25	2	1
7:30 AM - 7:45 AM	0	14	25	6	0	0	5	58	11	3	0	5	28	10	2	0	25	46	3	1
7:45 AM - 8:00 AM	0	10	35	14	1	0	6	83	10	0	0	15	32	10	4	0	22	29	5	1
8:00 AM - 8:15 AM	0	5	31	7	0	0	8	33	4	1	0	9	31	9	5	0	7	19	2	2
8:15 AM - 8:30 AM	0	3	21	4	1	0	6	14	3	2	0	4	28	12	0	0	4	16	2	1
8:30 AM - 8:45 AM	0	10	14	2	2	0	4	13	2	2	0	4	21	3	0	0	3	13	3	0
8:45 AM - 9:00 AM	0	2	15	3	0	0	4	18	3	0	0	3	18	8	2	0	2	15	2	1
TOTAL	0	60	182	46	5	0	62	283	53	10	0	57	233	70	23	0	85	186	24	7

Time	Northbound					Southbound					Eastbound					Westbound				
	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	7	29	7	0	0	2	17	6	0	0	11	32	6	1	0	3	42	5	2
4:15 PM - 4:30 PM	0	4	28	5	0	0	5	25	4	0	0	6	39	5	0	0	2	28	6	3
4:30 PM - 4:45 PM	0	8	23	10	0	0	1	12	8	0	0	4	33	14	0	0	10	32	5	0
4:45 PM - 5:00 PM	0	10	24	5	1	0	2	10	3	0	0	8	28	6	1	0	7	24	4	0
5:00 PM - 5:15 PM	0	8	34	7	0	0	2	15	4	0	0	6	41	4	1	0	7	38	7	0
5:15 PM - 5:30 PM	0	9	29	8	1	0	6	15	2	1	0	12	46	6	0	0	8	33	7	0
5:30 PM - 5:45 PM	0	8	41	6	0	0	1	17	4	0	0	5	29	7	0	0	10	37	3	3
5:45 PM - 6:00 PM	0	8	24	7	0	0	6	20	3	0	0	9	25	5	2	0	15	27	6	0
TOTAL	0	62	232	55	2	0	25	131	34	1	0	61	273	53	5	0	62	261	43	8

PEAK HOUR	Northbound					Southbound					Eastbound					Westbound				
	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	40	101	30	2	0	40	205	41	5	0	37	135	38	16	0	69	123	15	3
5:00 PM - 6:00 PM	0	33	128	28	1	0	15	67	13	1	0	32	141	22	3	0	40	135	23	3

	PHF	Trucks
AM	0.806	3.0%
PM	0.935	1.2%





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Turning Movement Report

Prepared For:

VICE
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93729

LOCATION Rd 36 @ Ave 15
COUNTY Madera
COLLECTION DATE Thursday, June 2, 2022

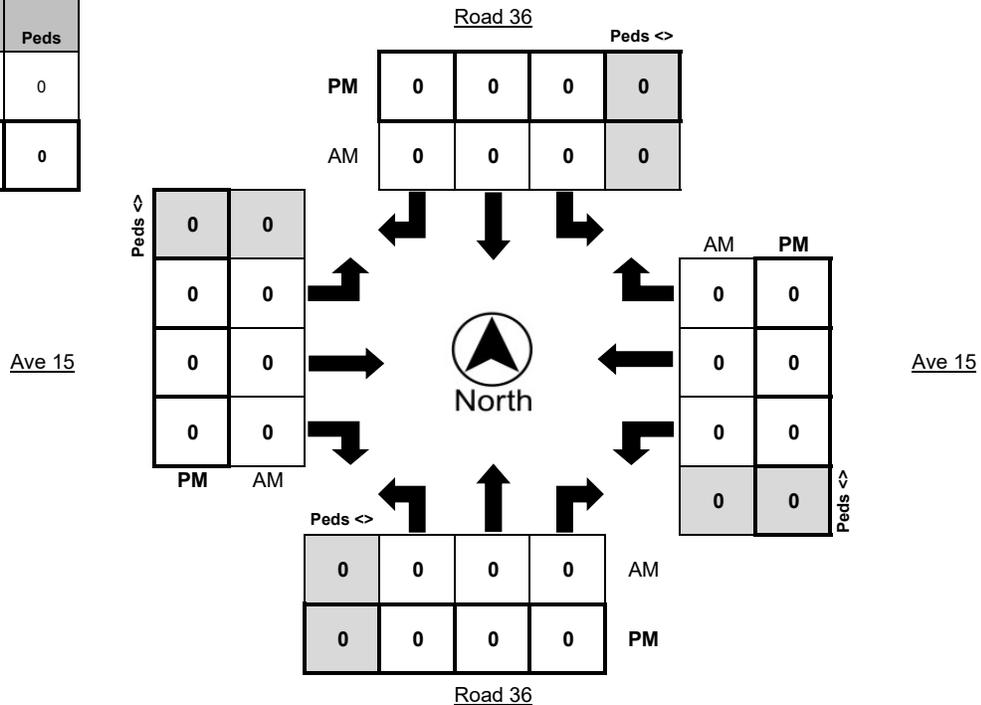
LATITUDE 36.9666
LONGITUDE -119.8938
WEATHER Clear

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PEAK HOUR	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:00 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	0	0





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Turning Movement Report

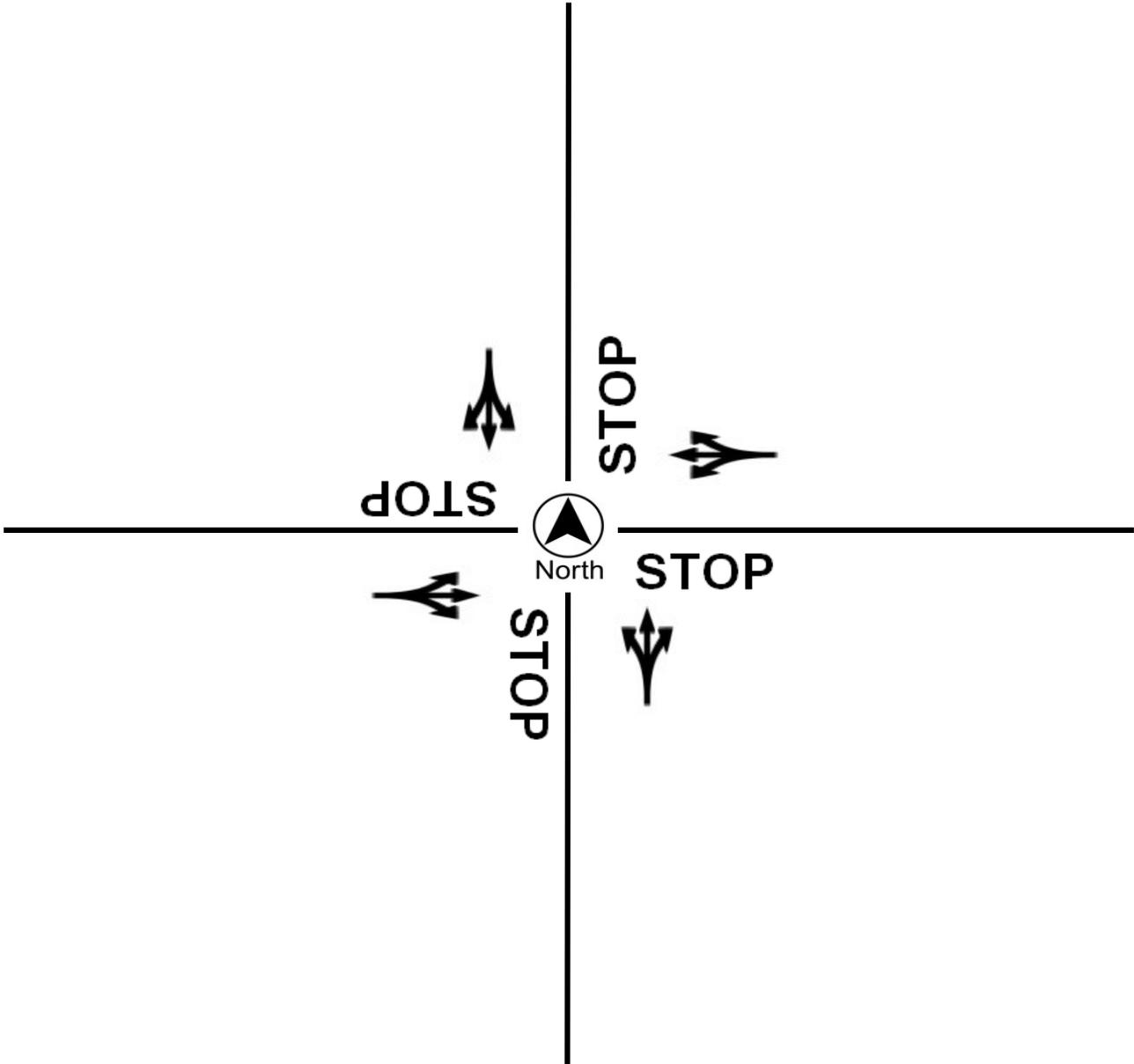
Prepared For:

VICE
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

LOCATION Rd 36 @ Ave 15
COUNTY Madera
COLLECTION DATE Thursday, June 2, 2022
CYCLE TIME N/A

N/S STREET Road 36
E/W STREET Ave 15
WEATHER Clear
CONTROL TYPE All-Way Stop

COMMENTS





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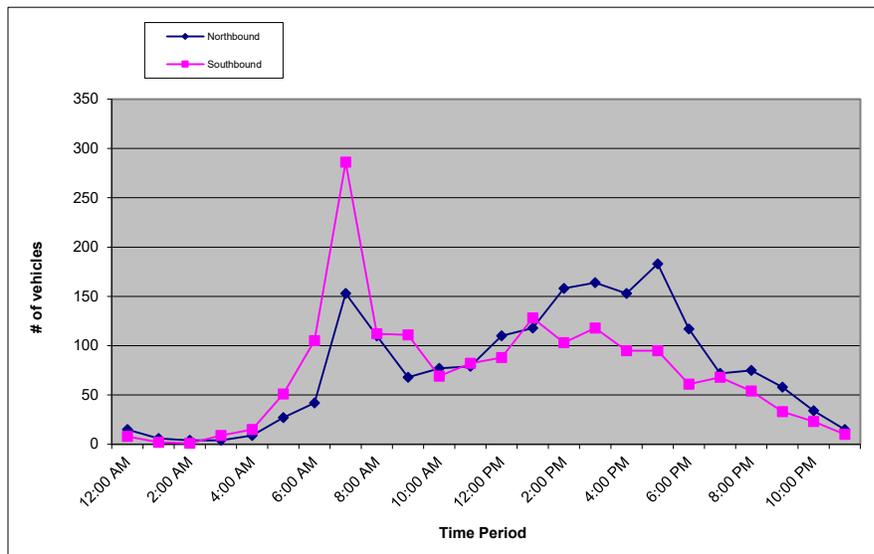
24 Hour Count Report

Prepared For: **VICE**
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

STREET Road 36 **LATITUDE** 36.9666196
SEGMENT North of Ave 15 **LONGITUDE** -119.8938378
COLLECTION DATE Thursday, June 2, 2022 **WEATHER** Clear
NUMBER OF LANES 2

Hour	Northbound					Southbound					Hourly Totals
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	5	8	1	1	15	1	2	5	0	8	23
1:00 AM	2	3	0	1	6	0	1	1	0	2	8
2:00 AM	1	1	1	1	4	0	0	1	0	1	5
3:00 AM	1	0	1	2	4	3	3	1	2	9	13
4:00 AM	2	6	1	0	9	3	1	4	7	15	24
5:00 AM	7	5	6	9	27	13	11	13	14	51	78
6:00 AM	9	8	11	14	42	20	22	26	37	105	147
7:00 AM	29	36	33	55	153	61	52	74	99	286	439
8:00 AM	42	27	21	20	110	45	23	19	25	112	222
9:00 AM	22	8	19	19	68	34	25	33	19	111	179
10:00 AM	14	18	22	23	77	15	20	15	19	69	146
11:00 AM	20	25	22	12	79	21	21	21	19	82	161
12:00 PM	29	32	19	30	110	19	22	19	28	88	198
1:00 PM	36	35	28	19	118	31	51	18	28	128	246
2:00 PM	28	43	27	60	158	20	27	31	25	103	261
3:00 PM	40	44	35	45	164	27	33	30	28	118	282
4:00 PM	45	40	32	36	153	25	34	21	15	95	248
5:00 PM	47	48	49	39	183	21	23	22	29	95	278
6:00 PM	36	29	27	25	117	23	14	11	13	61	178
7:00 PM	16	17	17	22	72	22	13	17	16	68	140
8:00 PM	23	23	15	14	75	13	19	14	8	54	129
9:00 PM	19	14	14	11	58	11	9	7	6	33	91
10:00 PM	19	4	4	7	34	7	8	3	5	23	57
11:00 PM	2	6	2	5	15	3	2	3	2	10	25
Total	51.7%				1851	48.3%				1727	
3578											

AM% 40.4% **AM Peak** 439 **7:00 am to 8:00 am** **AM P.H.F.** 0.71
PM% 59.6% **PM Peak** 294 **2:45 pm to 3:45 pm** **PM P.H.F.** 0.86





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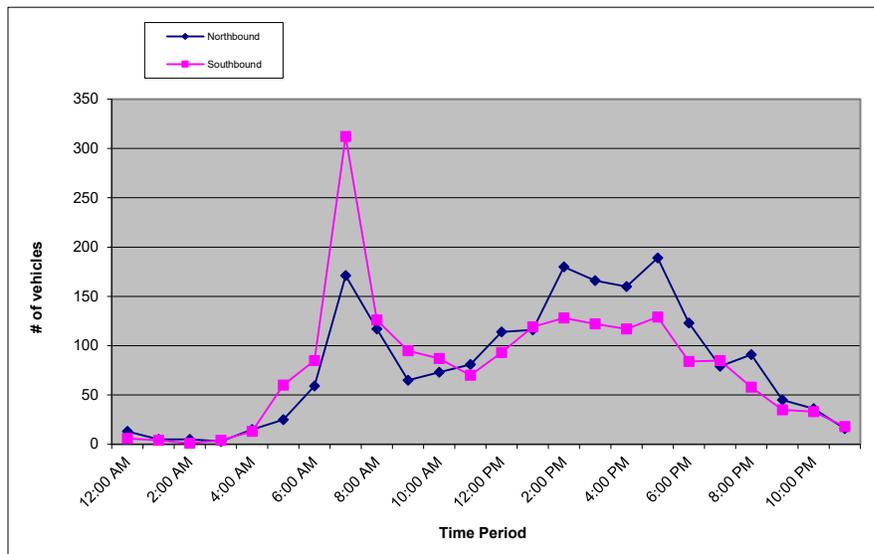
24 Hour Count Report

Prepared For: **VICE**
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

STREET Road 36 **LATITUDE** 36.9666196
SEGMENT South of Ave 15 **LONGITUDE** -119.8938378
COLLECTION DATE Thursday, June 2, 2022 **WEATHER** Clear
NUMBER OF LANES 2

Hour	Northbound					Southbound					Hourly Totals
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	3	8	1	1	13	1	1	4	0	6	19
1:00 AM	2	2	0	1	5	0	2	1	1	4	9
2:00 AM	1	1	2	1	5	0	0	1	0	1	6
3:00 AM	1	1	1	0	3	0	2	2	0	4	7
4:00 AM	2	6	4	3	15	3	0	3	7	13	28
5:00 AM	4	9	4	8	25	13	9	19	19	60	85
6:00 AM	16	10	13	20	59	16	10	31	28	85	144
7:00 AM	23	44	45	59	171	52	52	93	115	312	483
8:00 AM	43	28	26	20	117	49	30	19	28	126	243
9:00 AM	16	9	24	16	65	25	18	30	22	95	160
10:00 AM	12	19	23	19	73	16	29	15	27	87	160
11:00 AM	18	21	23	19	81	16	14	25	15	70	151
12:00 PM	29	24	28	33	114	24	23	24	22	93	207
1:00 PM	30	34	30	22	116	34	36	21	28	119	235
2:00 PM	33	42	33	72	180	24	36	36	32	128	308
3:00 PM	47	42	34	43	166	29	33	27	33	122	288
4:00 PM	43	37	41	39	160	26	32	36	23	117	277
5:00 PM	49	46	55	39	189	26	29	34	40	129	318
6:00 PM	41	32	24	26	123	25	20	22	17	84	207
7:00 PM	16	22	16	25	79	23	20	18	24	85	164
8:00 PM	31	26	22	12	91	14	17	15	12	58	149
9:00 PM	18	9	9	9	45	14	7	7	7	35	80
10:00 PM	19	5	7	5	36	13	11	4	5	33	69
11:00 PM	3	6	1	6	16	6	2	4	6	18	34
Total	50.8%				1947	49.2%				1884	3831

AM% **39.0%** **AM Peak 500** **7:15 am to 8:15 am** **AM P.H.F. 0.72**
PM% **61.0%** **PM Peak 318** **5:00 pm to 6:00 pm** **PM P.H.F. 0.89**





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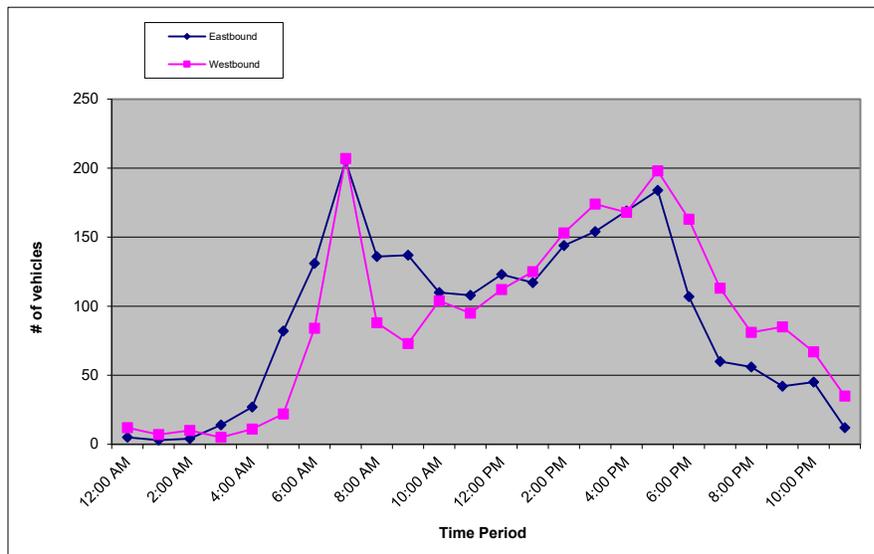
24 Hour Count Report

Prepared For: **VICE**
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

STREET Ave 15 **LATITUDE** 36.9666196
SEGMENT East of Road 36 **LONGITUDE** -119.8938378
COLLECTION DATE Thursday, June 2, 2022 **WEATHER** Clear
NUMBER OF LANES 2

Hour	Eastbound					Westbound					Hourly Totals
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	0	3	0	2	5	1	5	5	1	12	17
1:00 AM	0	1	1	1	3	1	2	3	1	7	10
2:00 AM	0	1	2	1	4	4	4	1	1	10	14
3:00 AM	3	2	5	4	14	1	2	1	1	5	19
4:00 AM	2	10	7	8	27	2	1	4	4	11	38
5:00 AM	7	25	26	24	82	4	1	6	11	22	104
6:00 AM	26	37	28	40	131	23	13	23	25	84	215
7:00 AM	59	55	39	52	205	39	38	74	56	207	412
8:00 AM	46	38	27	25	136	28	22	19	19	88	224
9:00 AM	25	43	43	26	137	19	14	13	27	73	210
10:00 AM	32	31	29	18	110	21	27	35	21	104	214
11:00 AM	22	28	31	27	108	21	20	20	34	95	203
12:00 PM	31	35	29	28	123	23	28	39	22	112	235
1:00 PM	27	26	26	38	117	19	36	42	28	125	242
2:00 PM	33	37	33	41	144	38	44	33	38	153	297
3:00 PM	39	39	36	40	154	47	41	47	39	174	328
4:00 PM	41	49	44	35	169	50	36	47	35	168	337
5:00 PM	50	60	36	38	184	52	48	50	48	198	382
6:00 PM	35	34	18	20	107	41	51	42	29	163	270
7:00 PM	19	19	10	12	60	27	33	24	29	113	173
8:00 PM	16	12	16	12	56	21	20	19	21	81	137
9:00 PM	8	16	9	9	42	24	23	16	22	85	127
10:00 PM	9	20	10	6	45	21	24	12	10	67	112
11:00 PM	3	3	2	4	12	14	11	5	5	35	47
Total	49.8%				2175	50.2%				2192	4367

AM% 38.5% **AM Peak** 412 **7:00 am to 8:00 am** **AM P.H.F.** 0.91
PM% 61.5% **PM Peak** 382 **5:00 pm to 6:00 pm** **PM P.H.F.** 0.88





Metro Traffic Data Inc.
 310 N. Irwin Street - Suite 20
 Hanford, CA 93230
 800-975-6938 Phone/Fax
 www.metrotrafficdata.com

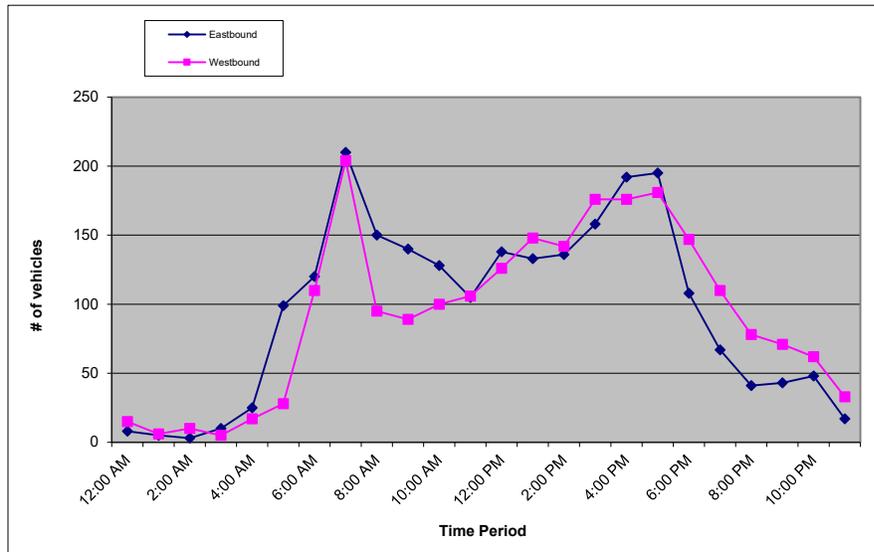
24 Hour Count Report

Prepared For: **VICE**
 4010 N. Chestnut Ave, Suite 101
 Fresno, CA 93727

STREET Ave 15 **LATITUDE** 36.9666196
SEGMENT West of Road 36 **LONGITUDE** -119.8938378
COLLECTION DATE Thursday, June 2, 2022 **WEATHER** Clear
NUMBER OF LANES 2

Hour	Eastbound					Westbound					Hourly Totals	
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total		
12:00 AM	2	4	1	1	8	1	7	7	0	15	23	
1:00 AM	0	2	1	2	5	1	1	3	1	6	11	
2:00 AM	0	1	1	1	3	4	4	1	1	10	13	
3:00 AM	1	0	6	3	10	2	2	1	0	5	15	
4:00 AM	1	10	7	7	25	1	2	8	6	17	42	
5:00 AM	10	21	35	33	99	4	3	7	14	28	127	
6:00 AM	19	34	30	37	120	27	24	22	37	110	230	
7:00 AM	52	58	43	57	210	35	49	71	49	204	414	
8:00 AM	49	44	28	29	150	28	22	25	20	95	245	
9:00 AM	30	39	42	29	140	27	18	20	24	89	229	
10:00 AM	38	34	30	26	128	24	22	37	17	100	228	
11:00 AM	24	27	35	19	105	26	22	21	37	106	211	
12:00 PM	38	36	31	33	138	25	20	45	36	126	264	
1:00 PM	38	26	30	39	133	21	50	45	32	148	281	
2:00 PM	29	43	30	34	136	35	40	31	36	142	278	
3:00 PM	29	38	39	52	158	42	38	52	44	176	334	
4:00 PM	49	50	51	42	192	55	36	48	37	176	368	
5:00 PM	51	64	41	39	195	50	44	49	38	181	376	
6:00 PM	31	27	25	25	108	40	41	35	31	147	255	
7:00 PM	20	19	12	16	67	27	31	24	28	110	177	
8:00 PM	7	8	13	13	41	19	21	22	16	78	119	
9:00 PM	11	13	12	7	43	23	17	14	17	71	114	
10:00 PM	12	20	9	7	48	18	22	13	9	62	110	
11:00 PM	5	3	3	6	17	14	11	4	4	33	50	
Total	50.5%				2279	49.5%				2235	4514	

AM% 39.6% **AM Peak** 414 **7:00 am to 8:00 am** **AM P.H.F.** 0.91
PM% 60.4% **PM Peak** 387 **4:30 pm to 5:30 pm** **PM P.H.F.** 0.90



Appendix B: Madera CTC Travel Demand Model Output

Legend

FC2020	:	Existing Scenario
FC2035	:	Cumulative Scenario
<u>1</u>	:	Denotes zoomed in project area
<u>2</u>	:	Denotes zoomed out region area (HWY interchanges)
PP	:	Plus Project
Pending	:	Pending Projects
SZA	:	Select Zone Analysis

2020

1025	673	1358	1179
48	35	136	101
136	71	43	47
30	25	211	156
97	49	64	64
973	626	1394	1210

2035

1672	1099	1831	1246
70	48	196	110
266	200	44	33
38	28	291	224
177	91	82	59
1626	1051	1886	1304
Avenue 15	Avenue 15		Road 36



Appendix C-1: TIS Scoping Letter

Appendix C-2: TIS Scoping Correspondence

From: Samuel Rashe <Samuel.Rashe@maderacounty.com>
Sent: Wednesday, May 25, 2022 9:12 AM
To: Ken Vang <kenvang@vice-engr.com>
Cc: ELIAS SALIBA <eliassaliba4668@comcast.net>; Rajdeep Sandhu <sandhu8114@gmail.com>;
Luke Vang <lukevang@vice-engr.com>
Subject: FW: CUP 2022-003 SR 145/Road 36 Gas Station TIS Scoping Letter

Good Morning Ken,

I have received comments (attached in this email) regarding the scoping letter from our county staff. I will be reaching out to Caltrans today to ascertain if they have any additional comments.

Very Respectfully,
Sam Rashe



Samuel Rashe | Planner III

COMMUNITY AND ECONOMIC DEVELOPMENT, PLANNING

200 W. 4th Street, Suite 3100, Madera, CA 93637

Office: (559) 675-7821



From: Phu Duong <phu.duong@maderacounty.com>
Sent: Wednesday, May 25, 2022 8:44 AM
To: Samuel Rashe <Samuel.Rashe@maderacounty.com>
Subject: RE: CUP 2022-003 SR 145/Road 36 Gas Station TIS Scoping Letter

Hi Sam,

Attached is our review comments on the scoping letter.



Phu Duong | Development Services Engineer

PUBLIC WORKS, ENGINEERING SERVICES

200 W. 4th Street, Suite 3100, Madera, CA 93637

Office: (559) 675-7811 | Cell: (559) 474-0333



From: Samuel Rashe <Samuel.Rashe@maderacounty.com>
Sent: Tuesday, May 10, 2022 11:27 AM
To: Phu Duong <phu.duong@maderacounty.com>
Subject: FW: CUP 2022-003 SR 145/Road 36 Gas Station TIS Scoping Letter

Good Morning Phu,



I am forwarding you a TIS received regarding CUP 2022-003. Please forward for comments.

Your assistance is greatly appreciated.

Very Respectfully,
Sam Rashe



Samuel Rashe | Planner III
COMMUNITY AND ECONOMIC DEVELOPMENT, PLANNING
200 W. 4th Street, Suite 3100, Madera, CA 93637
Office: (559) 675-7821



From: Ken Vang <kenvang@vice-engr.com>
Sent: Friday, May 6, 2022 3:45 PM
To: Samuel Rashe <Samuel.Rashe@maderacounty.com>
Cc: Jamie Bax <Jamie.Bax@maderacounty.com>; 'ELIAS SALIBA' <eliassaliba4668@comcast.net>; sandhu8114@gmail.com; Luke Vang <lukevang@vice-engr.com>
Subject: CUP 2022-003 SR 145/Road 36 Gas Station TIS Scoping Letter

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you validate the sender and know the content is safe. Please forward this email to spam@maderacounty.com if you believe this email is suspicious.

Sam/Jamie, please find attached TIS scoping letter, trip generation, and trip distribution for proposed gas station at SR 145/Road 36 for Raj.

Please let me know if you have any comments regarding the TIS scope. If so, please provide your comments within 10 business. Otherwise, we will assume you have no comments and we will move forward with acquiring traffic counts.

Best Regards,

Ken Vang, PE,TE
Principal





From: Xiong, Christopher@DOT <Christopher.Xiong@dot.ca.gov>
Sent: Thursday, May 26, 2022 2:31 PM
To: Ken Vang <kenvang@vice-engr.com>
Cc: Padilla, Dave@DOT <dave.padilla@dot.ca.gov>; Samuel Rashe <Samuel.Rashe@maderacounty.com>
Subject: RE: RE: SR 145/Road 36 Gas Station TIS Scoping Letter

Hi Ken,

I was recently notified that this project has been previously reviewed by our office and our comments on previous submittals still apply to this project. Overall our comments are the same, other than considering previous comments on the project. Attached is the revised comment letter that supersedes our May 23, 2022 letter. Please let me know if you have any questions or need clarification.

Best regards,

Christopher Xiong
Caltrans District 6
Christopher.Xiong@dot.ca.gov
(559) 908-7064

From: Xiong, Christopher@DOT
Sent: Monday, May 23, 2022 1:44 PM
To: 'kenvang@vice-engr.com' <kenvang@vice-engr.com>
Cc: Padilla, Dave@DOT <dave.padilla@dot.ca.gov>
Subject: RE: SR 145/Road 36 Gas Station TIS Scoping Letter

Hi Ken,

Please find our comment letter in regard to the SR 145/ Road 36 Gas Station TIS Scoping Letter. Please let me know if you have any questions.

Best regards,

Christopher Xiong
Associate Transportation Planner
Caltrans District 6
1352 W. Olive Avenue
Fresno, CA 93728
Christopher.Xiong@dot.ca.gov
(559) 908-7064



Appendix D: Synchro Reports



Appendix D-1: Existing Scenario(s)

Lanes, Volumes, Timings
1: ROAD 36 & HWY 145

EXISTING AM
02/01/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	137	69	24	157	56	27
Future Volume (vph)	137	69	24	157	56	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.955				0.956	
Flt Protected				0.993	0.967	
Satd. Flow (prot)	1696	0	0	1763	1642	0
Flt Permitted				0.993	0.967	
Satd. Flow (perm)	1696	0	0	1763	1642	0
Link Speed (mph)	65			65	55	
Link Distance (ft)	573			685	673	
Travel Time (s)	6.0			7.2	8.3	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	167	84	29	191	68	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	251	0	0	220	101	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	39.2%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	69	24	157	56	27
Future Vol, veh/h	137	69	24	157	56	27
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	167	84	29	191	68	33

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	261
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.17
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.263
Pot Cap-1 Maneuver	-	-	1275
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1262
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.05	12.56
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	577	-	-	239	-
HCM Lane V/C Ratio	0.175	-	-	0.023	-
HCM Control Delay (s/veh)	12.6	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Lanes, Volumes, Timings
2: ROAD 36 & AVENUE 15

EXISTING AM
02/01/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	37	135	38	69	123	15	40	101	30	40	205	41
Future Volume (vph)	37	135	38	69	123	15	40	101	30	40	205	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.976			0.990			0.976			0.980	
Fl _t Protected		0.991			0.984			0.989			0.993	
Satd. Flow (prot)	0	1802	0	0	1815	0	0	1798	0	0	1813	0
Fl _t Permitted		0.991			0.984			0.989			0.993	
Satd. Flow (perm)	0	1802	0	0	1815	0	0	1798	0	0	1813	0
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		522			593			536			480	
Travel Time (s)		6.5			7.4			6.6			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	147	41	75	134	16	43	110	33	43	223	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	0	225	0	0	186	0	0	311	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	135	38	69	123	15	40	101	30	40	205	41
Future Vol, veh/h	37	135	38	69	123	15	40	101	30	40	205	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	147	41	75	134	16	43	110	33	43	223	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	11.9	12.1	11.2	13.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	18%	33%	14%
Vol Thru, %	59%	64%	59%	72%
Vol Right, %	18%	18%	7%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	171	210	207	286
LT Vol	40	37	69	40
Through Vol	101	135	123	205
RT Vol	30	38	15	41
Lane Flow Rate	186	228	225	311
Geometry Grp	1	1	1	1
Degree of Util (X)	0.296	0.36	0.361	0.476
Departure Headway (Hd)	5.735	5.68	5.777	5.515
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	623	630	619	650
Service Time	3.804	3.747	3.844	3.576
HCM Lane V/C Ratio	0.299	0.362	0.363	0.478
HCM Control Delay, s/veh	11.2	11.9	12.1	13.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.2	1.6	1.6	2.6

Lanes, Volumes, Timings
1: ROAD 36 & HWY 145

EXISTING PM
02/01/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	222	42	16	175	31	29
Future Volume (vph)	222	42	16	175	31	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979				0.935	
Flt Protected				0.996	0.975	
Satd. Flow (prot)	1824	0	0	1855	1698	0
Flt Permitted				0.996	0.975	
Satd. Flow (perm)	1824	0	0	1855	1698	0
Link Speed (mph)	65			65	55	
Link Distance (ft)	573			685	673	
Travel Time (s)	6.0			7.2	8.3	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	244	46	18	192	34	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	290	0	0	210	66	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	222	42	16	175	31	29
Future Vol, veh/h	222	42	16	175	31	29
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	244	46	18	192	34	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	300
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1261
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1249
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.66	11.82
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	594	-	-	151	-
HCM Lane V/C Ratio	0.111	-	-	0.014	-
HCM Control Delay (s/veh)	11.8	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lanes, Volumes, Timings
2: ROAD 36 & AVENUE 15

EXISTING PM
02/01/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	32	141	22	40	135	23	33	128	28	15	67	13
Future Volume (vph)	32	141	22	40	135	23	33	128	28	15	67	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.985			0.984			0.980			0.982	
Flt Protected		0.992			0.990			0.991			0.992	
Satd. Flow (prot)	0	1820	0	0	1815	0	0	1809	0	0	1815	0
Flt Permitted		0.992			0.990			0.991			0.992	
Satd. Flow (perm)	0	1820	0	0	1815	0	0	1809	0	0	1815	0
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		522			593			536			480	
Travel Time (s)		6.5			7.4			6.6			6.0	
Confl. Peds. (#/hr)	10		10	10		10	10		10	10		10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	153	24	43	147	25	36	139	30	16	73	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	0	0	215	0	0	205	0	0	103	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Pretimed
Intersection Capacity Utilization	36.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	141	22	40	135	23	33	128	28	15	67	13
Future Vol, veh/h	32	141	22	40	135	23	33	128	28	15	67	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	153	24	43	147	25	36	139	30	16	73	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.1	10.2	10.2	9.3
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	16%	20%	16%
Vol Thru, %	68%	72%	68%	71%
Vol Right, %	15%	11%	12%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	195	198	95
LT Vol	33	32	40	15
Through Vol	128	141	135	67
RT Vol	28	22	23	13
Lane Flow Rate	205	212	215	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0.289	0.292	0.296	0.152
Departure Headway (Hd)	5.059	4.956	4.957	5.315
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	716	717	678
Service Time	3.151	3.049	3.05	3.315
HCM Lane V/C Ratio	0.292	0.296	0.3	0.152
HCM Control Delay, s/veh	10.2	10.1	10.2	9.3
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.2	1.2	1.2	0.5

Lanes, Volumes, Timings
1: ROAD 36 & HWY 145

EXISTING + PROJECT AM
02/01/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	137	138	93	157	122	27
Future Volume (vph)	137	138	93	157	122	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932				0.976	
Flt Protected				0.982	0.961	
Satd. Flow (prot)	1655	0	0	1744	1665	0
Flt Permitted				0.982	0.961	
Satd. Flow (perm)	1655	0	0	1744	1665	0
Link Speed (mph)	65			65	55	
Link Distance (ft)	573			276	221	
Travel Time (s)	6.0			2.9	2.7	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	167	168	113	191	149	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	335	0	0	304	182	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.5%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	138	93	157	122	27
Future Vol, veh/h	137	138	93	157	122	27
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	167	168	113	191	149	33

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	345
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.17
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.263
Pot Cap-1 Maneuver	-	-	1186
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1175
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.12	22.01
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	390	-	-	670	-
HCM Lane V/C Ratio	0.466	-	-	0.097	-
HCM Control Delay (s/veh)	22	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.4	-	-	0.3	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Volume (vph)	44	66	83	46	136	58
Future Volume (vph)	44	66	83	46	136	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.919		0.952			
Flt Protected	0.980					0.966
Satd. Flow (prot)	1599	0	1690	0	0	1715
Flt Permitted	0.980					0.966
Satd. Flow (perm)	1599	0	1690	0	0	1715
Link Speed (mph)	15		55			55
Link Distance (ft)	63		451			221
Travel Time (s)	2.9		5.6			2.7
Confl. Peds. (#/hr)	10	10		10	10	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	54	80	101	56	166	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	0	157	0	0	237
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	38.6%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	5.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	44	66	83	46	136	58
Future Vol, veh/h	44	66	83	46	136	58
Conflicting Peds, #/hr	10	10	0	10	10	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	82	82	82	82	82	82
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	54	80	101	56	166	71
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	552	149	0	0	167	0
Stage 1	139	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Critical Hdwy	6.47	6.27	-	-	4.17	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	-	-	2.263	-
Pot Cap-1 Maneuver	486	884	-	-	1381	-
Stage 1	875	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	417	868	-	-	1368	-
Mov Cap-2 Maneuver	417	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/√2.63		0		5.61		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	606	1262	-	
HCM Lane V/C Ratio	-	-	0.221	0.121	-	
HCM Control Delay (s/veh)	-	-	12.6	8	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.8	0.4	-	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	137	0	0	181	0	66
Future Volume (vph)	137	0	0	181	0	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Fr _t	0.865					
Fl _t Protected						
Satd. Flow (prot)	1776	0	0	1776	0	1536
Fl _t Permitted						
Satd. Flow (perm)	1776	0	0	1776	0	1536
Link Speed (mph)	65			65	15	
Link Distance (ft)	276			405	86	
Travel Time (s)	2.9			4.2	3.9	
Confl. Peds. (#/hr)	10		10	10		10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	167	0	0	221	0	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	167	0	0	221	0	80
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	23.1%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑		↗
Traffic Vol, veh/h	137	0	0	181	0	66
Future Vol, veh/h	137	0	0	181	0	66
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	167	0	0	221	0	80

Major/Minor

	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 187
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	- 6.27
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	- 3.363
Pot Cap-1 Maneuver	-	0	0 842
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 826
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	WB	NB
HCM Control Delay, s/v	0	0	9.83
HCM LOS			A

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	826	-	-	-
HCM Lane V/C Ratio	0.097	-	-	-
HCM Control Delay (s/veh)	9.8	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Lanes, Volumes, Timings
2: ROAD 36 & AVENUE 15

EXISTING + PROJECT AM
02/01/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	42	135	38	69	123	19	40	127	30	48	222	49
Future Volume (vph)	42	135	38	69	123	19	40	127	30	48	222	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.976			0.988			0.979			0.979	
Fl _t Protected		0.990			0.984			0.990			0.993	
Satd. Flow (prot)	0	1800	0	0	1811	0	0	1805	0	0	1811	0
Fl _t Permitted		0.990			0.984			0.990			0.993	
Satd. Flow (perm)	0	1800	0	0	1811	0	0	1805	0	0	1811	0
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		522			593			536			480	
Travel Time (s)		6.5			7.4			6.6			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	147	41	75	134	21	43	138	33	52	241	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	234	0	0	230	0	0	214	0	0	346	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.1%
Analysis Period (min)	15
	ICU Level of Service A

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	135	38	69	123	19	40	127	30	48	222	49
Future Vol, veh/h	42	135	38	69	123	19	40	127	30	48	222	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	147	41	75	134	21	43	138	33	52	241	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	12.8	12.9	12.2	15.4
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	20%	33%	15%
Vol Thru, %	64%	63%	58%	70%
Vol Right, %	15%	18%	9%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	197	215	211	319
LT Vol	40	42	69	48
Through Vol	127	135	123	222
RT Vol	30	38	19	49
Lane Flow Rate	214	234	229	347
Geometry Grp	1	1	1	1
Degree of Util (X)	0.351	0.385	0.383	0.545
Departure Headway (Hd)	5.907	5.937	6.018	5.654
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	604	601	592	635
Service Time	4	4.029	4.112	3.734
HCM Lane V/C Ratio	0.354	0.389	0.387	0.546
HCM Control Delay, s/veh	12.2	12.8	12.9	15.4
HCM Lane LOS	B	B	B	C
HCM 95th-tile Q	1.6	1.8	1.8	3.3



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	222	92	65	175	81	29
Future Volume (vph)	222	92	65	175	81	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.960				0.964	
Flt Protected				0.987	0.965	
Satd. Flow (prot)	1788	0	0	1839	1733	0
Flt Permitted				0.987	0.965	
Satd. Flow (perm)	1788	0	0	1839	1733	0
Link Speed (mph)	65			65	55	
Link Distance (ft)	573			276	221	
Travel Time (s)	6.0			2.9	2.7	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	244	101	71	192	89	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	345	0	0	263	121	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.9%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	222	92	65	175	81	29
Future Vol, veh/h	222	92	65	175	81	29
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	244	101	71	192	89	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	355
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1204
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1192
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.22	15.93
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	450	-	-	488	-
HCM Lane V/C Ratio	0.269	-	-	0.06	-
HCM Control Delay (s/veh)	15.9	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.1	-	-	0.2	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Volume (vph)	33	50	60	33	99	93
Future Volume (vph)	33	50	60	33	99	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.918		0.952			
Flt Protected	0.981					0.975
Satd. Flow (prot)	1678	0	1773	0	0	1816
Flt Permitted	0.981					0.975
Satd. Flow (perm)	1678	0	1773	0	0	1816
Link Speed (mph)	15		55			55
Link Distance (ft)	63		451			221
Travel Time (s)	2.9		5.6			2.7
Confl. Peds. (#/hr)	10	10		10	10	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	36	55	66	36	109	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	91	0	102	0	0	211
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	31.4%		ICU Level of Service A			
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	33	50	60	33	99	93
Future Vol, veh/h	33	50	60	33	99	93
Conflicting Peds, #/hr	10	10	0	10	10	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	55	66	36	109	102
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	424	104	0	0	112	0
Stage 1	94	-	-	-	-	-
Stage 2	330	-	-	-	-	-
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	587	951	-	-	1477	-
Stage 1	930	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	530	933	-	-	1463	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/√0.76		0		3.95		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	717	928	-	
HCM Lane V/C Ratio	-	-	0.127	0.074	-	
HCM Control Delay (s/veh)	-	-	10.8	7.7	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	222	0	0	191	0	50
Future Volume (vph)	222	0	0	191	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	1611
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	1611
Link Speed (mph)	65			65	15	
Link Distance (ft)	276			405	86	
Travel Time (s)	2.9			4.2	3.9	
Confl. Peds. (#/hr)	10		10	10		10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	244	0	0	210	0	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	244	0	0	210	0	55
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	25.6%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑		↗
Traffic Vol, veh/h	222	0	0	191	0	50
Future Vol, veh/h	222	0	0	191	0	50
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	244	0	0	210	0	55
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	264
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	775
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	760
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s/v	0	0	10.11			
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	760	-	-	-		
HCM Lane V/C Ratio	0.072	-	-	-		
HCM Control Delay (s/veh)	10.1	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	-		

Lanes, Volumes, Timings
2: ROAD 36 & AVENUE 15

EXISTING + PROJECT PM
02/01/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	38	141	22	40	135	29	33	141	28	21	80	19
Future Volume (vph)	38	141	22	40	135	29	33	141	28	21	80	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.985			0.981			0.982			0.978	
Fl _t Protected		0.991			0.990			0.992			0.991	
Satd. Flow (prot)	0	1818	0	0	1809	0	0	1815	0	0	1805	0
Fl _t Permitted		0.991			0.990			0.992			0.991	
Satd. Flow (perm)	0	1818	0	0	1809	0	0	1815	0	0	1805	0
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		522			593			536			480	
Travel Time (s)		6.5			7.4			6.6			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	153	24	43	147	32	36	153	30	23	87	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	218	0	0	222	0	0	219	0	0	131	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.1%
ICU Level of Service	A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	38	141	22	40	135	29	33	141	28	21	80	19
Future Vol, veh/h	38	141	22	40	135	29	33	141	28	21	80	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	153	24	43	147	32	36	153	30	23	87	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.6	10.6	10.8	9.8
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	19%	20%	18%
Vol Thru, %	70%	70%	66%	67%
Vol Right, %	14%	11%	14%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	201	204	120
LT Vol	33	38	40	21
Through Vol	141	141	135	80
RT Vol	28	22	29	19
Lane Flow Rate	220	218	222	130
Geometry Grp	1	1	1	1
Degree of Util (X)	0.321	0.316	0.319	0.196
Departure Headway (Hd)	5.262	5.201	5.179	5.4
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	683	690	694	664
Service Time	3.295	3.233	3.211	3.436
HCM Lane V/C Ratio	0.322	0.316	0.32	0.196
HCM Control Delay, s/veh	10.8	10.6	10.6	9.8
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.4	1.4	1.4	0.7



Appendix D-2: Cumulative Scenario(s)



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	
Traffic Volume (vph)	137	69	27	174	56	27
Future Volume (vph)	137	69	27	174	56	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Fr _t	0.950				0.956	
Fl _t Protected			0.950		0.967	
Satd. Flow (prot)	3362	0	1770	3539	1722	0
Fl _t Permitted			0.950		0.967	
Satd. Flow (perm)	3362	0	1770	3539	1722	0
Link Speed (mph)	65			65	55	
Link Distance (ft)	573			276	221	
Travel Time (s)	6.0			2.9	2.7	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	75	29	189	61	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	224	0	29	189	90	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	29.1%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	137	69	27	174	56	27
Future Vol, veh/h	137	69	27	174	56	27
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	75	29	189	61	29

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	234	0	360 132
Stage 1	-	-	-	-	196 -
Stage 2	-	-	-	-	163 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1331	-	612 893
Stage 1	-	-	-	-	817 -
Stage 2	-	-	-	-	849 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1318	-	588 876
Mov Cap-2 Maneuver	-	-	-	-	588 -
Stage 1	-	-	-	-	810 -
Stage 2	-	-	-	-	822 -

Approach

	EB	WB	NB
HCM Control Delay, s/v	0	1.05	11.34
HCM LOS			B

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	658	-	-	1318	-
HCM Lane V/C Ratio	0.137	-	-	0.022	-
HCM Control Delay (s/veh)	11.3	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Lanes, Volumes, Timings
1: ROAD 36 & AVENUE 15

2035 AM
02/01/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	140	39	112	200	24	40	101	30	16	81	16
Future Volume (vph)	38	140	39	112	200	24	40	101	30	16	81	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Fr _t		0.968			0.984			0.976			0.981	
Fl _t Protected	0.950			0.950				0.989			0.993	
Satd. Flow (prot)	1770	3426	0	1770	3483	0	0	1798	0	0	1815	0
Fl _t Permitted	0.950			0.950				0.989			0.993	
Satd. Flow (perm)	1770	3426	0	1770	3483	0	0	1798	0	0	1815	0
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		522			593			536			480	
Travel Time (s)		6.5			7.4			6.6			6.0	
Confl. Peds. (#/hr)	10		10	10		10	10		10	10		10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	152	42	122	217	26	43	110	33	17	88	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	194	0	122	243	0	0	186	0	0	122	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	39.2%
ICU Level of Service	A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↷			↷	
Traffic Vol, veh/h	38	140	39	112	200	24	40	101	30	16	81	16
Future Vol, veh/h	38	140	39	112	200	24	40	101	30	16	81	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	152	42	122	217	26	43	110	33	17	88	17
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay, s/veh	9.8	10.4	12	10.9
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	23%	100%	0%	0%	100%	0%	0%	14%
Vol Thru, %	59%	0%	100%	54%	0%	100%	74%	72%
Vol Right, %	18%	0%	0%	46%	0%	0%	26%	14%
Sign Control	Stop							
Traffic Vol by Lane	171	38	93	86	112	133	91	113
LT Vol	40	38	0	0	112	0	0	16
Through Vol	101	0	93	47	0	133	67	81
RT Vol	30	0	0	39	0	0	24	16
Lane Flow Rate	186	41	101	93	122	145	99	123
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.323	0.076	0.171	0.149	0.217	0.237	0.156	0.217
Departure Headway (Hd)	6.265	6.582	6.073	5.749	6.403	5.894	5.706	6.362
Convergence, Y/N	Yes							
Cap	574	544	590	623	561	609	628	564
Service Time	4.006	4.325	3.816	3.492	4.141	3.632	3.444	4.107
HCM Lane V/C Ratio	0.324	0.075	0.171	0.149	0.217	0.238	0.158	0.218
HCM Control Delay, s/veh	12	9.9	10.1	9.5	10.9	10.5	9.5	10.9
HCM Lane LOS	B	A	B	A	B	B	A	B
HCM 95th-tile Q	1.4	0.2	0.6	0.5	0.8	0.9	0.5	0.8



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	
Traffic Volume (vph)	252	48	16	175	31	29
Future Volume (vph)	252	48	16	175	31	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Fr _t	0.976				0.935	
Fl _t Protected			0.950		0.975	
Satd. Flow (prot)	3454	0	1770	3539	1698	0
Fl _t Permitted			0.950		0.975	
Satd. Flow (perm)	3454	0	1770	3539	1698	0
Link Speed (mph)	65			65	55	
Link Distance (ft)	573			276	221	
Travel Time (s)	6.0			2.9	2.7	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	274	52	17	190	34	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	326	0	17	190	66	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	252	48	16	175	31	29
Future Vol, veh/h	252	48	16	175	31	29
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	274	52	17	190	34	32

Major/Minor

	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	336	0	450
Stage 1	-	-	-	-	310
Stage 2	-	-	-	-	140
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1220	-	538
Stage 1	-	-	-	-	717
Stage 2	-	-	-	-	872
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1208	-	520
Mov Cap-2 Maneuver	-	-	-	-	520
Stage 1	-	-	-	-	710
Stage 2	-	-	-	-	851

Approach

	EB	WB	NB
HCM Control Delay, s/v	0	0.67	11.38
HCM LOS			B

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	629	-	-	1208	-
HCM Lane V/C Ratio	0.104	-	-	0.014	-
HCM Control Delay (s/veh)	11.4	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lanes, Volumes, Timings
1: ROAD 36 & AVENUE 15

2035 PM
02/01/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	199	31	43	144	25	35	134	29	58	258	50
Future Volume (vph)	45	199	31	43	144	25	35	134	29	58	258	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.980			0.978			0.980			0.982	
Fl _t Protected	0.950			0.950				0.991			0.992	
Satd. Flow (prot)	1770	3468	0	1770	3461	0	0	1809	0	0	1815	0
Fl _t Permitted	0.950			0.950				0.991			0.992	
Satd. Flow (perm)	1770	3468	0	1770	3461	0	0	1809	0	0	1815	0
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		522			593			536			480	
Travel Time (s)		6.5			7.4			6.6			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	216	34	47	157	27	38	146	32	63	280	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	250	0	47	184	0	0	216	0	0	397	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

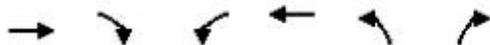
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	45.5%
ICU Level of Service	A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	17
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↷			↷	
Traffic Vol, veh/h	45	199	31	43	144	25	35	134	29	58	258	50
Future Vol, veh/h	45	199	31	43	144	25	35	134	29	58	258	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	216	34	47	157	27	38	146	32	63	280	54
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay, s/veh	12.1	11.6	14.6	25.1
HCM LOS	B	B	B	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	18%	100%	0%	0%	100%	0%	0%	16%
Vol Thru, %	68%	0%	100%	68%	0%	100%	66%	70%
Vol Right, %	15%	0%	0%	32%	0%	0%	34%	14%
Sign Control	Stop							
Traffic Vol by Lane	198	45	133	97	43	96	73	366
LT Vol	35	45	0	0	43	0	0	58
Through Vol	134	0	133	66	0	96	48	258
RT Vol	29	0	0	31	0	0	25	50
Lane Flow Rate	215	49	144	106	47	104	79	398
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.417	0.105	0.288	0.204	0.102	0.212	0.156	0.729
Departure Headway (Hd)	6.968	7.706	7.189	6.958	7.847	7.329	7.081	6.594
Convergence, Y/N	Yes							
Cap	517	465	500	515	457	489	506	549
Service Time	4.71	5.453	4.935	4.704	5.597	5.078	4.83	4.33
HCM Lane V/C Ratio	0.416	0.105	0.288	0.206	0.103	0.213	0.156	0.725
HCM Control Delay, s/veh	14.6	11.4	12.8	11.5	11.5	12.1	11.1	25.1
HCM Lane LOS	B	B	B	B	B	B	B	D
HCM 95th-tile Q	2	0.3	1.2	0.8	0.3	0.8	0.5	6.1



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	
Traffic Volume (vph)	137	138	96	174	122	27
Future Volume (vph)	137	138	96	174	122	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Fr _t	0.925				0.976	
Fl _t Protected			0.950		0.961	
Satd. Flow (prot)	3274	0	1770	3539	1747	0
Fl _t Permitted			0.950		0.961	
Satd. Flow (perm)	3274	0	1770	3539	1747	0
Link Speed (mph)	65			65	55	
Link Distance (ft)	573			276	221	
Travel Time (s)	6.0			2.9	2.7	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	150	104	189	133	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	299	0	104	189	162	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.3%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 4.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	137	138	96	174	122	27
Future Vol, veh/h	137	138	96	174	122	27
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	150	104	189	133	29

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	309	0	547 169
Stage 1	-	-	-	-	234 -
Stage 2	-	-	-	-	313 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1248	-	467 845
Stage 1	-	-	-	-	783 -
Stage 2	-	-	-	-	714 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1237	-	419 829
Mov Cap-2 Maneuver	-	-	-	-	419 -
Stage 1	-	-	-	-	775 -
Stage 2	-	-	-	-	648 -

Approach

	EB	WB	NB
HCM Control Delay, s/v	0	2.91	16.99
HCM LOS			C

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	461	-	-	1237	-
HCM Lane V/C Ratio	0.352	-	-	0.084	-
HCM Control Delay (s/veh)	17	-	-	8.2	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.6	-	-	0.3	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Volume (vph)	44	66	83	46	136	96
Future Volume (vph)	44	66	83	46	136	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.919		0.952			
Flt Protected	0.980					0.971
Satd. Flow (prot)	1678	0	1773	0	0	1809
Flt Permitted	0.980					0.971
Satd. Flow (perm)	1678	0	1773	0	0	1809
Link Speed (mph)	15		55			55
Link Distance (ft)	63		451			221
Travel Time (s)	2.9		5.6			2.7
Confl. Peds. (#/hr)	10	10		10	10	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	72	90	50	148	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	140	0	0	252
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	40.6%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 5.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	44	66	83	46	136	96
Future Vol, veh/h	44	66	83	46	136	96
Conflicting Peds, #/hr	10	10	0	10	10	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	72	90	50	148	104

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	535	135	0
Stage 1	125	-	-
Stage 2	410	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	506	914	-
Stage 1	900	-	-
Stage 2	670	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	441	896	-
Mov Cap-2 Maneuver	441	-	-
Stage 1	892	-	-
Stage 2	590	-	-

Approach	WB	NB	SB
HCM Control Delay, s/√	1.98	0	4.59
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	635	1055
HCM Lane V/C Ratio	-	-	0.188	0.104
HCM Control Delay (s/veh)	-	-	12	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.3



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Volume (vph)	137	0	0	201	0	66
Future Volume (vph)	137	0	0	201	0	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	1611
Link Speed (mph)	65			65	15	
Link Distance (ft)	276			405	86	
Travel Time (s)	2.9			4.2	3.9	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	0	0	218	0	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	149	0	0	218	0	72
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	137	0	0	201	0	66
Future Vol, veh/h	137	0	0	201	0	66
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	0	0	218	0	72

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 94
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 944
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 926
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	9.21
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	926	-	-	-
HCM Lane V/C Ratio	0.077	-	-	-
HCM Control Delay (s/veh)	9.2	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Lanes, Volumes, Timings
1: ROAD 36 & AVENUE 15

2035 + PROJECT AM
02/01/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	140	39	122	200	28	40	127	30	24	98	24
Future Volume (vph)	43	140	39	122	200	28	40	127	30	24	98	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.982			0.979			0.978	
Flt Protected	0.950			0.950				0.990			0.992	
Satd. Flow (prot)	1770	3426	0	1770	3476	0	0	1805	0	0	1807	0
Flt Permitted	0.950			0.950				0.990			0.992	
Satd. Flow (perm)	1770	3426	0	1770	3476	0	0	1805	0	0	1807	0
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		522			593			536			480	
Travel Time (s)		6.5			7.4			6.6			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	152	42	133	217	30	43	138	33	26	107	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	194	0	133	247	0	0	214	0	0	159	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	37.3%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↷			↷	
Traffic Vol, veh/h	43	140	39	122	200	28	40	127	30	24	98	24
Future Vol, veh/h	43	140	39	122	200	28	40	127	30	24	98	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	152	42	133	217	30	43	138	33	26	107	26
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay, s/veh	10.3	10.9	13.2	11.9
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	20%	100%	0%	0%	100%	0%	0%	16%
Vol Thru, %	64%	0%	100%	54%	0%	100%	70%	67%
Vol Right, %	15%	0%	0%	46%	0%	0%	30%	16%
Sign Control	Stop							
Traffic Vol by Lane	197	43	93	86	122	133	95	146
LT Vol	40	43	0	0	122	0	0	24
Through Vol	127	0	93	47	0	133	67	98
RT Vol	30	0	0	39	0	0	28	24
Lane Flow Rate	214	47	101	93	133	145	103	159
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.383	0.09	0.18	0.157	0.246	0.249	0.17	0.288
Departure Headway (Hd)	6.447	6.894	6.383	6.057	6.684	6.174	5.963	6.531
Convergence, Y/N	Yes							
Cap	557	518	560	589	536	580	600	549
Service Time	4.207	4.657	4.145	3.819	4.441	3.931	3.719	4.294
HCM Lane V/C Ratio	0.384	0.091	0.18	0.158	0.248	0.25	0.172	0.29
HCM Control Delay, s/veh	13.2	10.3	10.6	10	11.6	11	9.9	11.9
HCM Lane LOS	B	B	B	A	B	B	A	B
HCM 95th-tile Q	1.8	0.3	0.7	0.6	1	1	0.6	1.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	
Traffic Volume (vph)	252	98	65	175	81	29
Future Volume (vph)	252	98	65	175	81	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Fr _t	0.958				0.964	
Fl _t Protected			0.950		0.965	
Satd. Flow (prot)	3391	0	1770	3539	1733	0
Fl _t Permitted			0.950		0.965	
Satd. Flow (perm)	3391	0	1770	3539	1733	0
Link Speed (mph)	65			65	55	
Link Distance (ft)	573			276	221	
Travel Time (s)	6.0			2.9	2.7	
Confl. Peds. (#/hr)		10	10		10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	274	107	71	190	88	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	381	0	71	190	120	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	33.3%
	ICU Level of Service A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	252	98	65	175	81	29
Future Vol, veh/h	252	98	65	175	81	29
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	274	107	71	190	88	32

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	390	0	584
Stage 1	-	-	-	-	337
Stage 2	-	-	-	-	246
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1165	-	443
Stage 1	-	-	-	-	695
Stage 2	-	-	-	-	772
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1154	-	408
Mov Cap-2 Maneuver	-	-	-	-	408
Stage 1	-	-	-	-	688
Stage 2	-	-	-	-	717

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.25	15.35
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	467	-	-	1154	-
HCM Lane V/C Ratio	0.256	-	-	0.061	-
HCM Control Delay (s/veh)	15.4	-	-	8.3	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0.2	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Volume (vph)	33	50	60	33	99	58
Future Volume (vph)	33	50	60	33	99	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.919		0.952			
Flt Protected	0.980					0.969
Satd. Flow (prot)	1678	0	1773	0	0	1805
Flt Permitted	0.980					0.969
Satd. Flow (perm)	1678	0	1773	0	0	1805
Link Speed (mph)	15		55			55
Link Distance (ft)	63		451			221
Travel Time (s)	2.9		5.6			2.7
Confl. Peds. (#/hr)	10	10		10	10	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	54	65	36	108	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	0	101	0	0	171
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	29.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	33	50	60	33	99	58
Future Vol, veh/h	33	50	60	33	99	58
Conflicting Peds, #/hr	10	10	0	10	10	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	54	65	36	108	63

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	381	103	0
Stage 1	93	-	-
Stage 2	288	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	621	952	-
Stage 1	930	-	-
Stage 2	761	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	563	934	-
Mov Cap-2 Maneuver	563	-	-
Stage 1	922	-	-
Stage 2	696	-	-

Approach	WB	NB	SB
HCM Control Delay, s/√0.54		0	4.83
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	740	1135
HCM Lane V/C Ratio	-	-	0.122	0.073
HCM Control Delay (s/veh)	-	-	10.5	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Volume (vph)	222	0	0	191	0	50
Future Volume (vph)	222	0	0	191	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	1611
Link Speed (mph)	65			65	15	
Link Distance (ft)	276			405	86	
Travel Time (s)	2.9			4.2	3.9	
Confl. Peds. (#/hr)	10		10	10		10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	241	0	0	208	0	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	0	0	208	0	54
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	222	0	0	191	0	50
Future Vol, veh/h	222	0	0	191	0	50
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	241	0	0	208	0	54

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	141
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	882
Stage 1	-	-	0	-	-
Stage 2	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	865
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach

	EB	WB	NB
HCM Control Delay, s/v	0	0	9.44
HCM LOS			A

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	865	-	-	-
HCM Lane V/C Ratio	0.063	-	-	-
HCM Control Delay (s/veh)	9.4	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Lanes, Volumes, Timings
1: ROAD 36 & AVENUE 15

2035 + PROJECT PM
02/01/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	199	31	43	144	31	35	147	29	64	271	56
Future Volume (vph)	51	199	31	43	144	31	35	147	29	64	271	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.973			0.981			0.981	
Flt Protected	0.950			0.950				0.992			0.992	
Satd. Flow (prot)	1770	3468	0	1770	3444	0	0	1813	0	0	1813	0
Flt Permitted	0.950			0.950				0.992			0.992	
Satd. Flow (perm)	1770	3468	0	1770	3444	0	0	1813	0	0	1813	0
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		522			593			536			480	
Travel Time (s)		6.5			7.4			6.6			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	216	34	47	157	34	38	160	32	70	295	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	250	0	47	191	0	0	230	0	0	426	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	48.1%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection	
Intersection Delay, s/veh	19.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	51	199	31	43	144	31	35	147	29	64	271	56
Future Vol, veh/h	51	199	31	43	144	31	35	147	29	64	271	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	216	34	47	157	34	38	160	32	70	295	61
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay, s/veh	12.5	12	15.7	30.6
HCM LOS	B	B	C	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	17%	100%	0%	0%	100%	0%	0%	16%
Vol Thru, %	70%	0%	100%	68%	0%	100%	61%	69%
Vol Right, %	14%	0%	0%	32%	0%	0%	39%	14%
Sign Control	Stop							
Traffic Vol by Lane	211	51	133	97	43	96	79	391
LT Vol	35	51	0	0	43	0	0	64
Through Vol	147	0	133	66	0	96	48	271
RT Vol	29	0	0	31	0	0	31	56
Lane Flow Rate	229	55	144	106	47	104	86	425
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.454	0.122	0.297	0.211	0.105	0.219	0.173	0.793
Departure Headway (Hd)	7.132	7.926	7.408	7.176	8.076	7.556	7.271	6.717
Convergence, Y/N	Yes							
Cap	505	452	485	499	443	475	492	540
Service Time	4.883	5.682	5.163	4.931	5.835	5.315	5.03	4.458
HCM Lane V/C Ratio	0.453	0.122	0.297	0.212	0.106	0.219	0.175	0.787
HCM Control Delay, s/veh	15.7	11.8	13.3	11.9	11.8	12.4	11.6	30.6
HCM Lane LOS	C	B	B	B	B	B	B	D
HCM 95th-tile Q	2.3	0.4	1.2	0.8	0.3	0.8	0.6	7.5



Appendix E: Traffic Signal Warrants

Warrants Summary Report

1: RD36 / SR145

Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	0 Hours met (8 required)
Condition A and B Met?	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi **No** 2 Hours met (8 required)

Ped Condition? **No** 0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

No

Condition A Met? **No**

Condition B Met? **No**

Condition C Met? **No**

BicycleWarrant

No

0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

1: RD36 / SR145

Intersection Information

Major Street Name: SR 145

Major Street Direction: EB/WB

Minor Street Direction: NB

WARRANT 1 MET? No

Details:

Condition A Met? No 0 Hours met (8 required)

Condition B Met? No 0 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	70% Standard Met? Cond. A OR Cond. B		56% Standard Met? Cond. A AND Cond. B	
			Condition A 70% Column	Condition B 70% Column	Condition A 56% Column	Condition B 56% Column
00:00 to 01:00	60	4	No			
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:15 to 01:15	58	2	No			
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:30 to 01:30	54	3	No			
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:45 to 01:45	58	4	No			
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

01:00 to 02:00		53		3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:15 to 02:15		49		3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:30 to 02:30		47		1		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:45 to 02:45		44		1		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:00 to 03:00		43		1		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:15 to 03:15		42		2		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:30 to 03:30		48		3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:45 to 03:45		54		3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:00 to 04:00		62		5		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:15 to 04:15		67		5		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:30 to 04:30		68		8		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:45 to 04:45		79		14		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:00 to 05:00		89		13		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:15 to 05:15		104		18		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:30 to 05:30		111		19		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:45 to 05:45		111		15		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

05:00 to 06:00		122		22		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

05:15 to 06:15		133		27		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

05:30 to 06:30		163		31		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

05:45 to 06:45		205		40		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

06:00 to 07:00		233		46		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:15 to 07:15		265		51		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:30 to 07:30		333		60		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:45 to 07:45		354		70		No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

07:00 to 08:00		382		75		No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

07:15 to 08:15		387		83		No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

07:30 to 08:30		325		78		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

07:45 to 08:45		314		72		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:00 to 09:00		285		65		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:15 to 09:15		261		60		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:30 to 09:30		267		57		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:45 to 09:45		264		55		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:00 to 10:00		262		58		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:15 to 10:15		278		48		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:30 to 10:30		272		45		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:45 to 10:45	260	40	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

10:00 to 11:00	255	33	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

10:15 to 11:15	261	34	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

10:30 to 11:30	260	46	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

10:45 to 11:45	275	50	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

11:00 to 12:00	284	52	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

11:15 to 12:15	291	53	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

11:30 to 12:30	320	47	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

11:45 to 12:45	321	46	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

12:00 to 13:00	338	48	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

12:15 to 13:15	349	43	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

12:30 to 13:30	333	61	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

12:45 to 13:45	338	61	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

13:00 to 14:00	348	56	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

13:15 to 14:15	343		61	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

13:30 to 14:30	358		37	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

13:45 to 14:45	360		35	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

14:00 to 15:00	357		52	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:15 to 15:15	367		62	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:30 to 15:30	383		67	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:45 to 15:45	397		72	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:00 to 16:00	412	65	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

15:15 to 16:15	409	57	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

15:30 to 16:30	422	61	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

15:45 to 16:45	444	61	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

16:00 to 17:00	453	56	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

16:15 to 17:15	455	60	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

16:30 to 17:30	443	54	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

16:45 to 17:45	428	54	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

17:00 to 18:00	407	55	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

17:15 to 18:15	386	55	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

17:30 to 18:30	361	55	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

17:45 to 18:45	316	54	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

18:00 to 19:00	268	52	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

18:15 to 19:15	246	48	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

18:30 to 19:30	211	49	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

18:45 to 19:45	187	39	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

19:00 to 20:00	188	33	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

19:15 to 20:15	175	24	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

19:30 to 20:30	183	17	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

19:45 to 20:45	173	15	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

20:00 to 21:00	179	12	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

20:15 to 21:15	187		13	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

20:30 to 21:30	181		12	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

20:45 to 21:45	195		14	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

21:00 to 22:00	188		16	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

21:15 to 22:15	191		14	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

21:30 to 22:30	181		14	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

21:45 to 22:45	165		12	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

22:00 to 23:00	151	10	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

22:15 to 23:15	131	7	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

22:30 to 23:30	126	6	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

22:45 to 23:45	123	7	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

23:00 to 00:00	119	5	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

23:15 to 00:15	103	7	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

23:30 to 00:30	88	6	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

23:45 to 00:45		73	3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No				

Warrant 2: Four-hour Vehicular Volume

1: RD36 / SR145

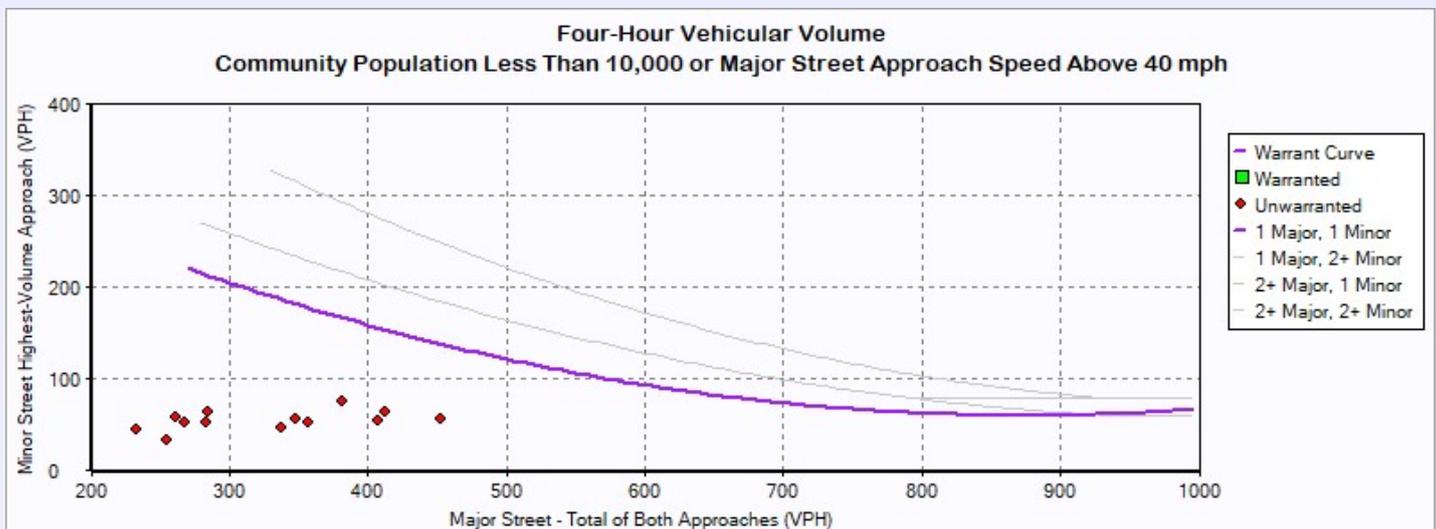
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

Warrant 2 Met? **No**

Details:

Notes	0 Hours met (4 required)
Low population	Yes



Hourly Volumes

Time	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	60	4
01:00:00 - 02:00:00	53	3
02:00:00 - 03:00:00	43	1
03:00:00 - 04:00:00	62	5
04:00:00 - 05:00:00	89	13
05:00:00 - 06:00:00	122	22
06:00:00 - 07:00:00	233	46
07:00:00 - 08:00:00	382	75
08:00:00 - 09:00:00	285	65
09:00:00 - 10:00:00	262	58
10:00:00 - 11:00:00	255	33
11:00:00 - 12:00:00	284	52
12:00:00 - 13:00:00	338	48
13:00:00 - 14:00:00	348	56
14:00:00 - 15:00:00	357	52
15:00:00 - 16:00:00	412	65
16:00:00 - 17:00:00	453	56
17:00:00 - 18:00:00	407	55
18:00:00 - 19:00:00	268	52
19:00:00 - 20:00:00	188	33
20:00:00 - 21:00:00	179	12
21:00:00 - 22:00:00	188	16
22:00:00 - 23:00:00	151	10
23:00:00 - 00:00:00	119	5

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)

Warrant 3: Peak Hour

1: RD36 / SR145

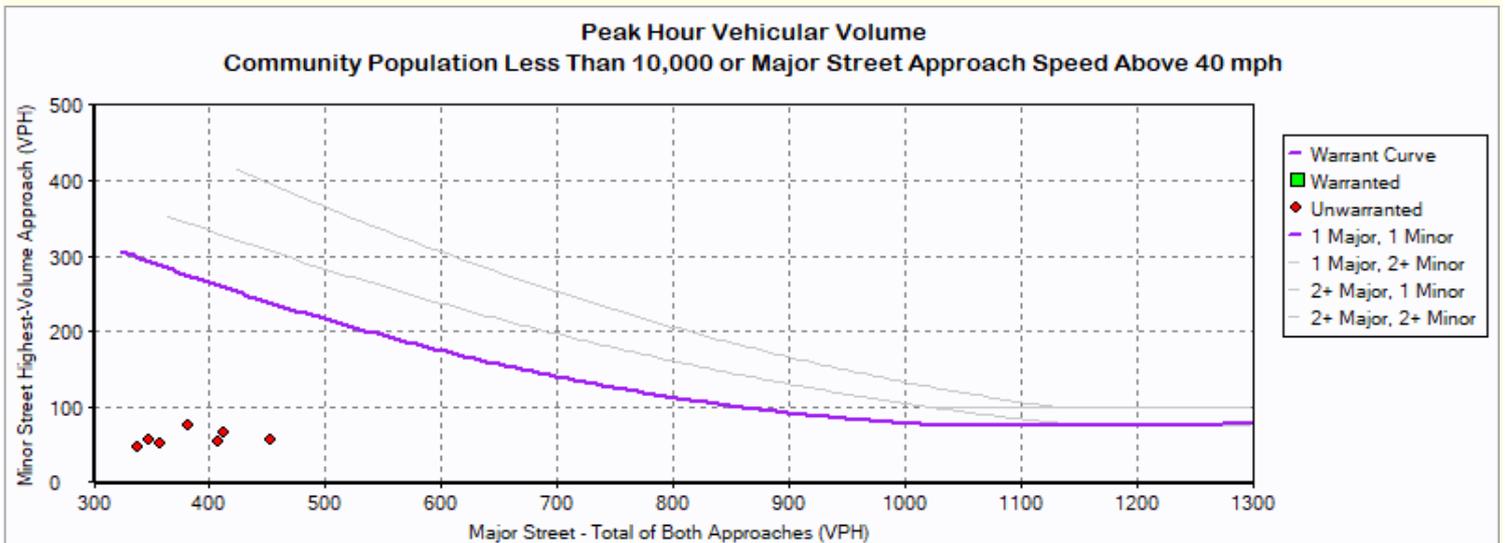
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lanes	1	1
Approach Speed	65	50

Warrant 3 Met? **No**

Details

Low Population?	Yes		
Condition A Met?	No	Condition B Met?	No
Notes	0 Hours met (1 required)	Notes	0 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Met		
Total Entering Intersection Volume Condition Met?	Not Met		



Warrant 3: Peak Hour

1: RD36 / SR145

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
0:00	60	4
1:00	53	3
2:00	43	1
3:00	62	5
4:00	89	13
5:00	122	22
6:00	233	46
7:00	382	75
8:00	285	65
9:00	262	58
10:00	255	33
11:00	284	52
12:00	338	48
13:00	348	56
14:00	357	52
15:00	412	65
16:00	453	56
17:00	407	55
18:00	268	52
19:00	188	33
20:00	179	12
21:00	188	16
22:00	151	10
23:00	119	5

Warrant 4: Pedestrian Volume

1: RD36 / SR145

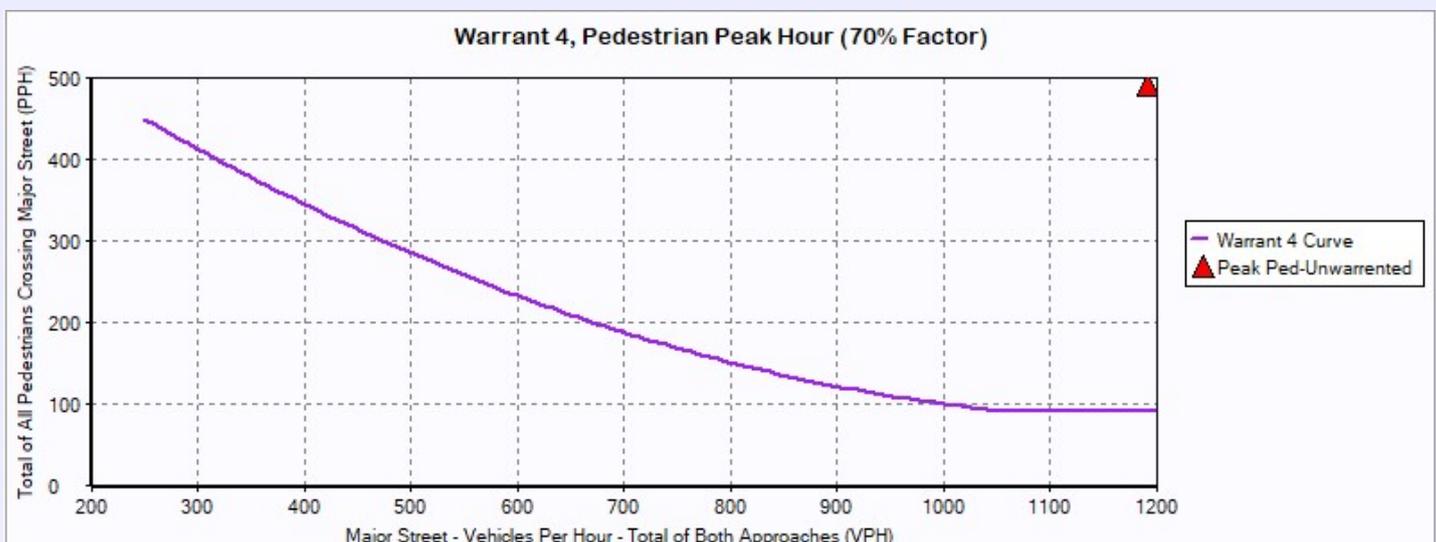
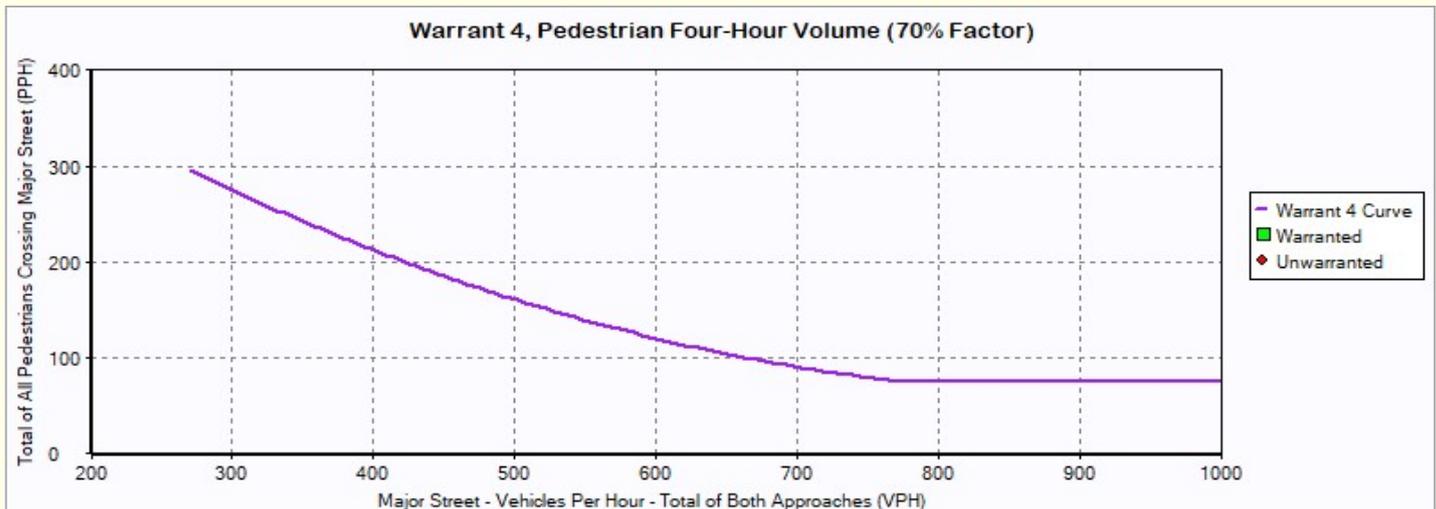
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approch Speed	65	50

WARRANT 4 MET ? No

Details

Pedestrian Four Hour Volume Warrant Met?	No	
Pedestrian Peak Hour Warrant Met?	No	Notes 0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	Yes	



Warrant 5: School Crossing

1: RD36 / SR145

Intersection Information

Major Street Name SR 145

Major Street Direction EB/WB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min) 0

Number of Students Crossing in Time Period 0

Number of Adequate Gaps in Time Period 0

Other Remedial Measures Attempted? **No**

Adjacent Signal on EB approach? **No**

Distance to signal on EB Approach (ft) -

Adjacent Signal on WB approach? **No**

Distance to signal on WB Approach (ft) -

Will New Signal Restrict Progressive Traffic? **No**

Warrant 6: Coordinated Signal System

1: RD36 / SR145

Intersection Information

Major Street Name SR 145
Major Street Direction EB/WB

WARRANT 6 MET? **No**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
NB Approach (Rd 36)	Yes	No	N/A
WB Approach (SR 145)	Yes	No	N/A
EB Approach (SR 145)	Yes	No	N/A

Unacceptable Platooning?
(At least one approach)

No

Distance to Closest Signal
(Must be N/A or > 1000)

N/A

Warrant 7: Crash Experience

1: RD36 / SR145

Intersection Information

Major Street Name SR 145
 Major Street Direction EB/WB
 Minor Street Direction NB

WARRANT 7 MET? No

Details:

Low Population? **Yes** Traffic Volume Condition Met? **No**
 Major Street Speed Limit 65 2 Hours Met (8 Required)
 Major Street 85th-% tile Speed 0.00 Ped Volume Condition Met? **No**
 0 Hours Met (8 Required)
 Qualifying Crashes **0**
 Adequate Alternative Trials? **No**

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Northbound Ped Volumes		Peds	> 80?
			Condition A	Condition B	Peds	> 80?		
00:00 to 01:00	60	0	No	No	0	No	0	No
00:15 to 01:15	58	0	No	No	0	No	0	No
00:30 to 01:30	54	0	No	No	0	No	0	No
00:45 to 01:45	58	0	No	No	0	No	0	No
01:00 to 02:00	53	0	No	No	0	No	0	No
01:15 to 02:15	49	0	No	No	0	No	0	No
01:30 to 02:30	47	0	No	No	0	No	0	No
01:45 to 02:45	44	0	No	No	0	No	0	No

02:00 to 03:00	43	0	No	No	0	No	0	No
02:15 to 03:15	42	0	No	No	0	No	0	No
02:30 to 03:30	48	0	No	No	0	No	0	No
02:45 to 03:45	54	0	No	No	0	No	0	No
03:00 to 04:00	62	0	No	No	0	No	0	No
03:15 to 04:15	67	0	No	No	0	No	0	No
03:30 to 04:30	68	0	No	No	0	No	0	No
03:45 to 04:45	79	0	No	No	0	No	0	No
04:00 to 05:00	89	0	No	No	0	No	0	No
04:15 to 05:15	104	0	No	No	0	No	0	No
04:30 to 05:30	111	0	No	No	0	No	0	No
04:45 to 05:45	111	0	No	No	0	No	0	No
05:00 to 06:00	122	0	No	No	0	No	0	No
05:15 to 06:15	133	0	No	No	0	No	0	No
05:30 to 06:30	163	0	No	No	0	No	0	No
05:45 to 06:45	205	0	No	No	0	No	0	No
06:00 to 07:00	233	0	No	No	0	No	0	No
06:15 to 07:15	265	0	No	No	0	No	0	No

06:30 to 07:30	333	0	No	No	0	No	0	No
06:45 to 07:45	354	0	No	No	0	No	0	No
07:00 to 08:00	382	0	No	No	0	No	0	No
07:15 to 08:15	387	0	No	No	0	No	0	No
07:30 to 08:30	325	0	No	No	0	No	0	No
07:45 to 08:45	314	0	No	No	0	No	0	No
08:00 to 09:00	285	0	No	No	0	No	0	No
08:15 to 09:15	261	0	No	No	0	No	0	No
08:30 to 09:30	267	0	No	No	0	No	0	No
08:45 to 09:45	264	0	No	No	0	No	0	No
09:00 to 10:00	262	0	No	No	0	No	0	No
09:15 to 10:15	278	0	No	No	0	No	0	No
09:30 to 10:30	272	0	No	No	0	No	0	No
09:45 to 10:45	260	0	No	No	0	No	0	No
10:00 to 11:00	255	0	No	No	0	No	0	No
10:15 to 11:15	261	0	No	No	0	No	0	No
10:30 to 11:30	260	0	No	No	0	No	0	No
10:45 to 11:45	275	0	No	No	0	No	0	No

11:00 to 12:00	284	0	No	No	0	No	0	No
11:15 to 12:15	291	0	No	No	0	No	0	No
11:30 to 12:30	320	0	No	No	0	No	0	No
11:45 to 12:45	321	0	No	No	0	No	0	No
12:00 to 13:00	338	0	No	No	0	No	0	No
12:15 to 13:15	349	0	No	No	0	No	0	No
12:30 to 13:30	333	0	No	No	0	No	0	No
12:45 to 13:45	338	0	No	No	0	No	0	No
13:00 to 14:00	348	0	No	No	0	No	0	No
13:15 to 14:15	343	0	No	No	0	No	0	No
13:30 to 14:30	358	0	No	No	0	No	0	No
13:45 to 14:45	360	0	No	No	0	No	0	No
14:00 to 15:00	357	0	No	No	0	No	0	No
14:15 to 15:15	367	0	No	No	0	No	0	No
14:30 to 15:30	383	0	No	No	0	No	0	No
14:45 to 15:45	397	0	No	No	0	No	0	No
15:00 to 16:00	412	0	No	No	0	No	0	No
15:15 to 16:15	409	0	No	No	0	No	0	No

15:30 to 16:30	422	0	No	No	0	No	0	No
15:45 to 16:45	444	0	No	No	0	No	0	No
16:00 to 17:00	453	0	No	No	0	No	0	No
16:15 to 17:15	455	0	No	No	0	No	0	No
16:30 to 17:30	443	0	No	No	0	No	0	No
16:45 to 17:45	428	0	No	No	0	No	0	No
17:00 to 18:00	407	0	No	No	0	No	0	No
17:15 to 18:15	386	0	No	No	0	No	0	No
17:30 to 18:30	361	0	No	No	0	No	0	No
17:45 to 18:45	316	0	No	No	0	No	0	No
18:00 to 19:00	268	0	No	No	0	No	0	No
18:15 to 19:15	246	0	No	No	0	No	0	No
18:30 to 19:30	211	0	No	No	0	No	0	No
18:45 to 19:45	187	0	No	No	0	No	0	No
19:00 to 20:00	188	0	No	No	0	No	0	No
19:15 to 20:15	175	0	No	No	0	No	0	No
19:30 to 20:30	183	0	No	No	0	No	0	No
19:45 to 20:45	173	0	No	No	0	No	0	No

20:00 to 21:00	179	0	No	No	0	No	0	No
20:15 to 21:15	187	0	No	No	0	No	0	No
20:30 to 21:30	181	0	No	No	0	No	0	No
20:45 to 21:45	195	0	No	No	0	No	0	No
21:00 to 22:00	188	0	No	No	0	No	0	No
21:15 to 22:15	191	0	No	No	0	No	0	No
21:30 to 22:30	181	0	No	No	0	No	0	No
21:45 to 22:45	165	0	No	No	0	No	0	No
22:00 to 23:00	151	0	No	No	0	No	0	No
22:15 to 23:15	131	0	No	No	0	No	0	No
22:30 to 23:30	126	0	No	No	0	No	0	No
22:45 to 23:45	123	0	No	No	0	No	0	No
23:00 to 00:00	119	0	No	No	0	No	0	No
23:15 to 00:15	103	0	No	No	0	No	0	No
23:30 to 00:30	88	0	No	No	0	No	0	No
23:45 to 00:45	73	0	No	No	0	No	0	No

Warrant 8: Roadway Network

1: RD36 / SR145

Intersection Information

Major Street Name SR 145
 Major Street Direction EB/WB
 Minor Street Direction NB

WARRANT 8 MET? (A or B) No

Details:

	Growth Rates % (per year)		
	NB	EB	WB
L	0.00	0.00	0.00
T	0.00	0.00	0.00
R	0.00	0.00	0.00

<u>Condition A, Total Entering Volume</u>		<u>Condition B, Non-normal Business Day</u>		
			<u>Existing</u>	<u>Future</u>
Existing Peak Hour	515	Highest Hour	0	0
Years	0.00	Second Highest Hour	0	0
Future Peak Hour	515	Third Highest Hour	0	0
Warrant 1 in 5 Years?	No	Fourth Highest Hour	0	0
Warrant 2 in 5 Years?	No	Fifth Highest Hour	0	0
Warrant 3 in 5 Years?	No	Yearly Growth Rate (%)	0.00	
		Years	0.00	

Condition A Met? No Condition B Met? No

Warrant 9: Intersection Near a Grade Crossing

1: RD36 / SR145

Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

WARRANT 9 MET ? **No**

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

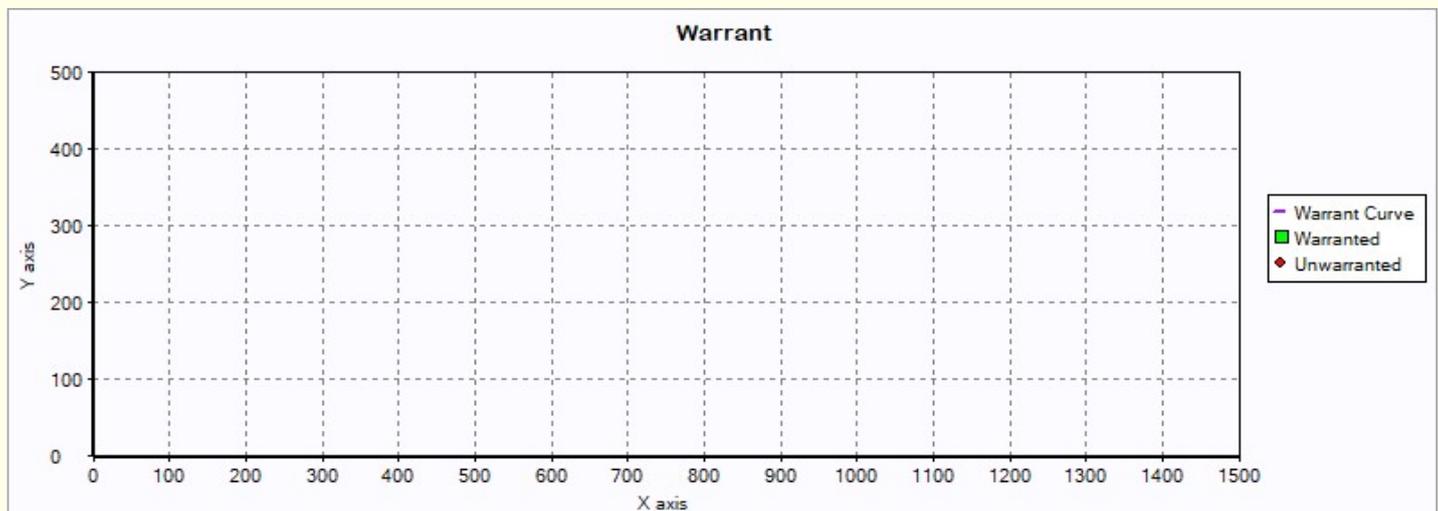
Distance from the center of the track to the stop or yield line Interpolated

Number of occurrences of rail traffic per day Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) Adjustment Factor

The rail traffic arrival times are unknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

Bicycle Warrant

1: RD36 / SR145

Intersection Information

Major Street Name: SR 145

Major Street Direction: EB/WB

Minor Street Direction: NB

BICYCLE WARRANT MET? **No**

Details:

Collision (2 or more counts) 0

Geometric Path **No**

Volume Condition Met? **No**

Notes: No hour met

Hour	Traffic Volumes	Bicycle Volumes	Condition	
	Vehicles entering the intersection (V)	Bicycles entering the intersection (B)	$B * V > 50,000?$	$B \geq 50?$
00:00 to 01:00	64	0	No	No
00:15 to 01:15	60	0	No	No
00:30 to 01:30	57	0	No	No
00:45 to 01:45	62	0	No	No
01:00 to 02:00	56	0	No	No
01:15 to 02:15	52	0	No	No
01:30 to 02:30	48	0	No	No
01:45 to 02:45	45	0	No	No
02:00 to 03:00	44	0	No	No
02:15 to 03:15	44	0	No	No
02:30 to 03:30	51	0	No	No
02:45 to 03:45	57	0	No	No
03:00 to 04:00	67	0	No	No
03:15 to 04:15	72	0	No	No
03:30 to 04:30	76	0	No	No
03:45 to 04:45	93	0	No	No
04:00 to 05:00	102	0	No	No
04:15 to 05:15	122	0	No	No
04:30 to 05:30	130	0	No	No
04:45 to 05:45	126	0	No	No
05:00 to 06:00	144	0	No	No

05:15 to 06:15	160	0	No	No
05:30 to 06:30	194	0	No	No
05:45 to 06:45	245	0	No	No
06:00 to 07:00	279	0	No	No
06:15 to 07:15	316	0	No	No
06:30 to 07:30	393	0	No	No
06:45 to 07:45	424	0	No	No
07:00 to 08:00	457	0	No	No
07:15 to 08:15	470	0	No	No
07:30 to 08:30	403	0	No	No
07:45 to 08:45	386	0	No	No
08:00 to 09:00	350	0	No	No
08:15 to 09:15	321	0	No	No
08:30 to 09:30	324	0	No	No
08:45 to 09:45	319	0	No	No
09:00 to 10:00	320	0	No	No
09:15 to 10:15	326	0	No	No
09:30 to 10:30	317	0	No	No
09:45 to 10:45	300	0	No	No
10:00 to 11:00	288	0	No	No
10:15 to 11:15	295	0	No	No
10:30 to 11:30	306	0	No	No
10:45 to 11:45	325	0	No	No
11:00 to 12:00	336	0	No	No
11:15 to 12:15	344	0	No	No
11:30 to 12:30	367	0	No	No
11:45 to 12:45	367	0	No	No
12:00 to 13:00	386	0	No	No
12:15 to 13:15	392	0	No	No
12:30 to 13:30	394	0	No	No
12:45 to 13:45	399	0	No	No
13:00 to 14:00	404	0	No	No
13:15 to 14:15	404	0	No	No
13:30 to 14:30	395	0	No	No
13:45 to 14:45	395	0	No	No
14:00 to 15:00	409	0	No	No
14:15 to 15:15	429	0	No	No
14:30 to 15:30	450	0	No	No

14:45 to 15:45	469	0	No	No
15:00 to 16:00	477	0	No	No
15:15 to 16:15	466	0	No	No
15:30 to 16:30	483	0	No	No
15:45 to 16:45	505	0	No	No
16:00 to 17:00	509	0	No	No
16:15 to 17:15	515	0	No*	No*
16:30 to 17:30	497	0	No	No
16:45 to 17:45	482	0	No	No
17:00 to 18:00	462	0	No	No
17:15 to 18:15	441	0	No	No
17:30 to 18:30	416	0	No	No
17:45 to 18:45	370	0	No	No
18:00 to 19:00	320	0	No	No
18:15 to 19:15	294	0	No	No
18:30 to 19:30	260	0	No	No
18:45 to 19:45	226	0	No	No
19:00 to 20:00	221	0	No	No
19:15 to 20:15	199	0	No	No
19:30 to 20:30	200	0	No	No
19:45 to 20:45	188	0	No	No
20:00 to 21:00	191	0	No	No
20:15 to 21:15	200	0	No	No
20:30 to 21:30	193	0	No	No
20:45 to 21:45	209	0	No	No
21:00 to 22:00	204	0	No	No
21:15 to 22:15	205	0	No	No
21:30 to 22:30	195	0	No	No
21:45 to 22:45	177	0	No	No
22:00 to 23:00	161	0	No	No
22:15 to 23:15	138	0	No	No
22:30 to 23:30	132	0	No	No
22:45 to 23:45	130	0	No	No
23:00 to 00:00	124	0	No	No
23:15 to 00:15	110	0	No	No
23:30 to 00:30	94	0	No	No
23:45 to 00:45	76	0	No	No

All-Way Stop Control Warrant: Multiway Stop Applications

1: RD36 / SR145

Intersection Information

Major Street Name: SR 145
 Major Street Direction: EB/WB
 Minor Street Direction: NB

AWSC WARRANT MET? No

Details:

Condition A Met?	No	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	65
Notes: 0 Hours Met (8 Required)			

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	East Bound Bicycle Volumes	North Bound Bicycle Volumes	East Bound Ped Volumes	North Bound Ped Volumes	Major Street Veh Vol > 210	Avg(Veh + Ped + Bicycle) > 200	Minor Street Delay > 30

Warrants Summary Report

2: RD36 / AVE15

Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	50	55

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	1 Hours met (8 required)
Condition A and B Met?	No	1 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	1 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi **No** 5 Hours met (8 required)

Ped Condition? **No** 0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

No

Condition A Met? **No**

Condition B Met? **No**

Condition C Met? **No**

BicycleWarrant

No

0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

2: RD36 / AVE15

Intersection Information

Major Street Name: RD 36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

WARRANT 1 MET? No

Details:

Condition A Met? No 1 Hours met (8 required)
 Condition B Met? No 1 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	70% Standard Met? Cond. A OR Cond. B		56% Standard Met? Cond. A AND Cond. B	
			Condition A 70% Column	Condition B 70% Column	Condition A 56% Column	Condition B 56% Column
00:00 to 01:00	21	12	No			
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:15 to 01:15	19	12	No			
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:30 to 01:30	12	9	No			
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:45 to 01:45	7	7	No			
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

01:00 to 02:00		7		7		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:15 to 02:15		6		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:30 to 02:30		4		12		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:45 to 02:45		6		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:00 to 03:00		6		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:15 to 03:15		9		7		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:30 to 03:30		12		5		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:45 to 03:45		11		8		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:00 to 04:00		12		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:15 to 04:15		13		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:30 to 04:30		16		20		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:45 to 04:45		22		21		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:00 to 05:00		30		25		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:15 to 05:15		42		34		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:30 to 05:30		55		45		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

04:45 to 05:45		64		73		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

05:00 to 06:00		76		99		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

05:15 to 06:15		95		108		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

05:30 to 06:30		107		121		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

05:45 to 06:45		129		116		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:00 to 07:00		164		120		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:15 to 07:15	212		153	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

06:30 to 07:30	276		177	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

06:45 to 07:45	356		190	Yes*	No	Yes	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

07:00 to 08:00	457		210	Yes	No	Yes*	Yes*
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

07:15 to 08:15	461		207	Yes	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

07:30 to 08:30	416		193	Yes	No	Yes	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

07:45 to 08:45	342		178	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

08:00 to 09:00		232		150		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:15 to 09:15		194		131		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:30 to 09:30		177		126		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:45 to 09:45		189		140		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:00 to 10:00		176		140		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:15 to 10:15		153		148		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:30 to 10:30		158		143		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:45 to 10:45	139		131	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:00 to 11:00	142		128	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:15 to 11:15	154		114	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:30 to 11:30	157		107	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:45 to 11:45	163		112	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:00 to 12:00	163		105	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:15 to 12:15	172		119	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:30 to 12:30	176		128	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:45 to 12:45	179		124	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

12:00 to 13:00	202		138	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

12:15 to 13:15	215		138	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

12:30 to 13:30	254		128	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

12:45 to 13:45	255		127	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

13:00 to 14:00	244		133	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

13:15 to 14:15	236		144	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

13:30 to 14:30	220		152	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

13:45 to 14:45	236		143	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:00 to 15:00	283		153	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:15 to 15:15	304		162	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:30 to 15:30	310		159	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:45 to 15:45	310		173	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:00 to 16:00	284		174	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:15 to 16:15	278		178	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:30 to 16:30	274		190	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:45 to 16:45	272		202	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

16:00 to 17:00	255		192	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

16:15 to 17:15	257		194	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

16:30 to 17:30	255		208	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

16:45 to 17:45	270		198	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:00 to 18:00	284		198	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:15 to 18:15	278		187	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:30 to 18:30	255		190	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:45 to 18:45	213		182	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

18:00 to 19:00	184		163	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

18:15 to 19:15	158		149	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

18:30 to 19:30	147		131	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

18:45 to 19:45	145		113	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

19:00 to 20:00	147		113	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

19:15 to 20:15	153		107	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

19:30 to 20:30	163		94	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

19:45 to 20:45	166		89	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

20:00 to 21:00	145		81	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

20:15 to 21:15	130		84	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

20:30 to 21:30	103		87	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

20:45 to 21:45	83		84	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

21:00 to 22:00	78		85	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

21:15 to 22:15	75		82	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

21:30 to 22:30	70		83	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

21:45 to 22:45	64		79	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

22:00 to 23:00		59		67		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

22:15 to 23:15		39		60		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

22:30 to 23:30		34		47		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

22:45 to 23:45		28		40		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

23:00 to 00:00		26		35		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

23:15 to 00:15		24		22		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

23:30 to 00:30		26		16		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

23:45 to 00:45		28	16	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

Warrant 2: Four-hour Vehicular Volume

2: RD36 / AVE15

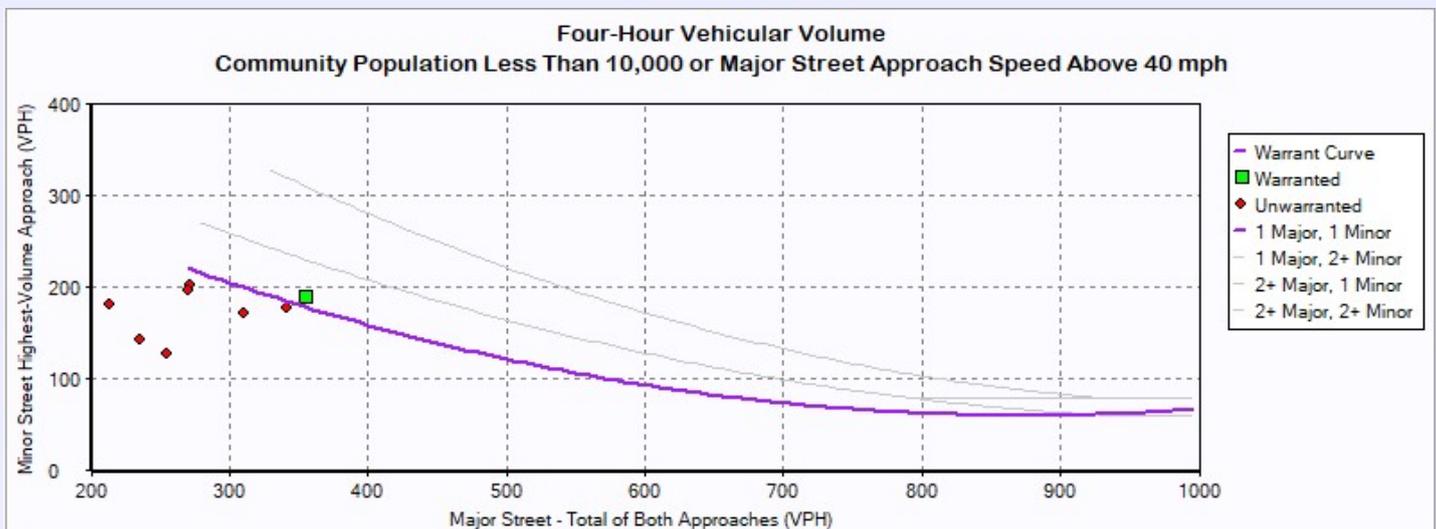
Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approch Speed	50	55

Warrant 2 Met? **No**

Details:

Notes	1 Hours met (4 required)
Low population	Yes



Hourly Volumes

Time	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	21	12
01:00:00 - 02:00:00	7	7
02:00:00 - 03:00:00	6	10
03:00:00 - 04:00:00	12	10
04:00:00 - 05:00:00	30	25
05:00:00 - 06:00:00	76	99
06:00:00 - 07:00:00	164	120
07:00:00 - 08:00:00	457	210
08:00:00 - 09:00:00	232	150
09:00:00 - 10:00:00	176	140
10:00:00 - 11:00:00	142	128
11:00:00 - 12:00:00	163	105
12:00:00 - 13:00:00	202	138
13:00:00 - 14:00:00	244	133
14:00:00 - 15:00:00	283	153
15:00:00 - 16:00:00	284	174
16:00:00 - 17:00:00	255	192
17:00:00 - 18:00:00	284	198
18:00:00 - 19:00:00	184	163
19:00:00 - 20:00:00	147	113
20:00:00 - 21:00:00	145	81
21:00:00 - 22:00:00	78	85
22:00:00 - 23:00:00	59	67
23:00:00 - 00:00:00	26	35

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
06:45:00 - 07:45:00	356.00	190.00

Warrant 3: Peak Hour

2: RD36 / AVE15

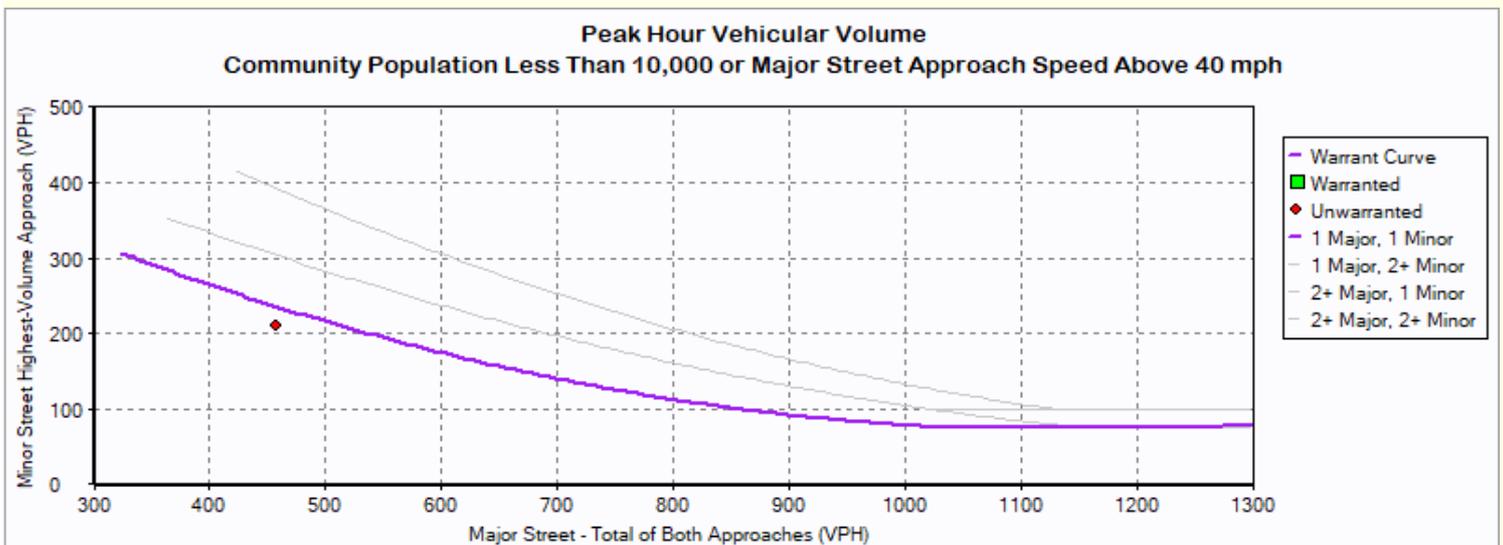
Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lanes	1	1
Approach Speed	50	55

Warrant 3 Met? **No**

Details

Low Population?	Yes		
Condition A Met?	No	Condition B Met?	No
Notes	0 Hours met (1 required)	Notes	0 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Met		
Total Entering Intersection Volume Condition Met?	Not Met		



Warrant 3: Peak Hour**2: RD36 / AVE15**

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
0:00	21	12
1:00	7	7
2:00	6	10
3:00	12	10
4:00	30	25
5:00	76	99
6:00	164	120
7:00	457	210
8:00	232	150
9:00	176	140
10:00	142	128
11:00	163	105
12:00	202	138
13:00	244	133
14:00	283	153
15:00	284	174
16:00	255	192
17:00	284	198
18:00	184	163
19:00	147	113
20:00	145	81
21:00	78	85
22:00	59	67
23:00	26	35

Warrant 4: Pedestrian Volume

2: RD36 / AVE15

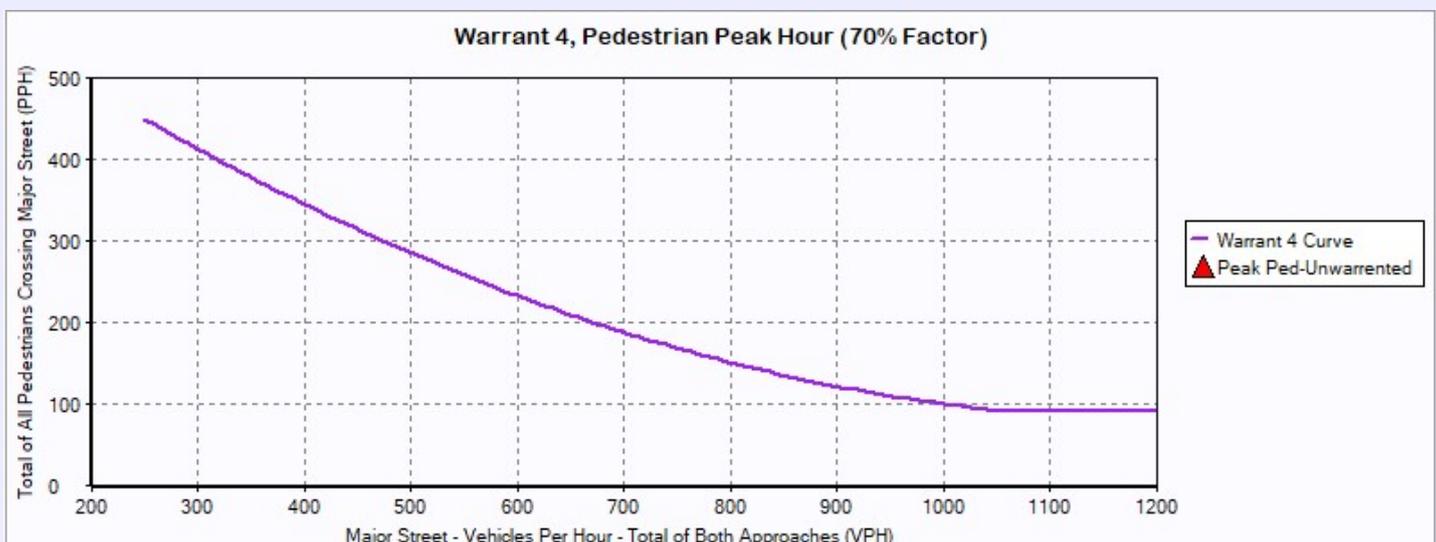
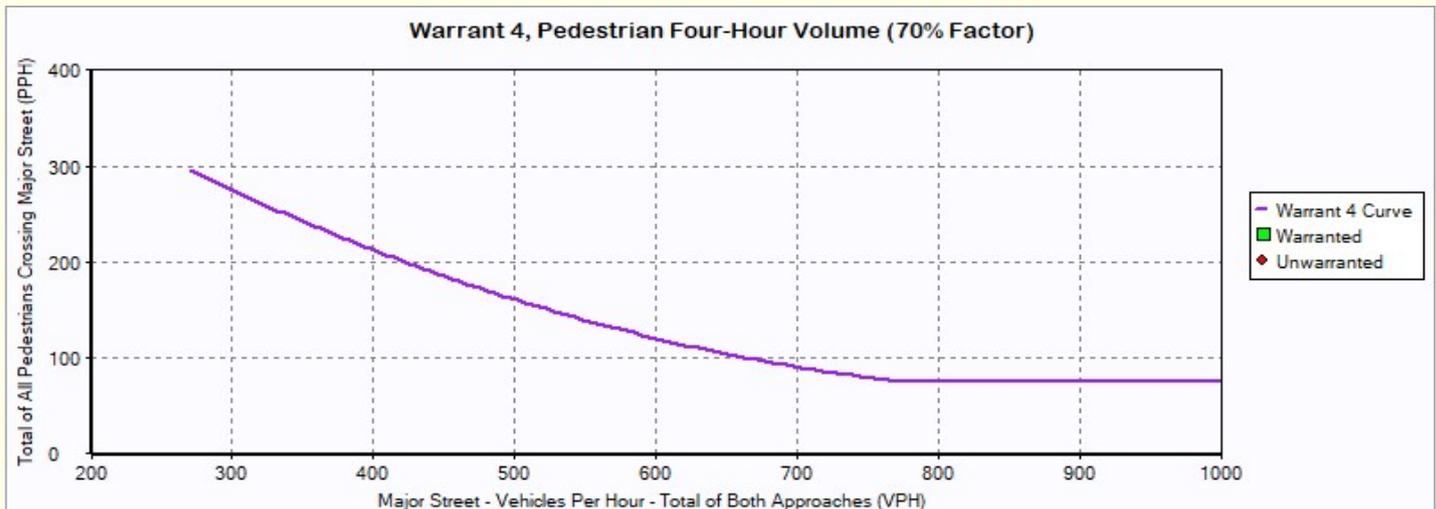
Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approch Speed	50	55

WARRANT 4 MET ? No

Details

Pedestrian Four Hour Volume Warrant Met?	No	
Pedestrian Peak Hour Warrant Met?	No	Notes 0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	Yes	



Warrant 5: School Crossing

2: RD36 / AVE15

Intersection Information

Major Street Name	RD 36
Major Street Direction	NB/SB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min)	0
Number of Students Crossing in Time Period	0
Number of Adequate Gaps in Time Period	0
Other Remedial Measures Attempted?	No
Adjacent Signal on NB approach?	No
Distance to signal on NB Approach (ft)	-
Adjacent Signal on SB approach?	No
Distance to signal on SB Approach (ft)	-
Will New Signal Restrict Progressive Traffic?	No

Warrant 6: Coordinated Signal System

2: RD36 / AVE15

Intersection Information

Major Street Name RD 36
Major Street Direction NB/SB

WARRANT 6 MET? **No**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
SB Approach (RD 36)	Yes	No	N/A
NB Approach (RD 36)	Yes	No	N/A
WB Approach (AVE 15)	Yes	No	N/A
EB Approach (AVE 15)	Yes	No	N/A

Unacceptable Platooning?
(At least one approach)

No

Distance to Closest Signal
(Must be N/A or > 1000)

N/A

Warrant 7: Crash Experience

2: RD36 / AVE15

Intersection Information

Major Street Name RD 36
 Major Street Direction NB/SB
 Minor Street Direction EB/WB

WARRANT 7 MET? **No**

Details:

Low Population? **Yes** Traffic Volume Condition Met? **No**
 Major Street Speed Limit 50 5 Hours Met (8 Required)
 Major Street 85th-% tile Speed 0.00 Ped Volume Condition Met? **No**
 0 Hours Met (8 Required)
 Qualifying Crashes **0**
 Adequate Alternative Trials? **No**

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Eastbound Ped Volumes		Westbound Ped Volumes	
			Condition A	Condition B	Peds	> 80?	Peds	> 80?
00:00 to 01:00	21	0	No	No	0	No	0	No
00:15 to 01:15	19	0	No	No	0	No	0	No
00:30 to 01:30	12	0	No	No	0	No	0	No
00:45 to 01:45	7	0	No	No	0	No	0	No
01:00 to 02:00	7	0	No	No	0	No	0	No
01:15 to 02:15	6	0	No	No	0	No	0	No
01:30 to 02:30	4	0	No	No	0	No	0	No
01:45 to 02:45	6	0	No	No	0	No	0	No

02:00 to 03:00	6	0	No	No	0	No	0	No
02:15 to 03:15	9	0	No	No	0	No	0	No
02:30 to 03:30	12	0	No	No	0	No	0	No
02:45 to 03:45	11	0	No	No	0	No	0	No
03:00 to 04:00	12	0	No	No	0	No	0	No
03:15 to 04:15	13	0	No	No	0	No	0	No
03:30 to 04:30	16	0	No	No	0	No	0	No
03:45 to 04:45	22	0	No	No	0	No	0	No
04:00 to 05:00	30	0	No	No	0	No	0	No
04:15 to 05:15	42	0	No	No	0	No	0	No
04:30 to 05:30	55	0	No	No	0	No	0	No
04:45 to 05:45	64	0	No	No	0	No	0	No
05:00 to 06:00	76	0	No	No	0	No	0	No
05:15 to 06:15	95	0	No	No	0	No	0	No
05:30 to 06:30	107	0	No	No	0	No	0	No
05:45 to 06:45	129	0	No	No	0	No	0	No
06:00 to 07:00	164	0	No	No	0	No	0	No
06:15 to 07:15	212	0	No	No	0	No	0	No

06:30 to 07:30	276	0	No	No	0	No	0	No
06:45 to 07:45	356	0	No	No	0	No	0	No
07:00 to 08:00	457	0	No	No	0	No	0	No
07:15 to 08:15	461	0	No	No	0	No	0	No
07:30 to 08:30	416	0	No	No	0	No	0	No
07:45 to 08:45	342	0	No	No	0	No	0	No
08:00 to 09:00	232	0	No	No	0	No	0	No
08:15 to 09:15	194	0	No	No	0	No	0	No
08:30 to 09:30	177	0	No	No	0	No	0	No
08:45 to 09:45	189	0	No	No	0	No	0	No
09:00 to 10:00	176	0	No	No	0	No	0	No
09:15 to 10:15	153	0	No	No	0	No	0	No
09:30 to 10:30	158	0	No	No	0	No	0	No
09:45 to 10:45	139	0	No	No	0	No	0	No
10:00 to 11:00	142	0	No	No	0	No	0	No
10:15 to 11:15	154	0	No	No	0	No	0	No
10:30 to 11:30	157	0	No	No	0	No	0	No
10:45 to 11:45	163	0	No	No	0	No	0	No

11:00 to 12:00	163	0	No	No	0	No	0	No
11:15 to 12:15	172	0	No	No	0	No	0	No
11:30 to 12:30	176	0	No	No	0	No	0	No
11:45 to 12:45	179	0	No	No	0	No	0	No
12:00 to 13:00	202	0	No	No	0	No	0	No
12:15 to 13:15	215	0	No	No	0	No	0	No
12:30 to 13:30	254	0	No	No	0	No	0	No
12:45 to 13:45	255	0	No	No	0	No	0	No
13:00 to 14:00	244	0	No	No	0	No	0	No
13:15 to 14:15	236	0	No	No	0	No	0	No
13:30 to 14:30	220	0	No	No	0	No	0	No
13:45 to 14:45	236	0	No	No	0	No	0	No
14:00 to 15:00	283	0	No	No	0	No	0	No
14:15 to 15:15	304	0	No	No	0	No	0	No
14:30 to 15:30	310	0	No	No	0	No	0	No
14:45 to 15:45	310	0	No	No	0	No	0	No
15:00 to 16:00	284	0	No	No	0	No	0	No
15:15 to 16:15	278	0	No	No	0	No	0	No

15:30 to 16:30	274	0	No	No	0	No	0	No
15:45 to 16:45	272	0	No	No	0	No	0	No
16:00 to 17:00	255	0	No	No	0	No	0	No
16:15 to 17:15	257	0	No	No	0	No	0	No
16:30 to 17:30	255	0	No	No	0	No	0	No
16:45 to 17:45	270	0	No	No	0	No	0	No
17:00 to 18:00	284	0	No	No	0	No	0	No
17:15 to 18:15	278	0	No	No	0	No	0	No
17:30 to 18:30	255	0	No	No	0	No	0	No
17:45 to 18:45	213	0	No	No	0	No	0	No
18:00 to 19:00	184	0	No	No	0	No	0	No
18:15 to 19:15	158	0	No	No	0	No	0	No
18:30 to 19:30	147	0	No	No	0	No	0	No
18:45 to 19:45	145	0	No	No	0	No	0	No
19:00 to 20:00	147	0	No	No	0	No	0	No
19:15 to 20:15	153	0	No	No	0	No	0	No
19:30 to 20:30	163	0	No	No	0	No	0	No
19:45 to 20:45	166	0	No	No	0	No	0	No

20:00 to 21:00	145	0	No	No	0	No	0	No
20:15 to 21:15	130	0	No	No	0	No	0	No
20:30 to 21:30	103	0	No	No	0	No	0	No
20:45 to 21:45	83	0	No	No	0	No	0	No
21:00 to 22:00	78	0	No	No	0	No	0	No
21:15 to 22:15	75	0	No	No	0	No	0	No
21:30 to 22:30	70	0	No	No	0	No	0	No
21:45 to 22:45	64	0	No	No	0	No	0	No
22:00 to 23:00	59	0	No	No	0	No	0	No
22:15 to 23:15	39	0	No	No	0	No	0	No
22:30 to 23:30	34	0	No	No	0	No	0	No
22:45 to 23:45	28	0	No	No	0	No	0	No
23:00 to 00:00	26	0	No	No	0	No	0	No
23:15 to 00:15	24	0	No	No	0	No	0	No
23:30 to 00:30	26	0	No	No	0	No	0	No
23:45 to 00:45	28	0	No	No	0	No	0	No

Warrant 8: Roadway Network

2: RD36 / AVE15

Intersection Information

Major Street Name	RD 36
Major Street Direction	NB/SB
Minor Street Direction	EB/WB

WARRANT 8 MET? (A or B) **No**

Details:

	Growth Rates % (per year)			
	NB	SB	EB	WB
L	0.00	0.00	0.00	0.00
T	0.00	0.00	0.00	0.00
R	0.00	0.00	0.00	0.00

Condition A, Total Entering Volume		Condition B, Non-normal Business Day		
			Existing	Future
Existing Peak Hour	874	Highest Hour	0	0
Years	0.00	Second Highest Hour	0	0
Future Peak Hour	874	Third Highest Hour	0	0
Warrant 1 in 5 Years?	No	Fourth Highest Hour	0	0
Warrant 2 in 5 Years?	No	Fifth Highest Hour	0	0
Warrant 3 in 5 Years?	No	Yearly Growth Rate (%)	0.00	
		Years	0.00	

Condition A Met? **No**

Condition B Met? **No**

Warrant 9: Intersection Near a Grade Crossing

2: RD36 / AVE15

Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	50	55

WARRANT 9 MET ? **No**

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

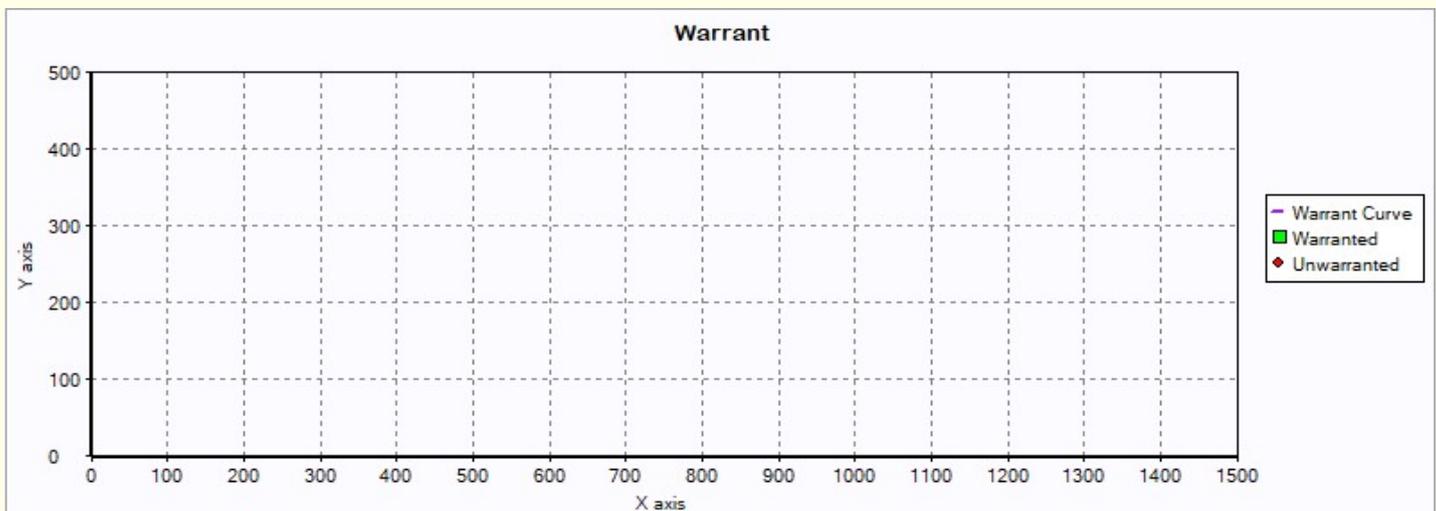
Distance from the center of the track to the stop or yield line Interpolated

Number of occurrences of rail traffic per day Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) Adjustment Factor

The rail traffic arrival times are unknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

Bicycle Warrant

2: RD36 / AVE15

Intersection Information

Major Street Name: RD 36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

BICYCLE WARRANT MET? **No**

Details:

Collision (2 or more counts) 0
 Geometric Path **No**
 Volume Condition Met? **No**
 Notes: No hour met

Hour	Traffic Volumes	Bicycle Volumes	Condition	
	Vehicles entering the intersection (V)	Bicycles entering the intersection (B)	$B * V > 50,000?$	$B \geq 50?$
00:00 to 01:00	41	0	No	No
00:15 to 01:15	37	0	No	No
00:30 to 01:30	25	0	No	No
00:45 to 01:45	18	0	No	No
01:00 to 02:00	19	0	No	No
01:15 to 02:15	21	0	No	No
01:30 to 02:30	20	0	No	No
01:45 to 02:45	20	0	No	No
02:00 to 03:00	19	0	No	No
02:15 to 03:15	20	0	No	No
02:30 to 03:30	20	0	No	No
02:45 to 03:45	24	0	No	No
03:00 to 04:00	27	0	No	No
03:15 to 04:15	29	0	No	No
03:30 to 04:30	41	0	No	No
03:45 to 04:45	51	0	No	No
04:00 to 05:00	66	0	No	No
04:15 to 05:15	89	0	No	No
04:30 to 05:30	113	0	No	No
04:45 to 05:45	152	0	No	No
05:00 to 06:00	197	0	No	No

05:15 to 06:15	244	0	No	No
05:30 to 06:30	281	0	No	No
05:45 to 06:45	315	0	No	No
06:00 to 07:00	368	0	No	No
06:15 to 07:15	465	0	No	No
06:30 to 07:30	578	0	No	No
06:45 to 07:45	722	0	No	No
07:00 to 08:00	874	0	No*	No*
07:15 to 08:15	864	0	No	No
07:30 to 08:30	789	0	No	No
07:45 to 08:45	645	0	No	No
08:00 to 09:00	470	0	No	No
08:15 to 09:15	404	0	No	No
08:30 to 09:30	374	0	No	No
08:45 to 09:45	394	0	No	No
09:00 to 10:00	389	0	No	No
09:15 to 10:15	376	0	No	No
09:30 to 10:30	389	0	No	No
09:45 to 10:45	380	0	No	No
10:00 to 11:00	374	0	No	No
10:15 to 11:15	372	0	No	No
10:30 to 11:30	361	0	No	No
10:45 to 11:45	357	0	No	No
11:00 to 12:00	363	0	No	No
11:15 to 12:15	388	0	No	No
11:30 to 12:30	409	0	No	No
11:45 to 12:45	427	0	No	No
12:00 to 13:00	452	0	No	No
12:15 to 13:15	461	0	No	No
12:30 to 13:30	498	0	No	No
12:45 to 13:45	501	0	No	No
13:00 to 14:00	502	0	No	No
13:15 to 14:15	504	0	No	No
13:30 to 14:30	513	0	No	No
13:45 to 14:45	520	0	No	No
14:00 to 15:00	572	0	No	No
14:15 to 15:15	602	0	No	No
14:30 to 15:30	600	0	No	No

14:45 to 15:45	623	0	No	No
15:00 to 16:00	616	0	No	No
15:15 to 16:15	633	0	No	No
15:30 to 16:30	636	0	No	No
15:45 to 16:45	646	0	No	No
16:00 to 17:00	619	0	No	No
16:15 to 17:15	625	0	No	No
16:30 to 17:30	649	0	No	No
16:45 to 17:45	657	0	No	No
17:00 to 18:00	677	0	No	No
17:15 to 18:15	640	0	No	No
17:30 to 18:30	583	0	No	No
17:45 to 18:45	517	0	No	No
18:00 to 19:00	455	0	No	No
18:15 to 19:15	404	0	No	No
18:30 to 19:30	367	0	No	No
18:45 to 19:45	334	0	No	No
19:00 to 20:00	327	0	No	No
19:15 to 20:15	314	0	No	No
19:30 to 20:30	300	0	No	No
19:45 to 20:45	299	0	No	No
20:00 to 21:00	267	0	No	No
20:15 to 21:15	259	0	No	No
20:30 to 21:30	240	0	No	No
20:45 to 21:45	216	0	No	No
21:00 to 22:00	206	0	No	No
21:15 to 22:15	201	0	No	No
21:30 to 22:30	204	0	No	No
21:45 to 22:45	191	0	No	No
22:00 to 23:00	174	0	No	No
22:15 to 23:15	140	0	No	No
22:30 to 23:30	105	0	No	No
22:45 to 23:45	86	0	No	No
23:00 to 00:00	78	0	No	No
23:15 to 00:15	60	0	No	No
23:30 to 00:30	57	0	No	No
23:45 to 00:45	57	0	No	No

All-Way Stop Control Warrant: Multiway Stop Applications

2: RD36 / AVE15

Intersection Information

Major Street Name: RD 36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

AWSC WARRANT MET? No

Details:

Condition A Met?	No	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	50
Notes: 7 Hours Met (8 Required)			

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	North Bound Bicycle Volumes	East Bound Bicycle Volumes	North Bound Ped Volumes	East Bound Ped Volumes	Major Street Veh Vol > 210	Minor Street Avg(Veh + Ped + Bicycle) > 200	Minor Street Delay > 30
06:30 to 07:30	276	302	0	0	0	0	False	No	No
06:45 to 07:45	356	366	0	0	0	0	False	No	No
07:30 to 08:30	416	373	0	0	0	0	False	No	No
07:45 to 08:45	342	303	0	0	0	0	False	No	No
12:30 to 13:30	254	244	0	0	0	0	False	No	No
14:00 to 15:00	283	289	0	0	0	0	False	No	No
14:15 to 15:15	304	298	0	0	0	0	False	No	No
15:00 to 16:00	284	332	0	0	0	0	False	No	No
16:00 to 17:00	255	364	0	0	0	0	False	No	No
17:00 to 18:00	284	393	0	0	0	0	False	No	No

Warrants Summary Report

1: RD36 / SR145 + Project

Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	1 Hours met (8 required)
Condition A and B Met?	No	3 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	1 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi **No** 4 Hours met (8 required)

Ped Condition? **No** 0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

BicycleWarrant

No

0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

1: RD36 / SR145 + Project

Intersection Information

Major Street Name: SR 145

Major Street Direction: EB/WB

Minor Street Direction: NB

WARRANT 1 MET? No

Details:

Condition A Met? No 1 Hours met (8 required)

Condition B Met? No 3 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	70% Standard Met? Cond. A OR Cond. B		56% Standard Met? Cond. A AND Cond. B	
			Condition A 70% Column	Condition B 70% Column	Condition A 56% Column	Condition B 56% Column
00:00 to 01:00	60	4	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:15 to 01:15	58	2	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:30 to 01:30	54	3	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:45 to 01:45	58	4	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

01:00 to 02:00		53		3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:15 to 02:15		49		3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:30 to 02:30		47		1		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:45 to 02:45		44		1		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:00 to 03:00		43		1		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:15 to 03:15		42		2		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:30 to 03:30		48		3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:45 to 03:45		54		3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:00 to 04:00		62		5		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:15 to 04:15		67		5		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:30 to 04:30		68		8		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:45 to 04:45		79		14		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:00 to 05:00		89		13		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:15 to 05:15		104		18		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:30 to 05:30		111		19		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:45 to 05:45		111		15		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

05:00 to 06:00		122		22		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

05:15 to 06:15		133		27		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

05:30 to 06:30		163		31		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

05:45 to 06:45		205		40		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

06:00 to 07:00		233		46		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:15 to 07:15		265		51		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:30 to 07:30		368		84		No	No	Yes	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:45 to 07:45		423		116		Yes*	No	Yes*	Yes*
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes					

07:00 to 08:00		486		121		Yes	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes					

07:15 to 08:15		525		129		Yes	Yes*	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	Yes	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes					

07:30 to 08:30		428		100		No	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes					

07:45 to 08:45		383		72		No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:00 to 09:00		319		65		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:15 to 09:15		261		60		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:30 to 09:30		267		57		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:45 to 09:45		264		55		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:00 to 10:00		262		58		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:15 to 10:15		278		48		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:30 to 10:30		272		45		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:45 to 10:45	260		40	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

10:00 to 11:00	255		33	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

10:15 to 11:15	261		34	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

10:30 to 11:30	260		46	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:45 to 11:45	275		50	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:00 to 12:00	284		52	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:15 to 12:15	291		53	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:30 to 12:30	320	47	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

11:45 to 12:45	321	46	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

12:00 to 13:00	338	48	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

12:15 to 13:15	349	43	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

12:30 to 13:30	333	61	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

12:45 to 13:45	338	61	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

13:00 to 14:00	348	56	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

13:15 to 14:15	343		61	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

13:30 to 14:30	358		37	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

13:45 to 14:45	360		35	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

14:00 to 15:00	357		52	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:15 to 15:15	367		62	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:30 to 15:30	383		67	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:45 to 15:45	397		72	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:00 to 16:00	412	65	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

15:15 to 16:15	409	57	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

15:30 to 16:30	422	61	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

15:45 to 16:45	444	61	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

16:00 to 17:00	453	56	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

16:15 to 17:15	455	60	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

16:30 to 17:30	468	70	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

16:45 to 17:45	478	87	No	No	Yes*	Yes*
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

17:00 to 18:00	481	88	No	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

17:15 to 18:15	485	88	No	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

17:30 to 18:30	435	72	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

17:45 to 18:45	365	54	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

18:00 to 19:00	293	52	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

18:15 to 19:15	246	48	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

18:30 to 19:30	211	49	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

18:45 to 19:45	187	39	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

19:00 to 20:00	188	33	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

19:15 to 20:15	175	24	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

19:30 to 20:30	183	17	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

19:45 to 20:45	173	15	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

20:00 to 21:00	179	12	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

20:15 to 21:15	187		13	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

20:30 to 21:30	181		12	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

20:45 to 21:45	195		14	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

21:00 to 22:00	188		16	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

21:15 to 22:15	191		14	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

21:30 to 22:30	181		14	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

21:45 to 22:45	165		12	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

22:00 to 23:00	151	10	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

22:15 to 23:15	131	7	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

22:30 to 23:30	126	6	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

22:45 to 23:45	123	7	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

23:00 to 00:00	119	5	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

23:15 to 00:15	103	7	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

23:30 to 00:30	88	6	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

23:45 to 00:45		73	3		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No				

Warrant 2: Four-hour Vehicular Volume

1: RD36 / SR145 + Project

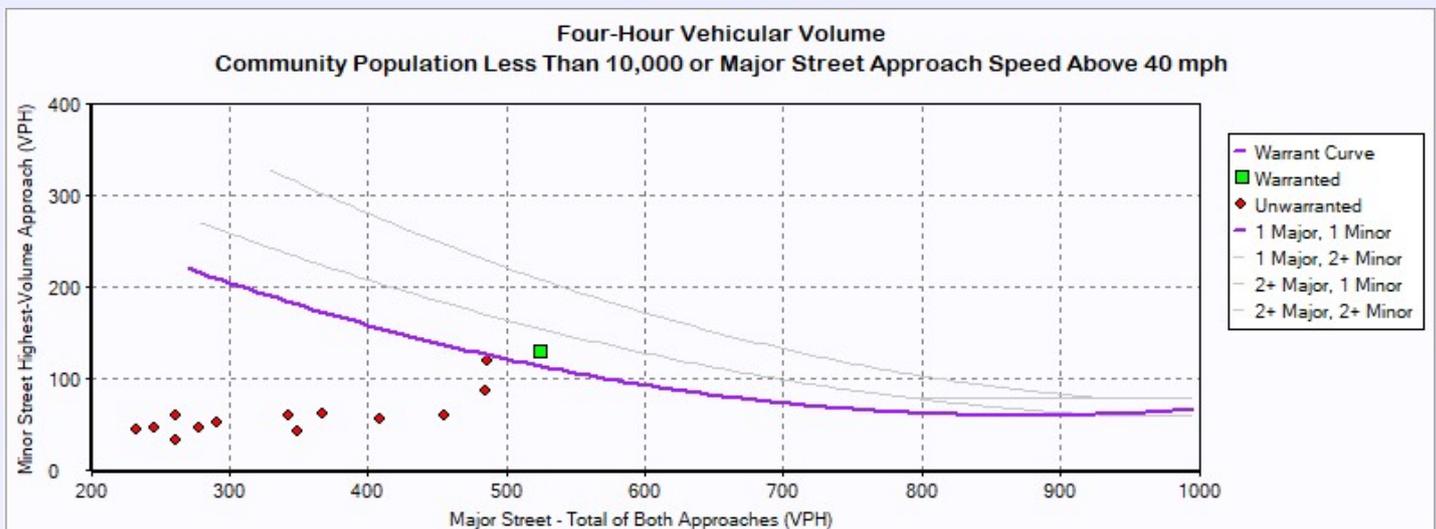
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

Warrant 2 Met? **No**

Details:

Notes	1 Hours met (4 required)
Low population	Yes



Hourly Volumes

Time	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	60	4
01:00:00 - 02:00:00	53	3
02:00:00 - 03:00:00	43	1
03:00:00 - 04:00:00	62	5
04:00:00 - 05:00:00	89	13
05:00:00 - 06:00:00	122	22
06:00:00 - 07:00:00	233	46
07:00:00 - 08:00:00	486	121
08:00:00 - 09:00:00	319	65
09:00:00 - 10:00:00	262	58
10:00:00 - 11:00:00	255	33
11:00:00 - 12:00:00	284	52
12:00:00 - 13:00:00	338	48
13:00:00 - 14:00:00	348	56
14:00:00 - 15:00:00	357	52
15:00:00 - 16:00:00	412	65
16:00:00 - 17:00:00	453	56
17:00:00 - 18:00:00	481	88
18:00:00 - 19:00:00	293	52
19:00:00 - 20:00:00	188	33
20:00:00 - 21:00:00	179	12
21:00:00 - 22:00:00	188	16
22:00:00 - 23:00:00	151	10
23:00:00 - 00:00:00	119	5

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
07:15:00 - 08:15:00	525.00	129.00

Warrant 3: Peak Hour

1: RD36 / SR145 + Project

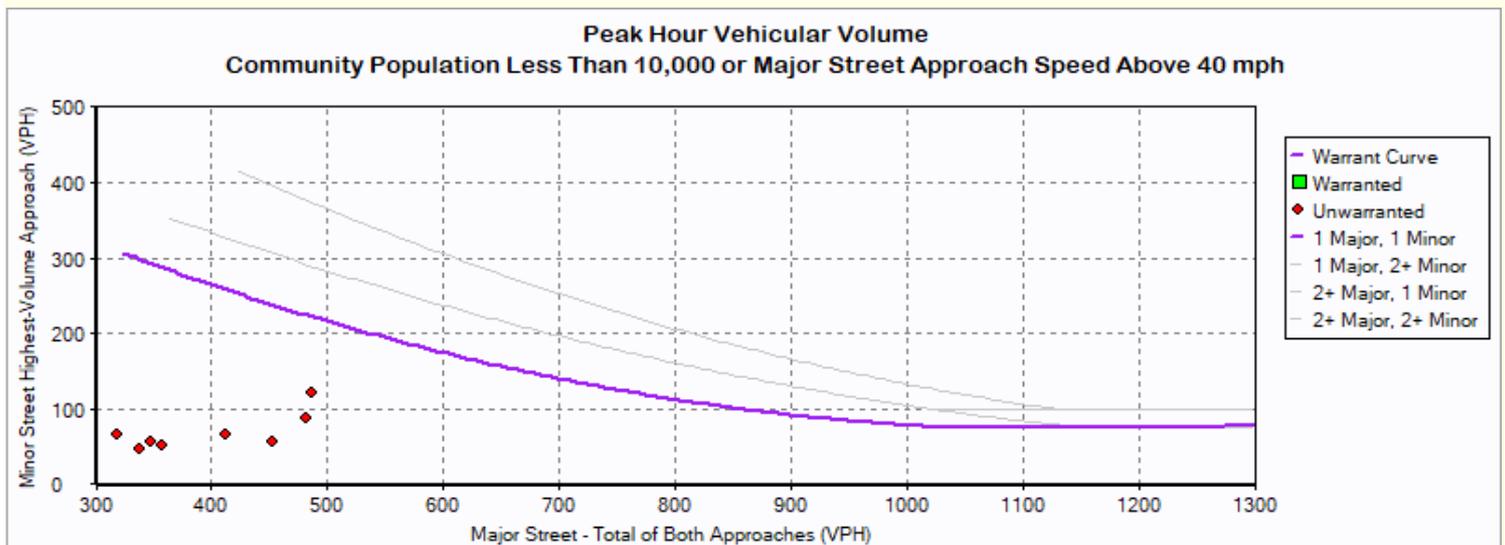
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lanes	1	1
Approach Speed	65	50

Warrant 3 Met? **No**

Details

Low Population?	Yes		
Condition A Met?	No	Condition B Met?	No
Notes	0 Hours met (1 required)	Notes	0 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Met		
Total Entering Intersection Volume Condition Met?	Not Met		



Warrant 3: Peak Hour**1: RD36 / SR145 + Project**

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
0:00	60	4
1:00	53	3
2:00	43	1
3:00	62	5
4:00	89	13
5:00	122	22
6:00	233	46
7:00	486	121
8:00	319	65
9:00	262	58
10:00	255	33
11:00	284	52
12:00	338	48
13:00	348	56
14:00	357	52
15:00	412	65
16:00	453	56
17:00	481	88
18:00	293	52
19:00	188	33
20:00	179	12
21:00	188	16
22:00	151	10
23:00	119	5

Warrant 4: Pedestrian Volume

1: RD36 / SR145 + Project

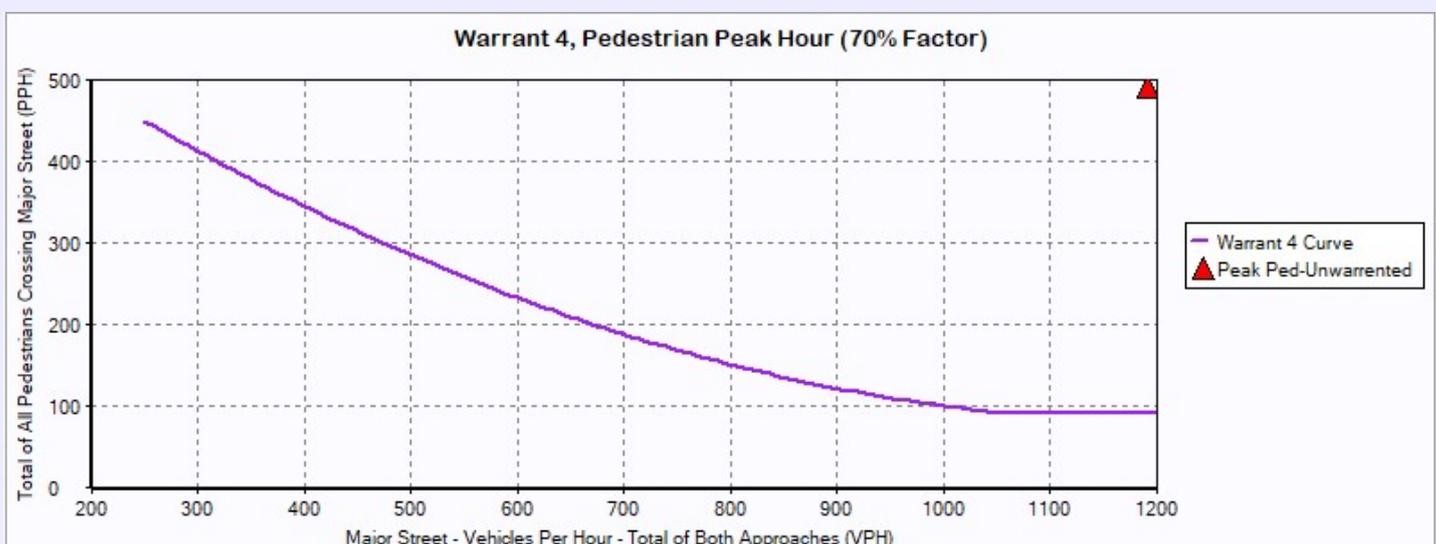
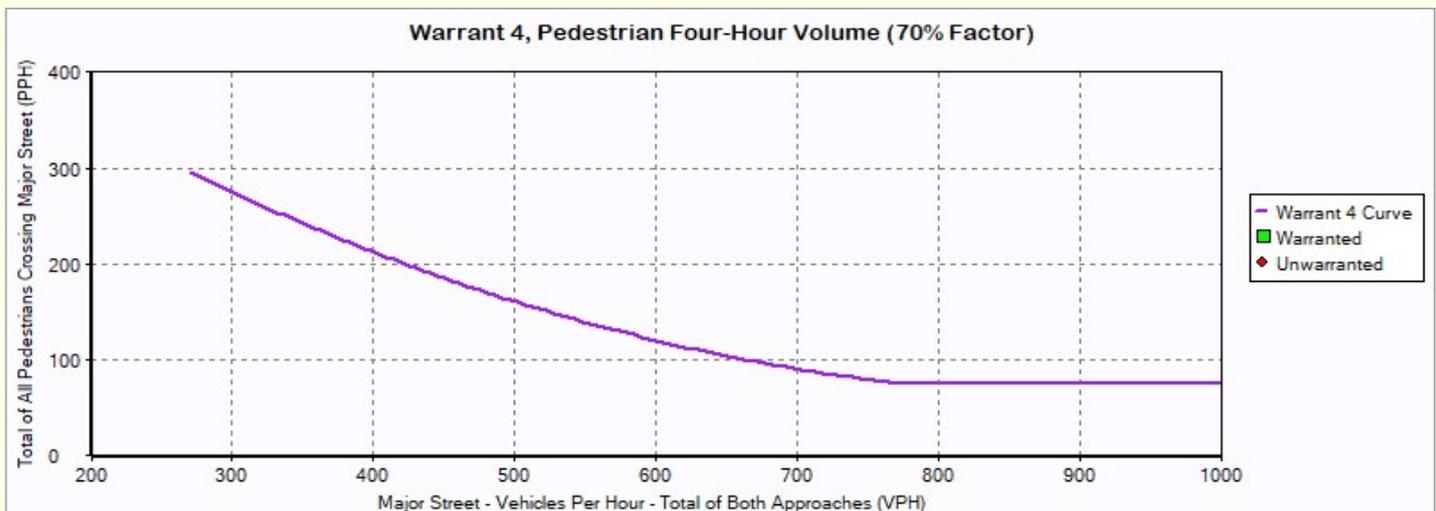
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approch Speed	65	50

WARRANT 4 MET ? No

Details

Pedestrian Four Hour Volume Warrant Met?	No	
Pedestrian Peak Hour Warrant Met?	No	Notes 0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	Yes	



Warrant 5: School Crossing

1: RD36 / SR145 + Project

Intersection Information

Major Street Name SR 145

Major Street Direction EB/WB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min) 0

Number of Students Crossing in Time Period 0

Number of Adequate Gaps in Time Period 0

Other Remedial Measures Attempted? **No**

Adjacent Signal on EB approach? **No**

Distance to signal on EB Approach (ft) -

Adjacent Signal on WB approach? **No**

Distance to signal on WB Approach (ft) -

Will New Signal Restrict Progressive Traffic? **No**

Warrant 6: Coordinated Signal System

1: RD36 / SR145 + Project

Intersection Information

Major Street Name SR 145
Major Street Direction EB/WB

WARRANT 6 MET? **No**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
NB Approach (Rd 36)	Yes	No	N/A
WB Approach (SR 145)	Yes	No	N/A
EB Approach (SR 145)	Yes	No	N/A

Unacceptable Platooning?
(At least one approach)

No

Distance to Closest Signal
(Must be N/A or > 1000)

N/A

Warrant 7: Crash Experience

1: RD36 / SR145 + Project

Intersection Information

Major Street Name SR 145
 Major Street Direction EB/WB
 Minor Street Direction NB

WARRANT 7 MET? No

Details:

Low Population? **Yes** Traffic Volume Condition Met? **No**
 Major Street Speed Limit 65 4 Hours Met (8 Required)
 Major Street 85th-% tile Speed 0.00 Ped Volume Condition Met? **No**
 0 Hours Met (8 Required)

Qualifying Crashes **0**
 Adequate Alternative Trials? **No**

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Northbound Ped Volumes		Peds	> 80?
			Condition A	Condition B	Peds	> 80?		
00:00 to 01:00	60	0	No	No	0	No	0	No
00:15 to 01:15	58	0	No	No	0	No	0	No
00:30 to 01:30	54	0	No	No	0	No	0	No
00:45 to 01:45	58	0	No	No	0	No	0	No
01:00 to 02:00	53	0	No	No	0	No	0	No
01:15 to 02:15	49	0	No	No	0	No	0	No
01:30 to 02:30	47	0	No	No	0	No	0	No
01:45 to 02:45	44	0	No	No	0	No	0	No

02:00 to 03:00	43	0	No	No	0	No	0	No
02:15 to 03:15	42	0	No	No	0	No	0	No
02:30 to 03:30	48	0	No	No	0	No	0	No
02:45 to 03:45	54	0	No	No	0	No	0	No
03:00 to 04:00	62	0	No	No	0	No	0	No
03:15 to 04:15	67	0	No	No	0	No	0	No
03:30 to 04:30	68	0	No	No	0	No	0	No
03:45 to 04:45	79	0	No	No	0	No	0	No
04:00 to 05:00	89	0	No	No	0	No	0	No
04:15 to 05:15	104	0	No	No	0	No	0	No
04:30 to 05:30	111	0	No	No	0	No	0	No
04:45 to 05:45	111	0	No	No	0	No	0	No
05:00 to 06:00	122	0	No	No	0	No	0	No
05:15 to 06:15	133	0	No	No	0	No	0	No
05:30 to 06:30	163	0	No	No	0	No	0	No
05:45 to 06:45	205	0	No	No	0	No	0	No
06:00 to 07:00	233	0	No	No	0	No	0	No
06:15 to 07:15	265	0	No	No	0	No	0	No

06:30 to 07:30	368	0	No	No	0	No	0	No
06:45 to 07:45	423	0	No	No	0	No	0	No
07:00 to 08:00	486	0	No	No	0	No	0	No
07:15 to 08:15	525	0	No	No	0	No	0	No
07:30 to 08:30	428	0	No	No	0	No	0	No
07:45 to 08:45	383	0	No	No	0	No	0	No
08:00 to 09:00	319	0	No	No	0	No	0	No
08:15 to 09:15	261	0	No	No	0	No	0	No
08:30 to 09:30	267	0	No	No	0	No	0	No
08:45 to 09:45	264	0	No	No	0	No	0	No
09:00 to 10:00	262	0	No	No	0	No	0	No
09:15 to 10:15	278	0	No	No	0	No	0	No
09:30 to 10:30	272	0	No	No	0	No	0	No
09:45 to 10:45	260	0	No	No	0	No	0	No
10:00 to 11:00	255	0	No	No	0	No	0	No
10:15 to 11:15	261	0	No	No	0	No	0	No
10:30 to 11:30	260	0	No	No	0	No	0	No
10:45 to 11:45	275	0	No	No	0	No	0	No

11:00 to 12:00	284	0	No	No	0	No	0	No
11:15 to 12:15	291	0	No	No	0	No	0	No
11:30 to 12:30	320	0	No	No	0	No	0	No
11:45 to 12:45	321	0	No	No	0	No	0	No
12:00 to 13:00	338	0	No	No	0	No	0	No
12:15 to 13:15	349	0	No	No	0	No	0	No
12:30 to 13:30	333	0	No	No	0	No	0	No
12:45 to 13:45	338	0	No	No	0	No	0	No
13:00 to 14:00	348	0	No	No	0	No	0	No
13:15 to 14:15	343	0	No	No	0	No	0	No
13:30 to 14:30	358	0	No	No	0	No	0	No
13:45 to 14:45	360	0	No	No	0	No	0	No
14:00 to 15:00	357	0	No	No	0	No	0	No
14:15 to 15:15	367	0	No	No	0	No	0	No
14:30 to 15:30	383	0	No	No	0	No	0	No
14:45 to 15:45	397	0	No	No	0	No	0	No
15:00 to 16:00	412	0	No	No	0	No	0	No
15:15 to 16:15	409	0	No	No	0	No	0	No

15:30 to 16:30	422	0	No	No	0	No	0	No
15:45 to 16:45	444	0	No	No	0	No	0	No
16:00 to 17:00	453	0	No	No	0	No	0	No
16:15 to 17:15	455	0	No	No	0	No	0	No
16:30 to 17:30	468	0	No	No	0	No	0	No
16:45 to 17:45	478	0	No	No	0	No	0	No
17:00 to 18:00	481	0	No	No	0	No	0	No
17:15 to 18:15	485	0	No	No	0	No	0	No
17:30 to 18:30	435	0	No	No	0	No	0	No
17:45 to 18:45	365	0	No	No	0	No	0	No
18:00 to 19:00	293	0	No	No	0	No	0	No
18:15 to 19:15	246	0	No	No	0	No	0	No
18:30 to 19:30	211	0	No	No	0	No	0	No
18:45 to 19:45	187	0	No	No	0	No	0	No
19:00 to 20:00	188	0	No	No	0	No	0	No
19:15 to 20:15	175	0	No	No	0	No	0	No
19:30 to 20:30	183	0	No	No	0	No	0	No
19:45 to 20:45	173	0	No	No	0	No	0	No

20:00 to 21:00	179	0	No	No	0	No	0	No
20:15 to 21:15	187	0	No	No	0	No	0	No
20:30 to 21:30	181	0	No	No	0	No	0	No
20:45 to 21:45	195	0	No	No	0	No	0	No
21:00 to 22:00	188	0	No	No	0	No	0	No
21:15 to 22:15	191	0	No	No	0	No	0	No
21:30 to 22:30	181	0	No	No	0	No	0	No
21:45 to 22:45	165	0	No	No	0	No	0	No
22:00 to 23:00	151	0	No	No	0	No	0	No
22:15 to 23:15	131	0	No	No	0	No	0	No
22:30 to 23:30	126	0	No	No	0	No	0	No
22:45 to 23:45	123	0	No	No	0	No	0	No
23:00 to 00:00	119	0	No	No	0	No	0	No
23:15 to 00:15	103	0	No	No	0	No	0	No
23:30 to 00:30	88	0	No	No	0	No	0	No
23:45 to 00:45	73	0	No	No	0	No	0	No

Warrant 8: Roadway Network

1: RD36 / SR145 + Project

Intersection Information

Major Street Name SR 145
 Major Street Direction EB/WB
 Minor Street Direction NB

WARRANT 8 MET? (A or B) No

Details:

Growth Rates % (per year)			
	NB	EB	WB
L	0.00	0.00	0.00
T	0.00	0.00	0.00
R	0.00	0.00	0.00

Condition A, Total Entering Volume		Condition B, Non-normal Business Day		
		Existing		Future
Existing Peak Hour	654	Highest Hour	0	0
Years	0.00	Second Highest Hour	0	0
Future Peak Hour	654	Third Highest Hour	0	0
Warrant 1 in 5 Years?	No	Fourth Highest Hour	0	0
Warrant 2 in 5 Years?	No	Fifth Highest Hour	0	0
Warrant 3 in 5 Years?	No	Yearly Growth Rate (%)	0.00	
		Years	0.00	

Condition A Met? No Condition B Met? No

Warrant 9: Intersection Near a Grade Crossing

1: RD36 / SR145 + Project

Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

WARRANT 9 MET ? No

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

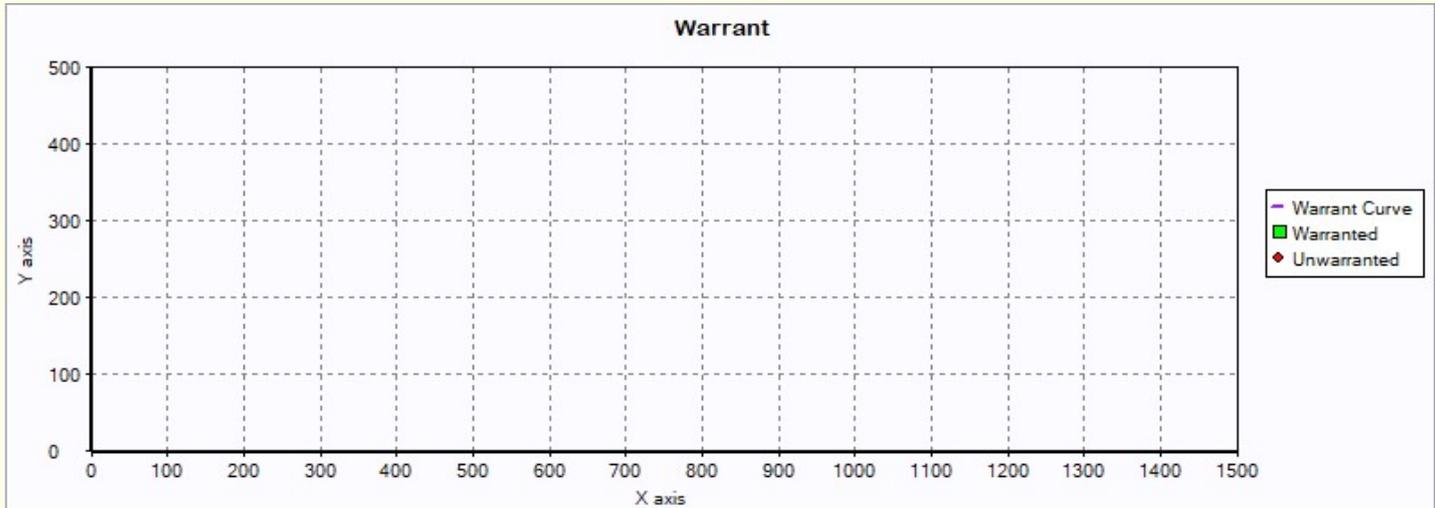
Distance from the center of the track to the stop or yield line Interpolated

Number of occurrences of rail traffic per day Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) Adjustment Factor

The rail traffic arrival times are unknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

Bicycle Warrant

1: RD36 / SR145 + Project

Intersection Information

Major Street Name: SR 145

Major Street Direction: EB/WB

Minor Street Direction: NB

BICYCLE WARRANT MET? No

Details:

Collision (2 or more counts) 0

Geometric Path **No**

Volume Condition Met? **No**

Notes: No hour met

Hour	Traffic Volumes	Bicycle Volumes	Condition	
	Vehicles entering the intersection (V)	Bicycles entering the intersection (B)	$B * V > 50,000?$	$B \geq 50?$
00:00 to 01:00	64	0	No	No
00:15 to 01:15	60	0	No	No
00:30 to 01:30	57	0	No	No
00:45 to 01:45	62	0	No	No
01:00 to 02:00	56	0	No	No
01:15 to 02:15	52	0	No	No
01:30 to 02:30	48	0	No	No
01:45 to 02:45	45	0	No	No
02:00 to 03:00	44	0	No	No
02:15 to 03:15	44	0	No	No
02:30 to 03:30	51	0	No	No
02:45 to 03:45	57	0	No	No
03:00 to 04:00	67	0	No	No
03:15 to 04:15	72	0	No	No
03:30 to 04:30	76	0	No	No
03:45 to 04:45	93	0	No	No
04:00 to 05:00	102	0	No	No
04:15 to 05:15	122	0	No	No
04:30 to 05:30	130	0	No	No
04:45 to 05:45	126	0	No	No
05:00 to 06:00	144	0	No	No

05:15 to 06:15	160	0	No	No
05:30 to 06:30	194	0	No	No
05:45 to 06:45	245	0	No	No
06:00 to 07:00	279	0	No	No
06:15 to 07:15	316	0	No	No
06:30 to 07:30	452	0	No	No
06:45 to 07:45	539	0	No	No
07:00 to 08:00	607	0	No	No
07:15 to 08:15	654	0	No*	No*
07:30 to 08:30	528	0	No	No
07:45 to 08:45	455	0	No	No
08:00 to 09:00	384	0	No	No
08:15 to 09:15	321	0	No	No
08:30 to 09:30	324	0	No	No
08:45 to 09:45	319	0	No	No
09:00 to 10:00	320	0	No	No
09:15 to 10:15	326	0	No	No
09:30 to 10:30	317	0	No	No
09:45 to 10:45	300	0	No	No
10:00 to 11:00	288	0	No	No
10:15 to 11:15	295	0	No	No
10:30 to 11:30	306	0	No	No
10:45 to 11:45	325	0	No	No
11:00 to 12:00	336	0	No	No
11:15 to 12:15	344	0	No	No
11:30 to 12:30	367	0	No	No
11:45 to 12:45	367	0	No	No
12:00 to 13:00	386	0	No	No
12:15 to 13:15	392	0	No	No
12:30 to 13:30	394	0	No	No
12:45 to 13:45	399	0	No	No
13:00 to 14:00	404	0	No	No
13:15 to 14:15	404	0	No	No
13:30 to 14:30	395	0	No	No
13:45 to 14:45	395	0	No	No
14:00 to 15:00	409	0	No	No
14:15 to 15:15	429	0	No	No
14:30 to 15:30	450	0	No	No

14:45 to 15:45	469	0	No	No
15:00 to 16:00	477	0	No	No
15:15 to 16:15	466	0	No	No
15:30 to 16:30	483	0	No	No
15:45 to 16:45	505	0	No	No
16:00 to 17:00	509	0	No	No
16:15 to 17:15	515	0	No	No
16:30 to 17:30	538	0	No	No
16:45 to 17:45	565	0	No	No
17:00 to 18:00	569	0	No	No
17:15 to 18:15	573	0	No	No
17:30 to 18:30	507	0	No	No
17:45 to 18:45	419	0	No	No
18:00 to 19:00	345	0	No	No
18:15 to 19:15	294	0	No	No
18:30 to 19:30	260	0	No	No
18:45 to 19:45	226	0	No	No
19:00 to 20:00	221	0	No	No
19:15 to 20:15	199	0	No	No
19:30 to 20:30	200	0	No	No
19:45 to 20:45	188	0	No	No
20:00 to 21:00	191	0	No	No
20:15 to 21:15	200	0	No	No
20:30 to 21:30	193	0	No	No
20:45 to 21:45	209	0	No	No
21:00 to 22:00	204	0	No	No
21:15 to 22:15	205	0	No	No
21:30 to 22:30	195	0	No	No
21:45 to 22:45	177	0	No	No
22:00 to 23:00	161	0	No	No
22:15 to 23:15	138	0	No	No
22:30 to 23:30	132	0	No	No
22:45 to 23:45	130	0	No	No
23:00 to 00:00	124	0	No	No
23:15 to 00:15	110	0	No	No
23:30 to 00:30	94	0	No	No
23:45 to 00:45	76	0	No	No

All-Way Stop Control Warrant: Multiway Stop Applications

1: RD36 / SR145 + Project

Intersection Information

Major Street Name: SR 145
 Major Street Direction: EB/WB
 Minor Street Direction: NB

AWSC WARRANT MET? No

Details:

Condition A Met?	No	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	65
Notes: 0 Hours Met (8 Required)			

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	East Bound Bicycle Volumes	North Bound Bicycle Volumes	East Bound Ped Volumes	North Bound Ped Volumes	Major Street Veh Vol > 210	Avg(Veh + Ped + Bicycle) > 200	Minor Street Delay > 30

Warrants Summary Report

2: RD36 / AVE15 + Project

Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	50	55

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	2 Hours met (8 required)
Condition A and B Met?	No	1 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	3 Hours met (4 required)
Warrant 3, Peak Hour		
	Yes	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	Yes	1 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi **No** 5 Hours met (8 required)

Ped Condition? **No** 0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

BicycleWarrant

No 0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

2: RD36 / AVE15 + Project

Intersection Information

Major Street Name: RD 36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

WARRANT 1 MET? No

Details:

Condition A Met? No 2 Hours met (8 required)
 Condition B Met? No 1 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	70% Standard Met? Cond. A OR Cond. B		56% Standard Met? Cond. A AND Cond. B	
			Condition A 70% Column	Condition B 70% Column	Condition A 56% Column	Condition B 56% Column
00:00 to 01:00	21	12	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:15 to 01:15	19	12	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:30 to 01:30	12	9	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		
00:45 to 01:45	7	7	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

01:00 to 02:00		7		7		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:15 to 02:15		6		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:30 to 02:30		4		12		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

01:45 to 02:45		6		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:00 to 03:00		6		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:15 to 03:15		9		7		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:30 to 03:30		12		5		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

02:45 to 03:45		11		8		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:00 to 04:00		12		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:15 to 04:15		13		10		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:30 to 04:30		16		20		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

03:45 to 04:45		22		21		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:00 to 05:00		30		25		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:15 to 05:15		42		34		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

04:30 to 05:30		55		45		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

04:45 to 05:45		64		73		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

05:00 to 06:00		76		99		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

05:15 to 06:15		95		108		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

05:30 to 06:30		107		121		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

05:45 to 06:45		129		116		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:00 to 07:00		164		120		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

06:15 to 07:15	226		154	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

06:30 to 07:30	305		179	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

06:45 to 07:45	400		193	Yes*	No	Yes	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

07:00 to 08:00	516		215	Yes	No	Yes*	Yes*
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

07:15 to 08:15	506		211	Yes	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

07:30 to 08:30	446		196	Yes	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

07:45 to 08:45	357		180	Yes*	No	Yes	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

08:00 to 09:00		232		150		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:15 to 09:15		194		131		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:30 to 09:30		177		126		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

08:45 to 09:45		189		140		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:00 to 10:00		176		140		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:15 to 10:15		153		148		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:30 to 10:30		158		143		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

09:45 to 10:45	139		131	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:00 to 11:00	142		128	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:15 to 11:15	154		114	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:30 to 11:30	157		107	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

10:45 to 11:45	163		112	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:00 to 12:00	163		105	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:15 to 12:15	172		119	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

11:30 to 12:30		176		128	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes				

11:45 to 12:45		179		124	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes				

12:00 to 13:00		202		138	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes				

12:15 to 13:15		215		138	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes				

12:30 to 13:30		254		128	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes				

12:45 to 13:45		255		127	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes				

13:00 to 14:00		244		133	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes				

13:15 to 14:15	236		144	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

13:30 to 14:30	220		152	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

13:45 to 14:45	236		143	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:00 to 15:00	283		153	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:15 to 15:15	304		162	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:30 to 15:30	310		159	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

14:45 to 15:45	310		173	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:00 to 16:00	284		174	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:15 to 16:15	278		178	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:30 to 16:30	274		190	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

15:45 to 16:45	272		202	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

16:00 to 17:00	255		192	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

16:15 to 17:15	267		195	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

16:30 to 17:30	274		210	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

16:45 to 17:45	298		202	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:00 to 18:00	322		203	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:15 to 18:15	306		191	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:30 to 18:30	274		192	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:45 to 18:45	223		183	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

18:00 to 19:00	184		163	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

18:15 to 19:15	158		149	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

18:30 to 19:30	147		131	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

18:45 to 19:45	145		113	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

19:00 to 20:00	147		113	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

19:15 to 20:15	153		107	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

19:30 to 20:30	163		94	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

19:45 to 20:45	166		89	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

20:00 to 21:00	145		81	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

20:15 to 21:15	130		84	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

20:30 to 21:30	103		87	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

20:45 to 21:45	83		84	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

21:00 to 22:00	78		85	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

21:15 to 22:15	75		82	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

21:30 to 22:30	70		83	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

21:45 to 22:45	64		79	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

22:00 to 23:00		59		67		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

22:15 to 23:15		39		60		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

22:30 to 23:30		34		47		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes					

22:45 to 23:45		28		40		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

23:00 to 00:00		26		35		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

23:15 to 00:15		24		22		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

23:30 to 00:30		26		16		No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No					
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No					
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No					
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No					

23:45 to 00:45		28	16	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

Warrant 2: Four-hour Vehicular Volume

2: RD36 / AVE15 + Project

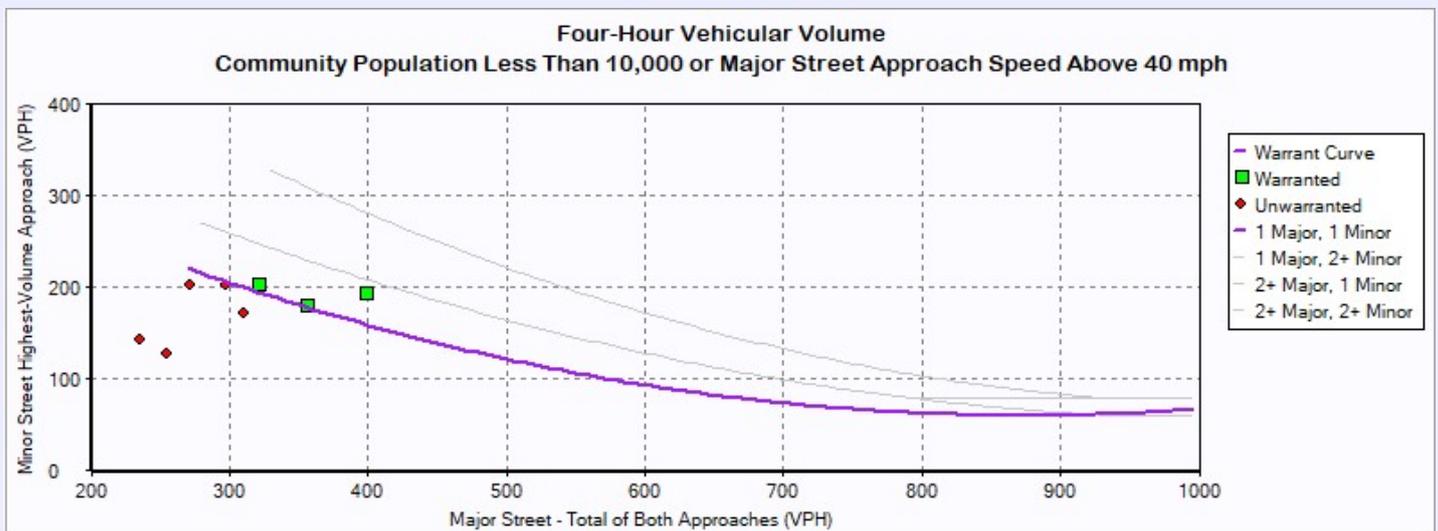
Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	50	55

Warrant 2 Met? **No**

Details:

Notes	3 Hours met (4 required)
Low population	Yes



Hourly Volumes

Time	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	21	12
01:00:00 - 02:00:00	7	7
02:00:00 - 03:00:00	6	10
03:00:00 - 04:00:00	12	10
04:00:00 - 05:00:00	30	25
05:00:00 - 06:00:00	76	99
06:00:00 - 07:00:00	164	120
07:00:00 - 08:00:00	516	215
08:00:00 - 09:00:00	232	150
09:00:00 - 10:00:00	176	140
10:00:00 - 11:00:00	142	128
11:00:00 - 12:00:00	163	105
12:00:00 - 13:00:00	202	138
13:00:00 - 14:00:00	244	133
14:00:00 - 15:00:00	283	153
15:00:00 - 16:00:00	284	174
16:00:00 - 17:00:00	255	192
17:00:00 - 18:00:00	322	203
18:00:00 - 19:00:00	184	163
19:00:00 - 20:00:00	147	113
20:00:00 - 21:00:00	145	81
21:00:00 - 22:00:00	78	85
22:00:00 - 23:00:00	59	67
23:00:00 - 00:00:00	26	35

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
06:45:00 - 07:45:00	400.00	193.00
07:45:00 - 08:45:00	357.00	180.00
17:00:00 - 18:00:00	322.00	203.00

Warrant 3: Peak Hour

2: RD36 / AVE15 + Project

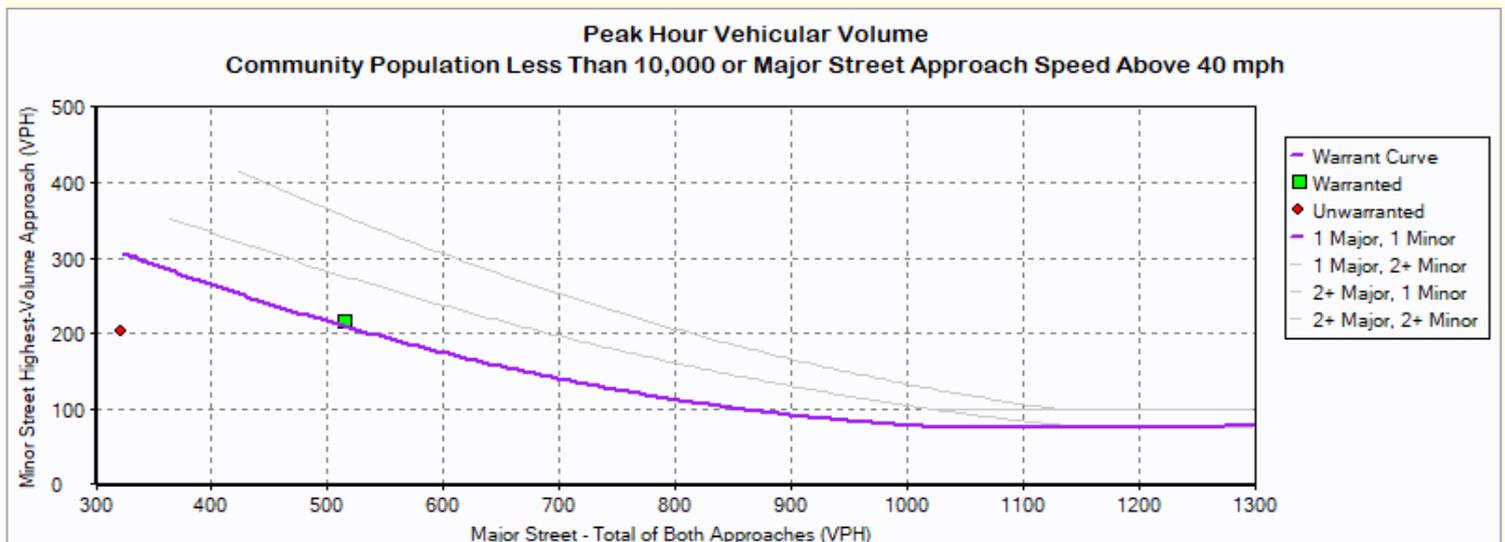
Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lanes	1	1
Approach Speed	50	55

Warrant 3 Met? **Yes**

Details

Low Population?	Yes		
Condition A Met?	No	Condition B Met?	Yes
Notes	0 Hours met (1 required)	Notes	1 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Met		
Total Entering Intersection Volume Condition Met?	Not Met		



Warrant 3: Peak Hour

2: RD36 / AVE15 + Project

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
0:00	21	12
1:00	7	7
2:00	6	10
3:00	12	10
4:00	30	25
5:00	76	99
6:00	164	120
7:00	516	215
8:00	232	150
9:00	176	140
10:00	142	128
11:00	163	105
12:00	202	138
13:00	244	133
14:00	283	153
15:00	284	174
16:00	255	192
17:00	322	203
18:00	184	163
19:00	147	113
20:00	145	81
21:00	78	85
22:00	59	67
23:00	26	35

Warrant 4: Pedestrian Volume

2: RD36 / AVE15 + Project

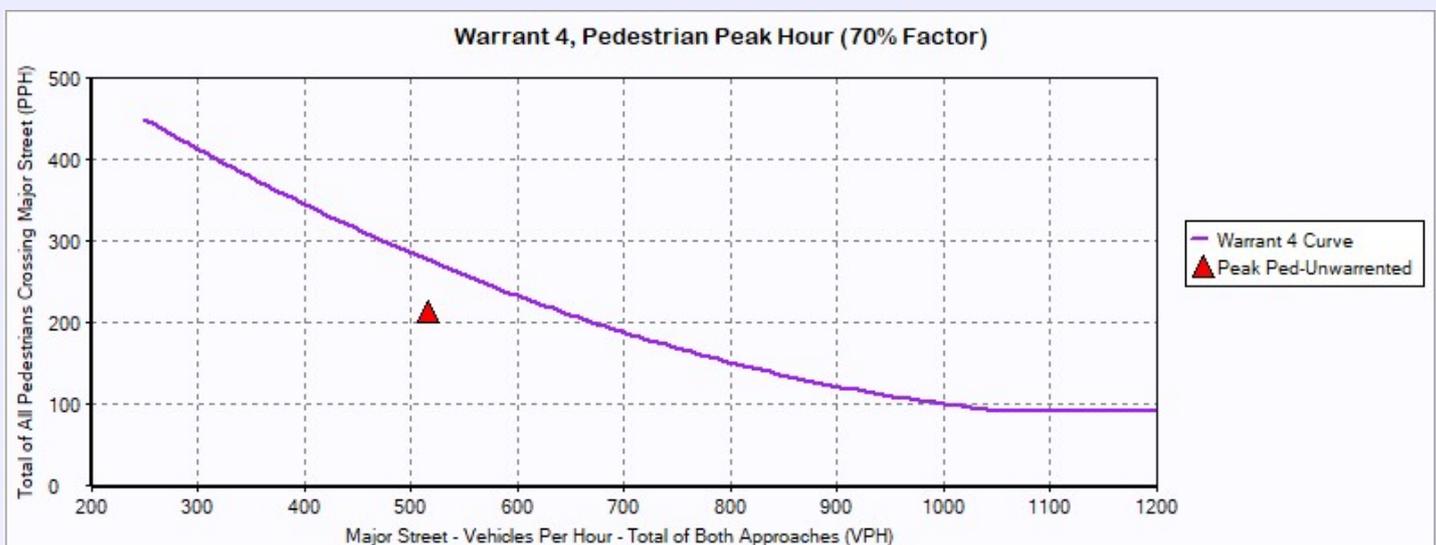
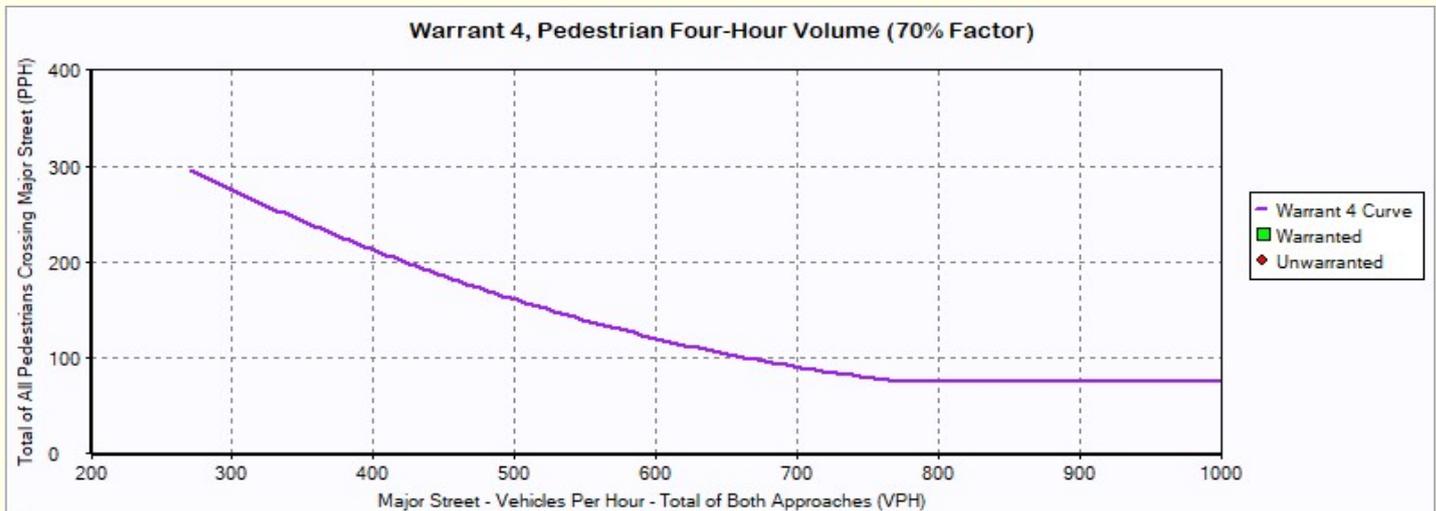
Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approch Speed	50	55

WARRANT 4 MET ? No

Details

Pedestrian Four Hour Volume Warrant Met?	No	
Pedestrian Peak Hour Warrant Met?	No	Notes 0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	Yes	



Warrant 5: School Crossing

2: RD36 / AVE15 + Project

Intersection Information

Major Street Name	RD 36
Major Street Direction	NB/SB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min)	0
Number of Students Crossing in Time Period	0
Number of Adequate Gaps in Time Period	0
Other Remedial Measures Attempted?	No
Adjacent Signal on NB approach?	No
Distance to signal on NB Approach (ft)	-
Adjacent Signal on SB approach?	No
Distance to signal on SB Approach (ft)	-
Will New Signal Restrict Progressive Traffic?	No

Warrant 6: Coordinated Signal System

2: RD36 / AVE15 + Project

Intersection Information

Major Street Name RD 36
Major Street Direction NB/SB

WARRANT 6 MET? **No**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
SB Approach (RD 36)	Yes	No	N/A
NB Approach (RD 36)	Yes	No	N/A
WB Approach (AVE 15)	Yes	No	N/A
EB Approach (AVE 15)	Yes	No	N/A

Unacceptable Platooning?
(At least one approach)

No

Distance to Closest Signal
(Must be N/A or > 1000)

N/A

Warrant 7: Crash Experience

2: RD36 / AVE15 + Project

Intersection Information

Major Street Name RD 36
 Major Street Direction NB/SB
 Minor Street Direction EB/WB

WARRANT 7 MET? **No**

Details:

Low Population? **Yes** Traffic Volume Condition Met? **No**
 Major Street Speed Limit 50 5 Hours Met (8 Required)
 Major Street 85th-% tile Speed 0.00 Ped Volume Condition Met? **No**
 0 Hours Met (8 Required)

Qualifying Crashes **0**
 Adequate Alternative Trials? **No**

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Eastbound Ped Volumes		Westbound Ped Volumes	
			Condition A	Condition B	Peds	> 80?	Peds	> 80?
00:00 to 01:00	21	0	No	No	0	No	0	No
00:15 to 01:15	19	0	No	No	0	No	0	No
00:30 to 01:30	12	0	No	No	0	No	0	No
00:45 to 01:45	7	0	No	No	0	No	0	No
01:00 to 02:00	7	0	No	No	0	No	0	No
01:15 to 02:15	6	0	No	No	0	No	0	No
01:30 to 02:30	4	0	No	No	0	No	0	No
01:45 to 02:45	6	0	No	No	0	No	0	No

02:00 to 03:00	6	0	No	No	0	No	0	No
02:15 to 03:15	9	0	No	No	0	No	0	No
02:30 to 03:30	12	0	No	No	0	No	0	No
02:45 to 03:45	11	0	No	No	0	No	0	No
03:00 to 04:00	12	0	No	No	0	No	0	No
03:15 to 04:15	13	0	No	No	0	No	0	No
03:30 to 04:30	16	0	No	No	0	No	0	No
03:45 to 04:45	22	0	No	No	0	No	0	No
04:00 to 05:00	30	0	No	No	0	No	0	No
04:15 to 05:15	42	0	No	No	0	No	0	No
04:30 to 05:30	55	0	No	No	0	No	0	No
04:45 to 05:45	64	0	No	No	0	No	0	No
05:00 to 06:00	76	0	No	No	0	No	0	No
05:15 to 06:15	95	0	No	No	0	No	0	No
05:30 to 06:30	107	0	No	No	0	No	0	No
05:45 to 06:45	129	0	No	No	0	No	0	No
06:00 to 07:00	164	0	No	No	0	No	0	No
06:15 to 07:15	226	0	No	No	0	No	0	No

06:30 to 07:30	305	0	No	No	0	No	0	No
06:45 to 07:45	400	0	No	No	0	No	0	No
07:00 to 08:00	516	0	No	No	0	No	0	No
07:15 to 08:15	506	0	No	No	0	No	0	No
07:30 to 08:30	446	0	No	No	0	No	0	No
07:45 to 08:45	357	0	No	No	0	No	0	No
08:00 to 09:00	232	0	No	No	0	No	0	No
08:15 to 09:15	194	0	No	No	0	No	0	No
08:30 to 09:30	177	0	No	No	0	No	0	No
08:45 to 09:45	189	0	No	No	0	No	0	No
09:00 to 10:00	176	0	No	No	0	No	0	No
09:15 to 10:15	153	0	No	No	0	No	0	No
09:30 to 10:30	158	0	No	No	0	No	0	No
09:45 to 10:45	139	0	No	No	0	No	0	No
10:00 to 11:00	142	0	No	No	0	No	0	No
10:15 to 11:15	154	0	No	No	0	No	0	No
10:30 to 11:30	157	0	No	No	0	No	0	No
10:45 to 11:45	163	0	No	No	0	No	0	No

11:00 to 12:00	163	0	No	No	0	No	0	No
11:15 to 12:15	172	0	No	No	0	No	0	No
11:30 to 12:30	176	0	No	No	0	No	0	No
11:45 to 12:45	179	0	No	No	0	No	0	No
12:00 to 13:00	202	0	No	No	0	No	0	No
12:15 to 13:15	215	0	No	No	0	No	0	No
12:30 to 13:30	254	0	No	No	0	No	0	No
12:45 to 13:45	255	0	No	No	0	No	0	No
13:00 to 14:00	244	0	No	No	0	No	0	No
13:15 to 14:15	236	0	No	No	0	No	0	No
13:30 to 14:30	220	0	No	No	0	No	0	No
13:45 to 14:45	236	0	No	No	0	No	0	No
14:00 to 15:00	283	0	No	No	0	No	0	No
14:15 to 15:15	304	0	No	No	0	No	0	No
14:30 to 15:30	310	0	No	No	0	No	0	No
14:45 to 15:45	310	0	No	No	0	No	0	No
15:00 to 16:00	284	0	No	No	0	No	0	No
15:15 to 16:15	278	0	No	No	0	No	0	No

15:30 to 16:30	274	0	No	No	0	No	0	No
15:45 to 16:45	272	0	No	No	0	No	0	No
16:00 to 17:00	255	0	No	No	0	No	0	No
16:15 to 17:15	267	0	No	No	0	No	0	No
16:30 to 17:30	274	0	No	No	0	No	0	No
16:45 to 17:45	298	0	No	No	0	No	0	No
17:00 to 18:00	322	0	No	No	0	No	0	No
17:15 to 18:15	306	0	No	No	0	No	0	No
17:30 to 18:30	274	0	No	No	0	No	0	No
17:45 to 18:45	223	0	No	No	0	No	0	No
18:00 to 19:00	184	0	No	No	0	No	0	No
18:15 to 19:15	158	0	No	No	0	No	0	No
18:30 to 19:30	147	0	No	No	0	No	0	No
18:45 to 19:45	145	0	No	No	0	No	0	No
19:00 to 20:00	147	0	No	No	0	No	0	No
19:15 to 20:15	153	0	No	No	0	No	0	No
19:30 to 20:30	163	0	No	No	0	No	0	No
19:45 to 20:45	166	0	No	No	0	No	0	No

20:00 to 21:00	145	0	No	No	0	No	0	No
20:15 to 21:15	130	0	No	No	0	No	0	No
20:30 to 21:30	103	0	No	No	0	No	0	No
20:45 to 21:45	83	0	No	No	0	No	0	No
21:00 to 22:00	78	0	No	No	0	No	0	No
21:15 to 22:15	75	0	No	No	0	No	0	No
21:30 to 22:30	70	0	No	No	0	No	0	No
21:45 to 22:45	64	0	No	No	0	No	0	No
22:00 to 23:00	59	0	No	No	0	No	0	No
22:15 to 23:15	39	0	No	No	0	No	0	No
22:30 to 23:30	34	0	No	No	0	No	0	No
22:45 to 23:45	28	0	No	No	0	No	0	No
23:00 to 00:00	26	0	No	No	0	No	0	No
23:15 to 00:15	24	0	No	No	0	No	0	No
23:30 to 00:30	26	0	No	No	0	No	0	No
23:45 to 00:45	28	0	No	No	0	No	0	No

Warrant 8: Roadway Network

2: RD36 / AVE15 + Project

Intersection Information

Major Street Name	RD 36
Major Street Direction	NB/SB
Minor Street Direction	EB/WB

WARRANT 8 MET? (A or B) No

Details:

	Growth Rates % (per year)			
	NB	SB	EB	WB
L	0.00	0.00	0.00	0.00
T	0.00	0.00	0.00	0.00
R	0.00	0.00	0.00	0.00

<u>Condition A, Total Entering Volume</u>		<u>Condition B, Non-normal Business Day</u>	
		<u>Existing</u>	<u>Future</u>
Existing Peak Hour	942	Highest Hour	0
Years	0.00	Second Highest Hour	0
Future Peak Hour	942	Third Highest Hour	0
Warrant 1 in 5 Years?	No	Fourth Highest Hour	0
Warrant 2 in 5 Years?	No	Fifth Highest Hour	0
Warrant 3 in 5 Years?	Yes	Yearly Growth Rate (%)	0.00
		Years	0.00

Condition A Met? No

Condition B Met? No

Warrant 9: Intersection Near a Grade Crossing

2: RD36 / AVE15 + Project

Intersection Information

	Major Street	Minor Street
Street Name	RD 36	AVE 15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	50	55

WARRANT 9 MET ? No

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

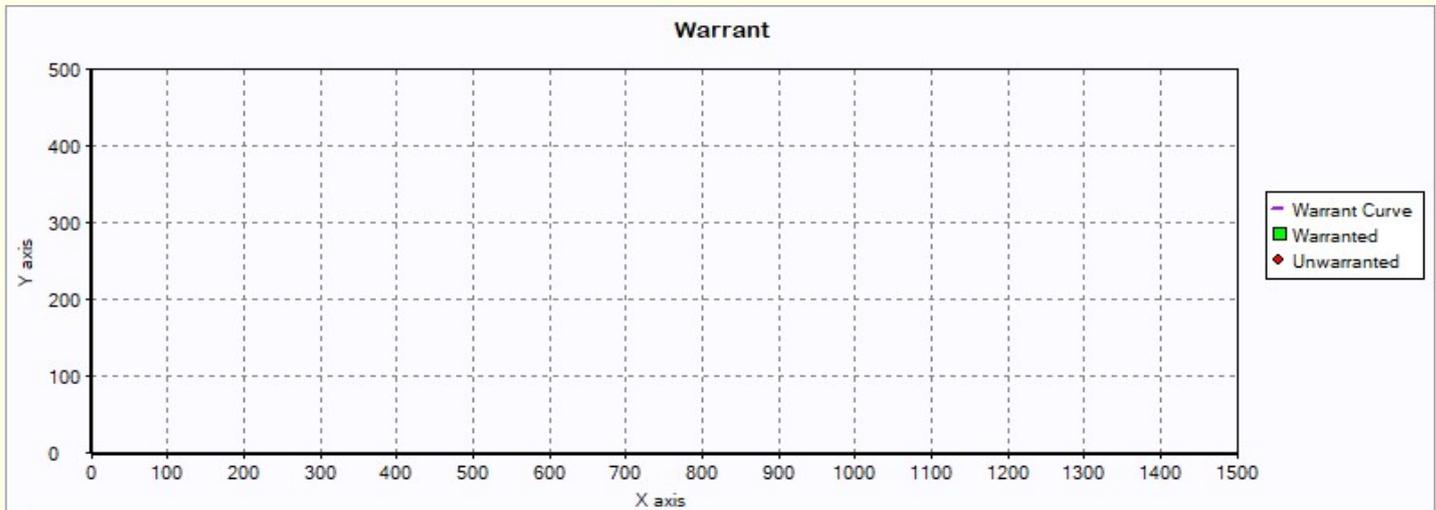
Distance from the center of the track to the stop or yield line Interpolated

Number of occurrences of rail traffic per day Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) Adjustment Factor

The rail traffic arrival times are unknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

Bicycle Warrant

2: RD36 / AVE15 + Project

Intersection Information

Major Street Name: RD 36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

BICYCLE WARRANT MET? **No**

Details:

Collision (2 or more counts) 0
 Geometric Path **No**
 Volume Condition Met? **No**
 Notes: No hour met

Hour	Traffic Volumes	Bicycle Volumes	Condition	
	Vehicles entering the intersection (V)	Bicycles entering the intersection (B)	$B * V > 50,000?$	$B \geq 50?$
00:00 to 01:00	41	0	No	No
00:15 to 01:15	37	0	No	No
00:30 to 01:30	25	0	No	No
00:45 to 01:45	18	0	No	No
01:00 to 02:00	19	0	No	No
01:15 to 02:15	21	0	No	No
01:30 to 02:30	20	0	No	No
01:45 to 02:45	20	0	No	No
02:00 to 03:00	19	0	No	No
02:15 to 03:15	20	0	No	No
02:30 to 03:30	20	0	No	No
02:45 to 03:45	24	0	No	No
03:00 to 04:00	27	0	No	No
03:15 to 04:15	29	0	No	No
03:30 to 04:30	41	0	No	No
03:45 to 04:45	51	0	No	No
04:00 to 05:00	66	0	No	No
04:15 to 05:15	89	0	No	No
04:30 to 05:30	113	0	No	No
04:45 to 05:45	152	0	No	No
05:00 to 06:00	197	0	No	No

05:15 to 06:15	244	0	No	No
05:30 to 06:30	281	0	No	No
05:45 to 06:45	315	0	No	No
06:00 to 07:00	368	0	No	No
06:15 to 07:15	481	0	No	No
06:30 to 07:30	611	0	No	No
06:45 to 07:45	772	0	No	No
07:00 to 08:00	942	0	No*	No*
07:15 to 08:15	916	0	No	No
07:30 to 08:30	824	0	No	No
07:45 to 08:45	663	0	No	No
08:00 to 09:00	470	0	No	No
08:15 to 09:15	404	0	No	No
08:30 to 09:30	374	0	No	No
08:45 to 09:45	394	0	No	No
09:00 to 10:00	389	0	No	No
09:15 to 10:15	376	0	No	No
09:30 to 10:30	389	0	No	No
09:45 to 10:45	380	0	No	No
10:00 to 11:00	374	0	No	No
10:15 to 11:15	372	0	No	No
10:30 to 11:30	361	0	No	No
10:45 to 11:45	357	0	No	No
11:00 to 12:00	363	0	No	No
11:15 to 12:15	388	0	No	No
11:30 to 12:30	409	0	No	No
11:45 to 12:45	427	0	No	No
12:00 to 13:00	452	0	No	No
12:15 to 13:15	461	0	No	No
12:30 to 13:30	498	0	No	No
12:45 to 13:45	501	0	No	No
13:00 to 14:00	502	0	No	No
13:15 to 14:15	504	0	No	No
13:30 to 14:30	513	0	No	No
13:45 to 14:45	520	0	No	No
14:00 to 15:00	572	0	No	No
14:15 to 15:15	602	0	No	No
14:30 to 15:30	600	0	No	No

14:45 to 15:45	623	0	No	No
15:00 to 16:00	616	0	No	No
15:15 to 16:15	633	0	No	No
15:30 to 16:30	636	0	No	No
15:45 to 16:45	646	0	No	No
16:00 to 17:00	619	0	No	No
16:15 to 17:15	637	0	No	No
16:30 to 17:30	673	0	No	No
16:45 to 17:45	693	0	No	No
17:00 to 18:00	725	0	No	No
17:15 to 18:15	676	0	No	No
17:30 to 18:30	607	0	No	No
17:45 to 18:45	529	0	No	No
18:00 to 19:00	455	0	No	No
18:15 to 19:15	404	0	No	No
18:30 to 19:30	367	0	No	No
18:45 to 19:45	334	0	No	No
19:00 to 20:00	327	0	No	No
19:15 to 20:15	314	0	No	No
19:30 to 20:30	300	0	No	No
19:45 to 20:45	299	0	No	No
20:00 to 21:00	267	0	No	No
20:15 to 21:15	259	0	No	No
20:30 to 21:30	240	0	No	No
20:45 to 21:45	216	0	No	No
21:00 to 22:00	206	0	No	No
21:15 to 22:15	201	0	No	No
21:30 to 22:30	204	0	No	No
21:45 to 22:45	191	0	No	No
22:00 to 23:00	174	0	No	No
22:15 to 23:15	140	0	No	No
22:30 to 23:30	105	0	No	No
22:45 to 23:45	86	0	No	No
23:00 to 00:00	78	0	No	No
23:15 to 00:15	60	0	No	No
23:30 to 00:30	57	0	No	No
23:45 to 00:45	57	0	No	No

All-Way Stop Control Warrant: Multiway Stop Applications

2: RD36 / AVE15 + Project

Intersection Information

Major Street Name: RD 36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

AWSC WARRANT MET? Yes

Details:

Condition A Met?	Yes	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	50

Notes: 4 Hours Met (8 Required)

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	North Bound Bicycle Volumes	East Bound Bicycle Volumes	North Bound Ped Volumes	East Bound Ped Volumes	Major Street Veh Volume > 300	Minor Street Avg(Veh + Ped + Bicycle) > 200	Minor Street Delay > 30
06:30 to 07:30	305	306	0	0	0	0	False	No	No
07:30 to 08:30	446	378	0	0	0	0	False	No	No
14:15 to 15:15	304	298	0	0	0	0	False	No	No
17:00 to 18:00	322	403	0	0	0	0	False	No	No

Warrants Summary Report

1: RD36 / SR145 2035

Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	0 Hours met (8 required)
Condition A and B Met?	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi **No** 1 Hours met (8 required)

Ped Condition? **No** 0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

No

Condition A Met? **No**

Condition B Met? **No**

Condition C Met? **No**

BicycleWarrant

No

0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

1: RD36 / SR145 2035

Intersection Information

Major Street Name: SR 145
 Major Street Direction: EB/WB
 Minor Street Direction: NB

WARRANT 1 MET? No

Details:

Condition A Met? No 0 Hours met (8 required)
 Condition B Met? No 0 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	70% Standard Met? Cond. A OR Cond. B		56% Standard Met? Cond. A AND Cond. B	
			Condition A 70% Column	Condition B 70% Column	Condition A 56% Column	Condition B 56% Column
07:00 to 08:00	407	83	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		
07:15 to 08:15	305	63	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		
07:30 to 08:30	205	42	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		
07:45 to 08:45	103	21	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

17:00 to 18:00		491		60	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No				
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes				
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes				

17:15 to 18:15		368		46	No	No	No	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No				
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes				

17:30 to 18:30		245		31	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No				

17:45 to 18:45		123		15	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No				
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No				
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No				
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No				

Warrant 2: Four-hour Vehicular Volume

1: RD36 / SR145 2035

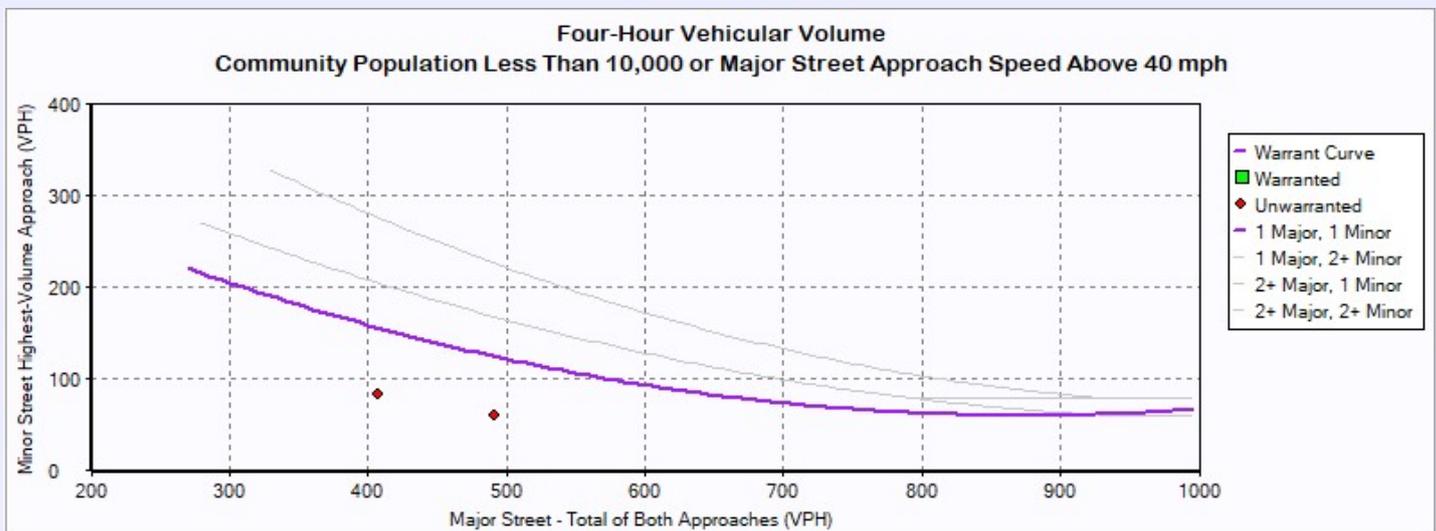
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

Warrant 2 Met? **No**

Details:

Notes	0 Hours met (4 required)
Low population	Yes



Hourly Volumes

Time	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	0	0
01:00:00 - 02:00:00	0	0
02:00:00 - 03:00:00	0	0
03:00:00 - 04:00:00	0	0
04:00:00 - 05:00:00	0	0
05:00:00 - 06:00:00	0	0
06:00:00 - 07:00:00	0	0
07:00:00 - 08:00:00	407	83
08:00:00 - 09:00:00	0	0
09:00:00 - 10:00:00	0	0
10:00:00 - 11:00:00	0	0
11:00:00 - 12:00:00	0	0
12:00:00 - 13:00:00	0	0
13:00:00 - 14:00:00	0	0
14:00:00 - 15:00:00	0	0
15:00:00 - 16:00:00	0	0
16:00:00 - 17:00:00	0	0
17:00:00 - 18:00:00	491	60
18:00:00 - 19:00:00	0	0
19:00:00 - 20:00:00	0	0
20:00:00 - 21:00:00	0	0
21:00:00 - 22:00:00	0	0
22:00:00 - 23:00:00	0	0
23:00:00 - 00:00:00	0	0

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)

Warrant 3: Peak Hour

1: RD36 / SR145 2035

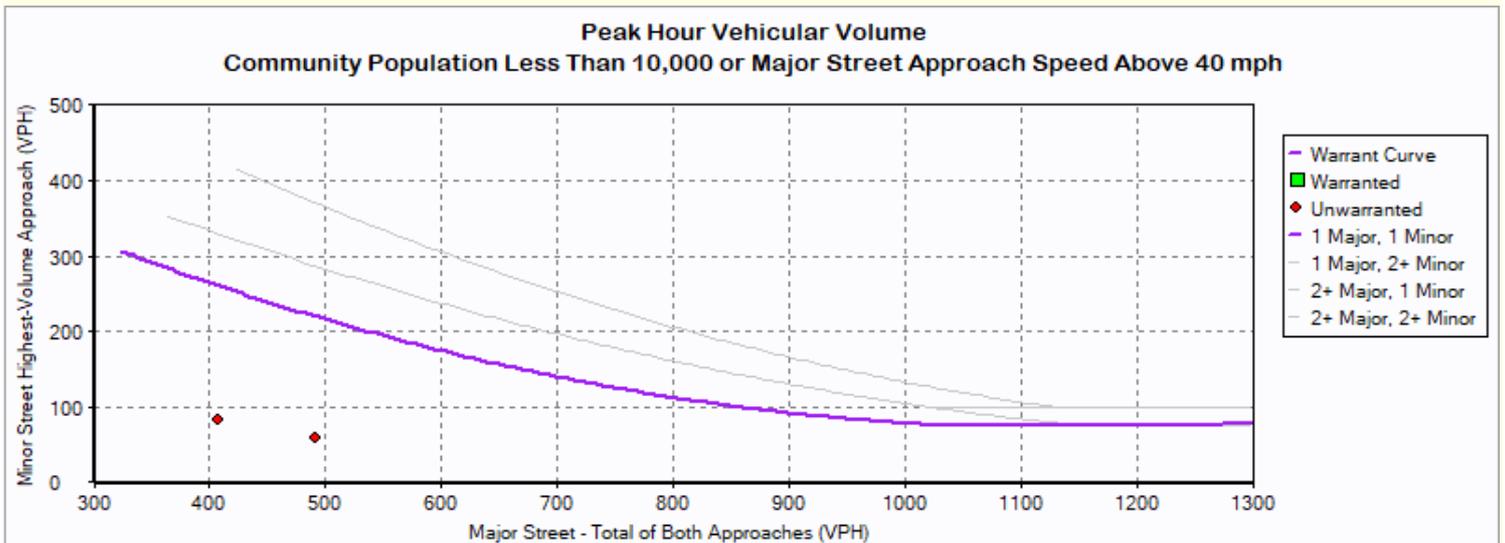
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lanes	1	1
Approach Speed	65	50

Warrant 3 Met? **No**

Details

Low Population?	Yes		
Condition A Met?	No	Condition B Met?	No
Notes	0 Hours met (1 required)	Notes	0 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Met		
Total Entering Intersection Volume Condition Met?	Not Met		



Warrant 3: Peak Hour

1: RD36 / SR145 2035

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:00	407	83
17:00	491	60

Warrant 4: Pedestrian Volume

1: RD36 / SR145 2035

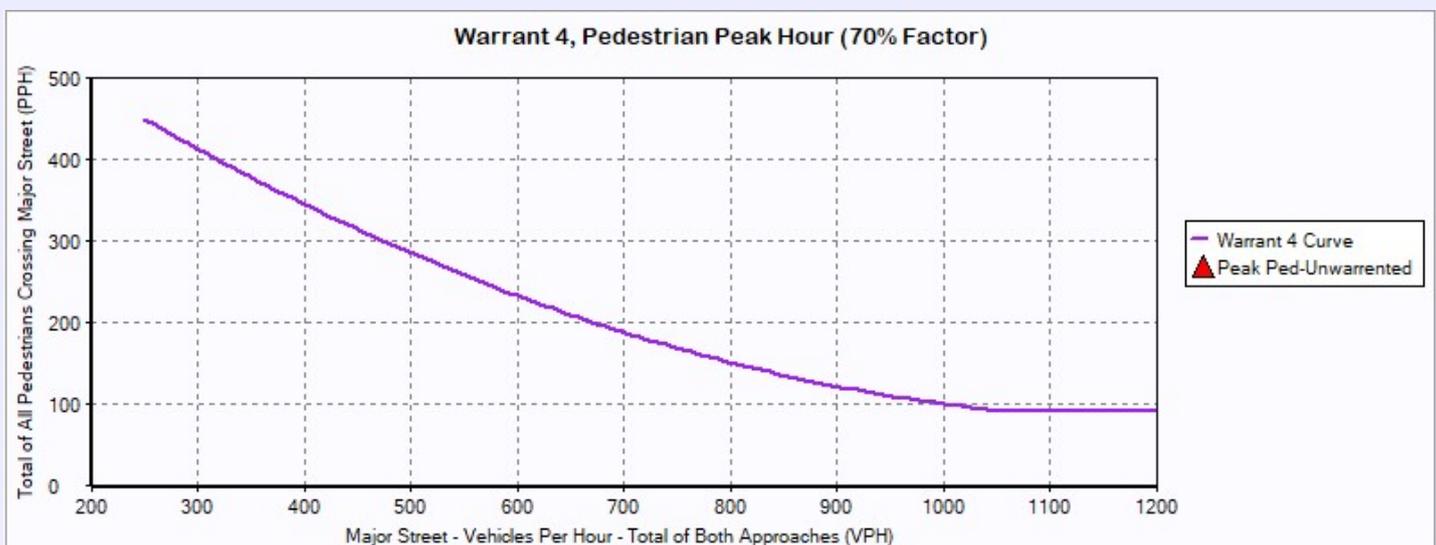
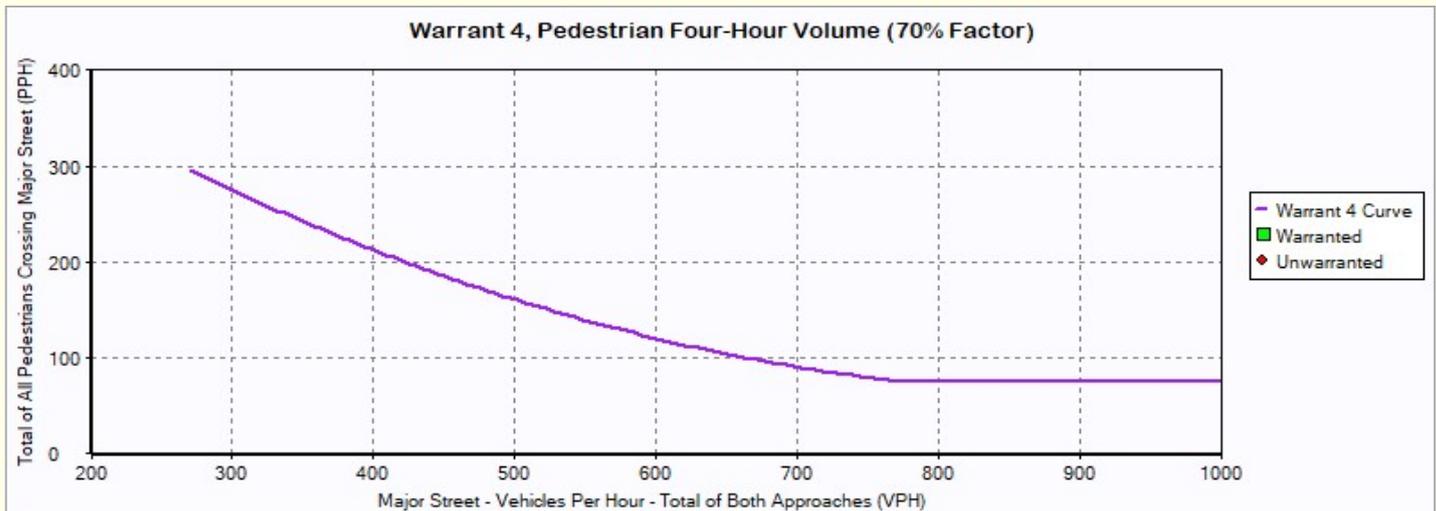
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approch Speed	65	50

WARRANT 4 MET ? No

Details

Pedestrian Four Hour Volume Warrant Met?	No	
Pedestrian Peak Hour Warrant Met?	No	Notes 0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	Yes	



Warrant 5: School Crossing

1: RD36 / SR145 2035

Intersection Information

Major Street Name SR 145

Major Street Direction EB/WB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min) 0

Number of Students Crossing in Time Period 0

Number of Adequate Gaps in Time Period 0

Other Remedial Measures Attempted? **No**

Adjacent Signal on EB approach? **No**

Distance to signal on EB Approach (ft) -

Adjacent Signal on WB approach? **No**

Distance to signal on WB Approach (ft) -

Will New Signal Restrict Progressive Traffic? **No**

Warrant 6: Coordinated Signal System

1: RD36 / SR145 2035

Intersection Information

Major Street Name SR 145

Major Street Direction EB/WB

WARRANT 6 MET? **No**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
NB Approach (Rd 36)	Yes	No	N/A
WB Approach (SR 145)	Yes	No	N/A
EB Approach (SR 145)	Yes	No	N/A

Unacceptable Platooning?
(At least one approach)

No

Distance to Closest Signal
(Must be N/A or > 1000)

N/A

Warrant 7: Crash Experience

1: RD36 / SR145 2035

Intersection Information

Major Street Name SR 145
 Major Street Direction EB/WB
 Minor Street Direction NB

WARRANT 7 MET? No

Details:

Low Population?	Yes	Traffic Volume Condition Met?	No
Major Street Speed Limit	65	1 Hours Met (8 Required)	
Major Street 85th-% tile Speed	0.00	Ped Volume Condition Met?	No
		0 Hours Met (8 Required)	
Qualifying Crashes		0	
Adequate Alternative Trials?		No	

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Northbound Ped Volumes		Peds	> 80?
			Condition A	Condition B	Peds	> 80?		
07:00 to 08:00	407	0	No	No	0	No	0	No
07:15 to 08:15	305	0	No	No	0	No	0	No
07:30 to 08:30	205	0	No	No	0	No	0	No
07:45 to 08:45	103	0	No	No	0	No	0	No
17:00 to 18:00	491	0	No	No	0	No	0	No
17:15 to 18:15	368	0	No	No	0	No	0	No
17:30 to 18:30	245	0	No	No	0	No	0	No
17:45 to 18:45	123	0	No	No	0	No	0	No

Warrant 8: Roadway Network

1: RD36 / SR145 2035

Intersection Information

Major Street Name SR 145
 Major Street Direction EB/WB
 Minor Street Direction NB

WARRANT 8 MET? (A or B) No

Details:

	Growth Rates % (per year)		
	NB	EB	WB
L	0.00	0.00	0.00
T	0.00	0.00	0.00
R	0.00	0.00	0.00

<u>Condition A, Total Entering Volume</u>		<u>Condition B, Non-normal Business Day</u>		
			<u>Existing</u>	<u>Future</u>
Existing Peak Hour	551	Highest Hour	0	0
Years	0.00	Second Highest Hour	0	0
Future Peak Hour	551	Third Highest Hour	0	0
Warrant 1 in 5 Years?	No	Fourth Highest Hour	0	0
Warrant 2 in 5 Years?	No	Fifth Highest Hour	0	0
Warrant 3 in 5 Years?	No	Yearly Growth Rate (%)	0.00	
		Years	0.00	

Condition A Met? No Condition B Met? No

Warrant 9: Intersection Near a Grade Crossing

1: RD36 / SR145 2035

Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

WARRANT 9 MET ? No

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

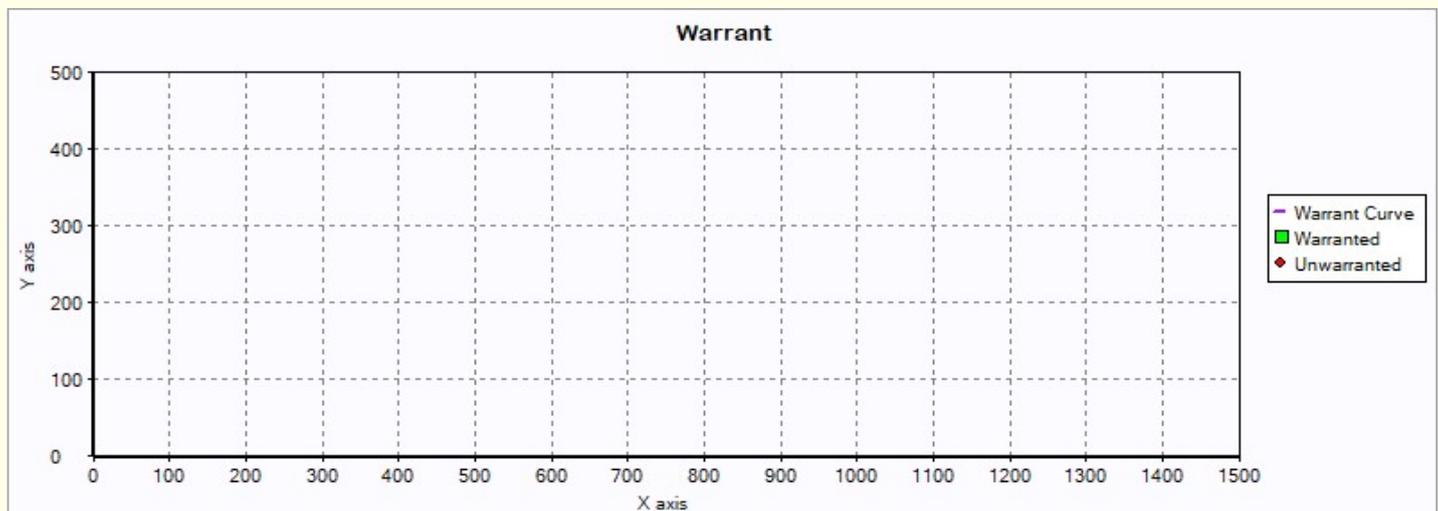
Distance from the center of the track to the stop or yield line Interpolated

Number of occurrences of rail traffic per day Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) Adjustment Factor

The rail traffic arrival times are unknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

Bicycle Warrant

1: RD36 / SR145 2035

Intersection Information

Major Street Name: SR 145
Major Street Direction: EB/WB
Minor Street Direction: NB

BICYCLE WARRANT MET? **No**

Details:

Collision (2 or more counts) 0
Geometric Path **No**
Volume Condition Met? **No**
Notes: No hour met

Hour	<u>Traffic Volumes</u>	<u>Bicycle Volumes</u>	<u>Condition</u>	
	Vehicles entering the intersection (V)	Bicycles entering the intersection (B)	B * V > 50,000?	B >= 50?
07:00 to 08:00	490	0	No	No
07:15 to 08:15	368	0	No	No
07:30 to 08:30	247	0	No	No
07:45 to 08:45	124	0	No	No
17:00 to 18:00	551	0	No*	No*
17:15 to 18:15	414	0	No	No
17:30 to 18:30	276	0	No	No
17:45 to 18:45	138	0	No	No

All-Way Stop Control Warrant: Multiway Stop Applications

1: RD36 / SR145 2035

Intersection Information

Major Street Name: SR 145
 Major Street Direction: EB/WB
 Minor Street Direction: NB

AWSC WARRANT MET? No

Details:

Condition A Met?	No	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	65
Notes: 0 Hours Met (8 Required)			

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	East Bound Bicycle Volumes	North Bound Bicycle Volumes	East Bound Ped Volumes	North Bound Ped Volumes	Major Street Veh Vol > 210	Avg(Veh + Ped + Bicycle) > 200	Minor Street Delay > 30

Warrants Summary Report

2: RD36 / AVE15 2035

Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	30	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	1 Hours met (8 required)
Condition A and B Met?	No	1 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	2 Hours met (4 required)
Warrant 3, Peak Hour		
	Yes	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	Yes	2 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi **No** 2 Hours met (8 required)

Ped Condition? **No** 0 Hours met (8 required)

Warrant 8, Roadway Network

Yes

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

Yes

Condition A Met? **Yes**

Condition B Met? **No**

Condition C Met? **No**

BicycleWarrant

No

0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

2: RD36 / AVE15 2035

Intersection Information

Major Street Name: RD36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

WARRANT 1 MET? No

Details:

Condition A Met? No 1 Hours met (8 required)
 Condition B Met? No 1 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	70% Standard Met? Cond. A OR Cond. B		56% Standard Met? Cond. A AND Cond. B	
			Condition A 70% Column	Condition B 70% Column	Condition A 56% Column	Condition B 56% Column
07:00 to 08:00	284	336	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		
07:15 to 08:15	212	252	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		
07:30 to 08:30	141	168	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		
07:45 to 08:45	70	84	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

17:00 to 18:00	564	275	Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	Yes	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

17:15 to 18:15	422	208	Yes	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		

17:30 to 18:30	283	138	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

17:45 to 18:45	141	69	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		

Warrant 2: Four-hour Vehicular Volume

2: RD36 / AVE15 2035

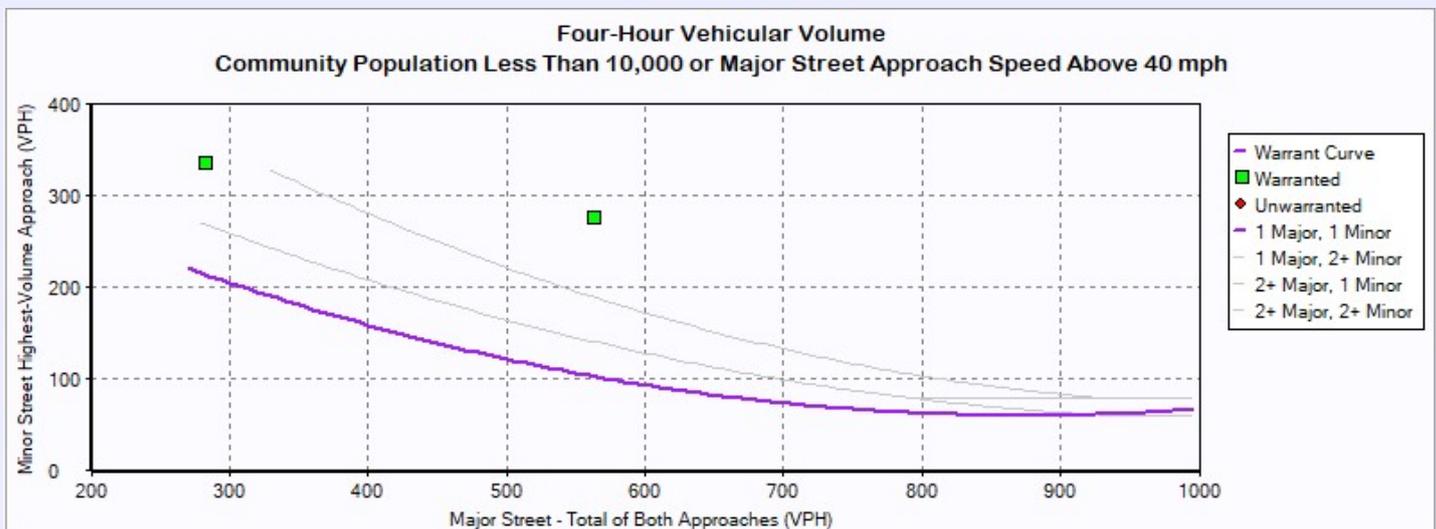
Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approch Speed	30	30

Warrant 2 Met? **No**

Details:

Notes	2 Hours met (4 required)
Low population	Yes



Hourly Volumes

Time	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	0	0
01:00:00 - 02:00:00	0	0
02:00:00 - 03:00:00	0	0
03:00:00 - 04:00:00	0	0
04:00:00 - 05:00:00	0	0
05:00:00 - 06:00:00	0	0
06:00:00 - 07:00:00	0	0
07:00:00 - 08:00:00	284	336
08:00:00 - 09:00:00	0	0
09:00:00 - 10:00:00	0	0
10:00:00 - 11:00:00	0	0
11:00:00 - 12:00:00	0	0
12:00:00 - 13:00:00	0	0
13:00:00 - 14:00:00	0	0
14:00:00 - 15:00:00	0	0
15:00:00 - 16:00:00	0	0
16:00:00 - 17:00:00	0	0
17:00:00 - 18:00:00	564	275
18:00:00 - 19:00:00	0	0
19:00:00 - 20:00:00	0	0
20:00:00 - 21:00:00	0	0
21:00:00 - 22:00:00	0	0
22:00:00 - 23:00:00	0	0
23:00:00 - 00:00:00	0	0

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
07:00:00 - 08:00:00	284.00	336.00
17:00:00 - 18:00:00	564.00	275.00

Warrant 3: Peak Hour

2: RD36 / AVE15 2035

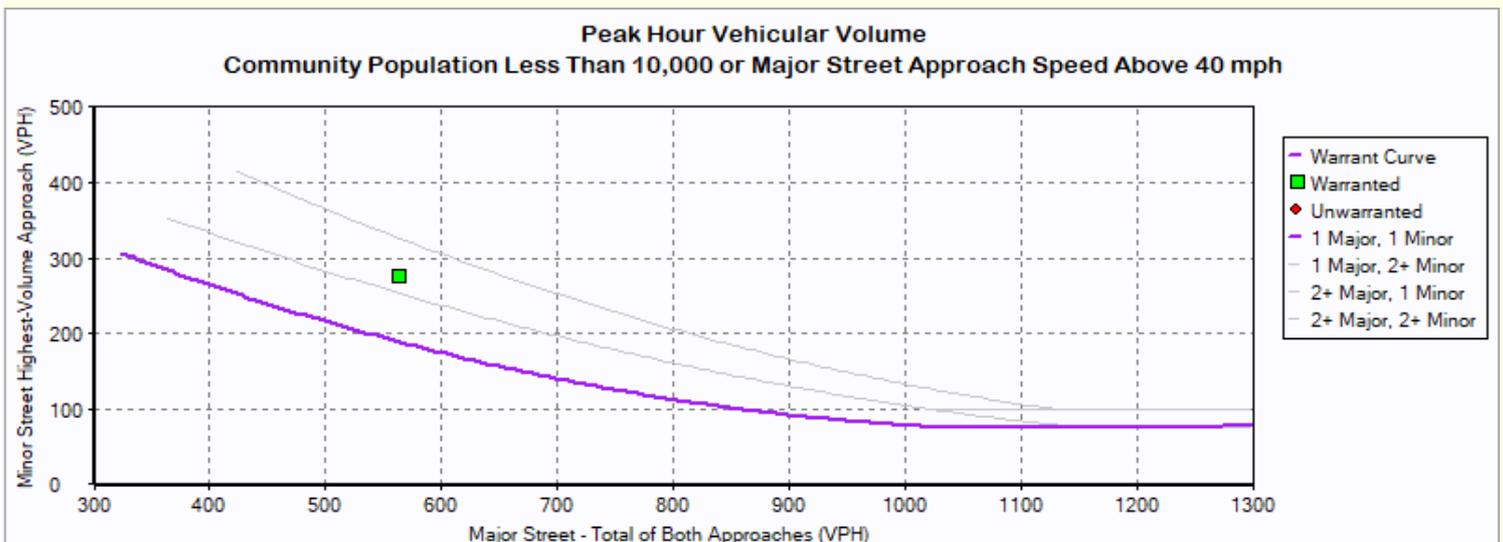
Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lanes	1	1
Approach Speed	30	30

Warrant 3 Met? **Yes**

Details

Low Population?	Yes		
Condition A Met?	No	Condition B Met?	Yes
Notes	0 Hours met (1 required)	Notes	2 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Met		
Total Entering Intersection Volume Condition Met?	Not Met		



Warrant 3: Peak Hour

2: RD36 / AVE15 2035

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:00	284	336
17:00	564	275

Warrant 4: Pedestrian Volume

2: RD36 / AVE15 2035

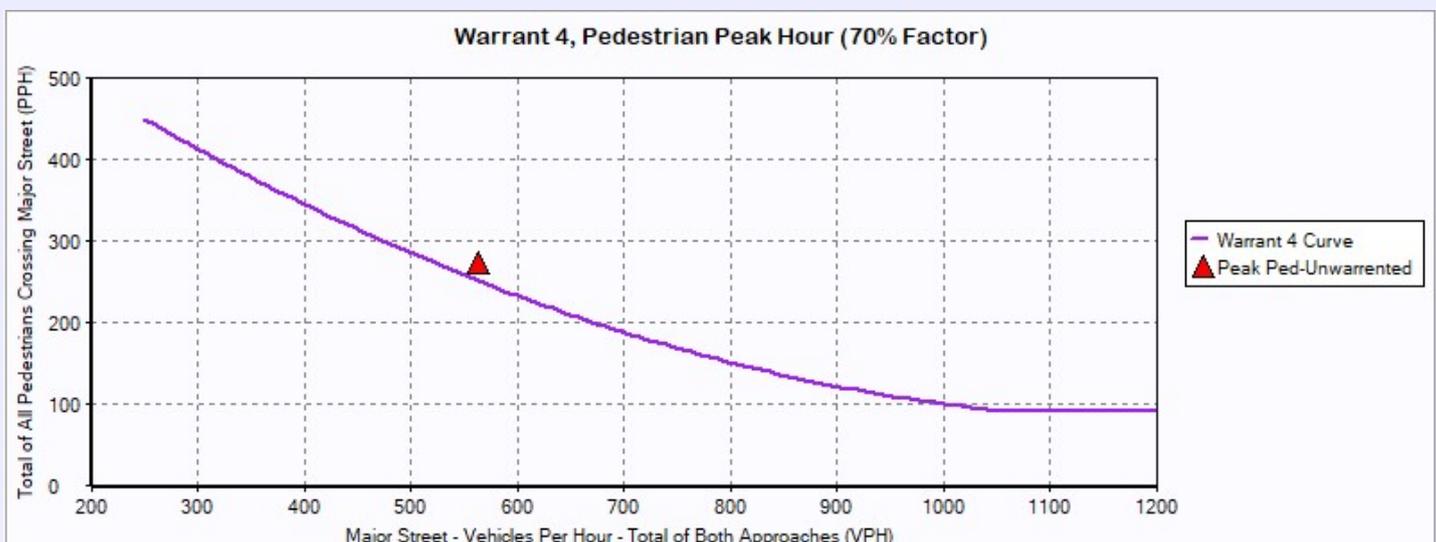
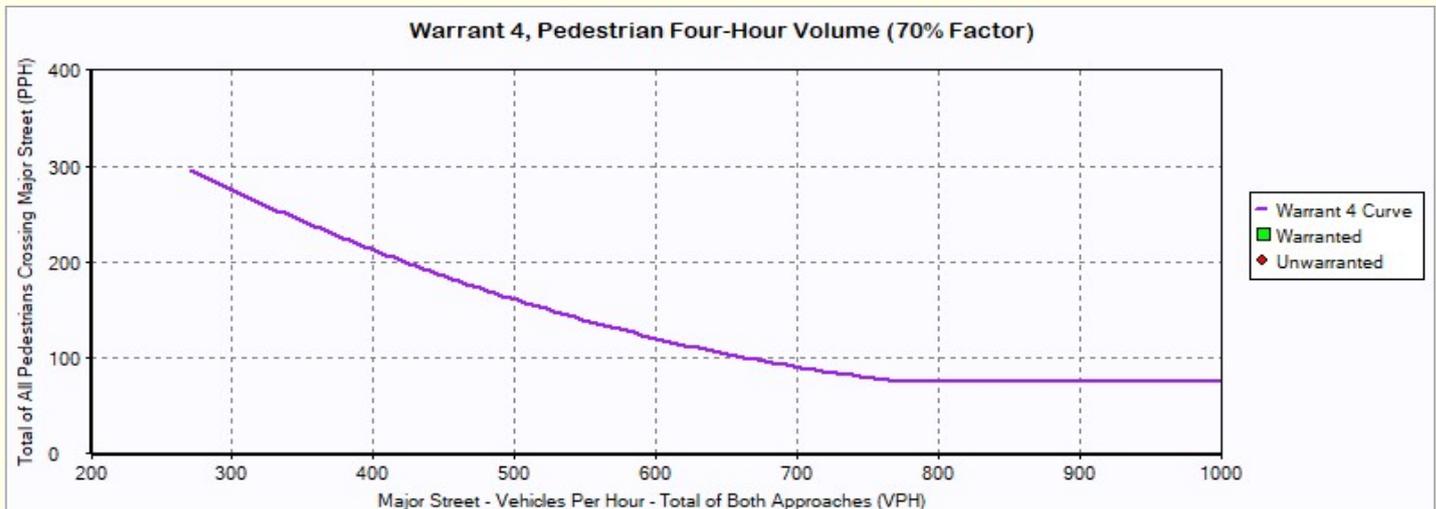
Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	30	30

WARRANT 4 MET ? No

Details

Pedestrian Four Hour Volume Warrant Met?	No	
Pedestrian Peak Hour Warrant Met?	No	Notes 0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	Yes	



Warrant 5: School Crossing

2: RD36 / AVE15 2035

Intersection Information

Major Street Name RD36

Major Street Direction NB/SB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min) 0

Number of Students Crossing in Time Period 0

Number of Adequate Gaps in Time Period 0

Other Remedial Measures Attempted? **No**

Adjacent Signal on NB approach? **No**

Distance to signal on NB Approach (ft) -

Adjacent Signal on SB approach? **No**

Distance to signal on SB Approach (ft) -

Will New Signal Restrict Progressive Traffic? **No**

Warrant 6: Coordinated Signal System

2: RD36 / AVE15 2035

Intersection Information

Major Street Name RD36
Major Street Direction NB/SB

WARRANT 6 MET? **No**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
SB Approach (RD36)	Yes	No	N/A
NB Approach (RD36)	Yes	No	N/A
WB Approach (AVE15)	Yes	No	N/A
EB Approach (AVE15)	Yes	No	N/A

Unacceptable Platooning?
(At least one approach)

No

Distance to Closest Signal
(Must be N/A or > 1000)

N/A

Warrant 7: Crash Experience

2: RD36 / AVE15 2035

Intersection Information

Major Street Name RD36
 Major Street Direction NB/SB
 Minor Street Direction EB/WB

WARRANT 7 MET? **No**

Details:

Low Population? **Yes** Traffic Volume Condition Met? **No**
 Major Street Speed Limit 30 2 Hours Met (8 Required)
 Major Street 85th-% tile Speed 0.00 Ped Volume Condition Met? **No**
 0 Hours Met (8 Required)
 Qualifying Crashes **0**
 Adequate Alternative Trials? **No**

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Eastbound Ped Volumes		Westbound Ped Volumes	
			Condition A	Condition B	Peds	> 80?	Peds	> 80?
07:00 to 08:00	284	0	No	No	0	No	0	No
07:15 to 08:15	212	0	No	No	0	No	0	No
07:30 to 08:30	141	0	No	No	0	No	0	No
07:45 to 08:45	70	0	No	No	0	No	0	No
17:00 to 18:00	564	0	No	No	0	No	0	No
17:15 to 18:15	422	0	No	No	0	No	0	No
17:30 to 18:30	283	0	No	No	0	No	0	No
17:45 to 18:45	141	0	No	No	0	No	0	No

Warrant 8: Roadway Network

2: RD36 / AVE15 2035

Intersection Information

Major Street Name RD36
 Major Street Direction NB/SB
 Minor Street Direction EB/WB

WARRANT 8 MET? (A or B) Yes

Details:

Growth Rates % (per year)				
	NB	SB	EB	WB
L	0.00	0.00	0.00	0.00
T	0.00	0.00	0.00	0.00
R	0.00	0.00	0.00	0.00

Condition A, Total Entering Volume		Condition B, Non-normal Business Day		
			Existing	Future
Existing Peak Hour	1,051	Highest Hour	0	0
Years	0.00	Second Highest Hour	0	0
Future Peak Hour	1,051	Third Highest Hour	0	0
Warrant 1 in 5 Years?	No	Fourth Highest Hour	0	0
Warrant 2 in 5 Years?	No	Fifth Highest Hour	0	0
Warrant 3 in 5 Years?	Yes	Yearly Growth Rate (%)	0.00	
		Years	0.00	

Condition A Met? Yes Condition B Met? No

Warrant 9: Intersection Near a Grade Crossing

2: RD36 / AVE15 2035

Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	30	30

WARRANT 9 MET ? No

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

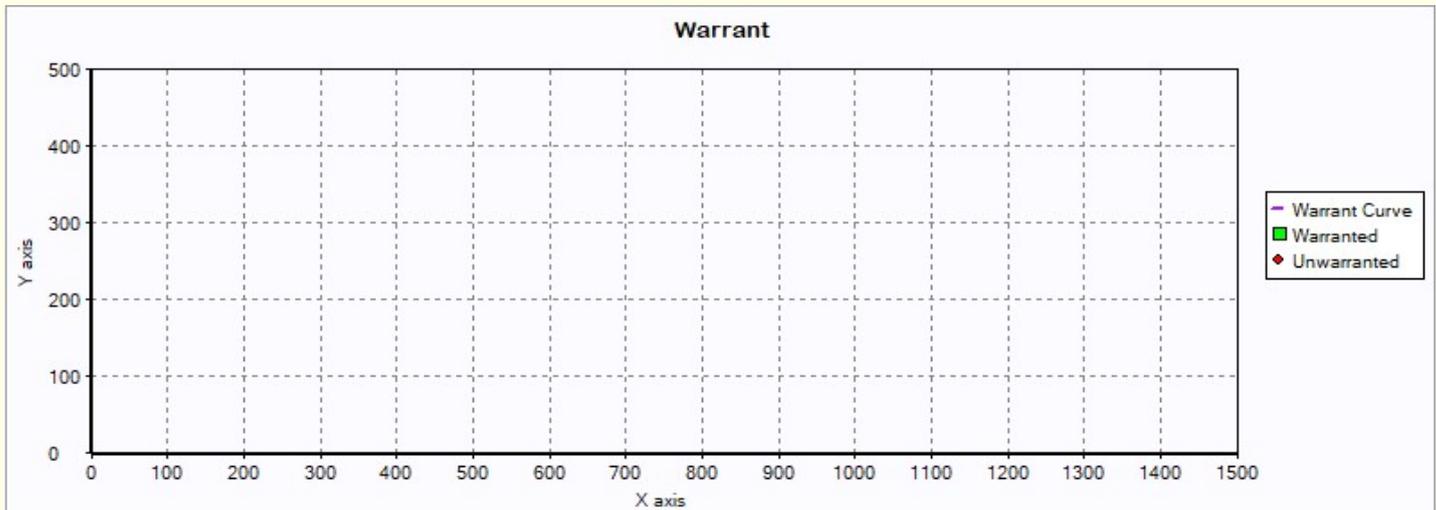
Distance from the center of the track to the stop or yield line Interpolated

Number of occurrences of rail traffic per day Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) Adjustment Factor

The rail traffic arrival times are unknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

Bicycle Warrant

2: RD36 / AVE15 2035

Intersection Information

Major Street Name: RD36
Major Street Direction: NB/SB
Minor Street Direction: EB/WB

BICYCLE WARRANT MET? **No**

Details:

Collision (2 or more counts) 0
Geometric Path **No**
Volume Condition Met? **No**
Notes: No hour met

Hour	<u>Traffic Volumes</u>	<u>Bicycle Volumes</u>	<u>Condition</u>	
	Vehicles entering the intersection (V)	Bicycles entering the intersection (B)	B * V > 50,000?	B >= 50?
07:00 to 08:00	837	0	No	No
07:15 to 08:15	627	0	No	No
07:30 to 08:30	417	0	No	No
07:45 to 08:45	207	0	No	No
17:00 to 18:00	1,051	0	No*	No*
17:15 to 18:15	789	0	No	No
17:30 to 18:30	527	0	No	No
17:45 to 18:45	263	0	No	No

All-Way Stop Control Warrant: Multiway Stop Applications

2: RD36 / AVE15 2035

Intersection Information

Major Street Name: RD36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

AWSC WARRANT MET? Yes

Details:

Condition A Met?	Yes	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	30
Notes: 1 Hours Met (8 Required)			

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	North Bound Bicycle Volumes	East Bound Bicycle Volumes	North Bound Ped Volumes	East Bound Ped Volumes	Major Street Veh Volume > 300	Minor Street Avg(Veh + Ped + Bicycle) > 200	Minor Street Delay > 30
17:00 to 18:00	564	487	0	0	0	0	False	No	No

Warrants Summary Report

1: RD36 / SR145 2035+PROJECT

Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	2 Hours met (8 required)
Condition A and B Met?	No	2 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	2 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi **No** 2 Hours met (8 required)

Ped Condition? **No** 0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

No

Condition A Met? **No**

Condition B Met? **No**

Condition C Met? **No**

BicycleWarrant

No 0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

1: RD36 / SR145 2035+PROJECT

Intersection Information

Major Street Name: SR 145

Major Street Direction: EB/WB

Minor Street Direction: NB

WARRANT 1 MET? No

Details:

Condition A Met? **No** 2 Hours met (8 required)

Condition B Met? **No** 2 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	70% Standard Met? Cond. A OR Cond. B		56% Standard Met? Cond. A AND Cond. B	
			Condition A 70% Column	Condition B 70% Column	Condition A 56% Column	Condition B 56% Column
07:00 to 08:00	545	139	Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	Yes	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes		
07:15 to 08:15	408	105	Yes	No	Yes	No
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes		
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		
07:30 to 08:30	273	70	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes		
07:45 to 08:45	136	35	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No		
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No		
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No		
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No		

17:00 to 18:00	590		110	Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	Yes	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

17:15 to 18:15	443		83	No	No	No	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

17:30 to 18:30	296		55	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:45 to 18:45	148		27	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	No			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	No			

Warrant 2: Four-hour Vehicular Volume

1: RD36 / SR145 2035+PROJECT

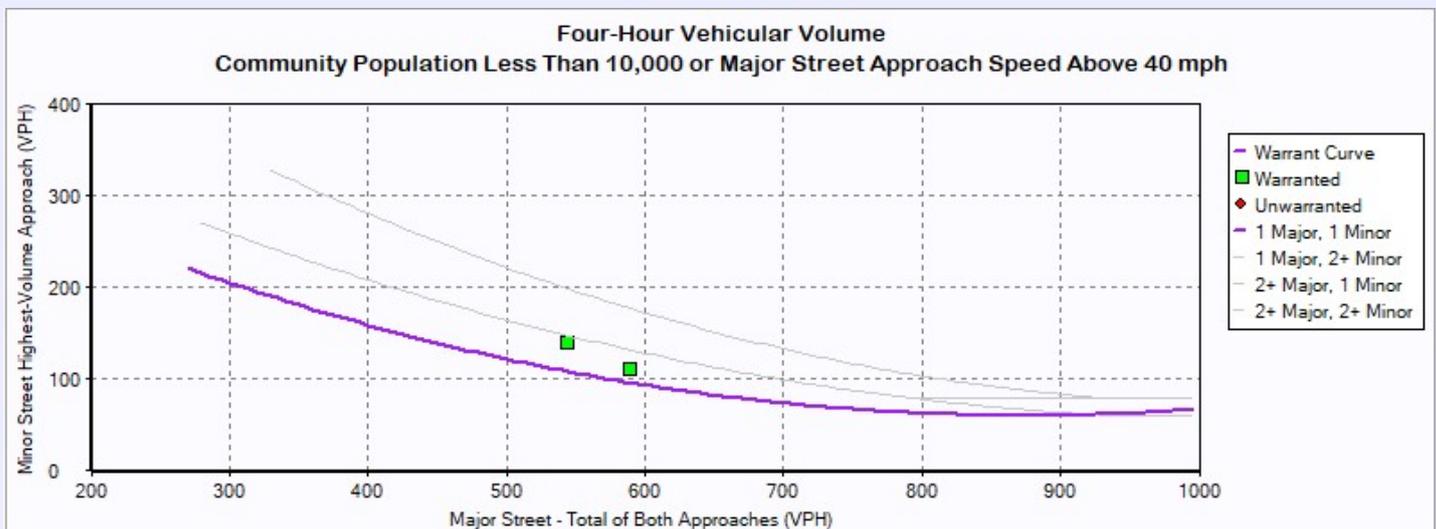
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

Warrant 2 Met? **No**

Details:

Notes	2 Hours met (4 required)
Low population	Yes



Hourly Volumes

Time	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	0	0
01:00:00 - 02:00:00	0	0
02:00:00 - 03:00:00	0	0
03:00:00 - 04:00:00	0	0
04:00:00 - 05:00:00	0	0
05:00:00 - 06:00:00	0	0
06:00:00 - 07:00:00	0	0
07:00:00 - 08:00:00	545	139
08:00:00 - 09:00:00	0	0
09:00:00 - 10:00:00	0	0
10:00:00 - 11:00:00	0	0
11:00:00 - 12:00:00	0	0
12:00:00 - 13:00:00	0	0
13:00:00 - 14:00:00	0	0
14:00:00 - 15:00:00	0	0
15:00:00 - 16:00:00	0	0
16:00:00 - 17:00:00	0	0
17:00:00 - 18:00:00	590	110
18:00:00 - 19:00:00	0	0
19:00:00 - 20:00:00	0	0
20:00:00 - 21:00:00	0	0
21:00:00 - 22:00:00	0	0
22:00:00 - 23:00:00	0	0
23:00:00 - 00:00:00	0	0

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
07:00:00 - 08:00:00	545.00	139.00
17:00:00 - 18:00:00	590.00	110.00

Warrant 3: Peak Hour

1: RD36 / SR145 2035+PROJECT

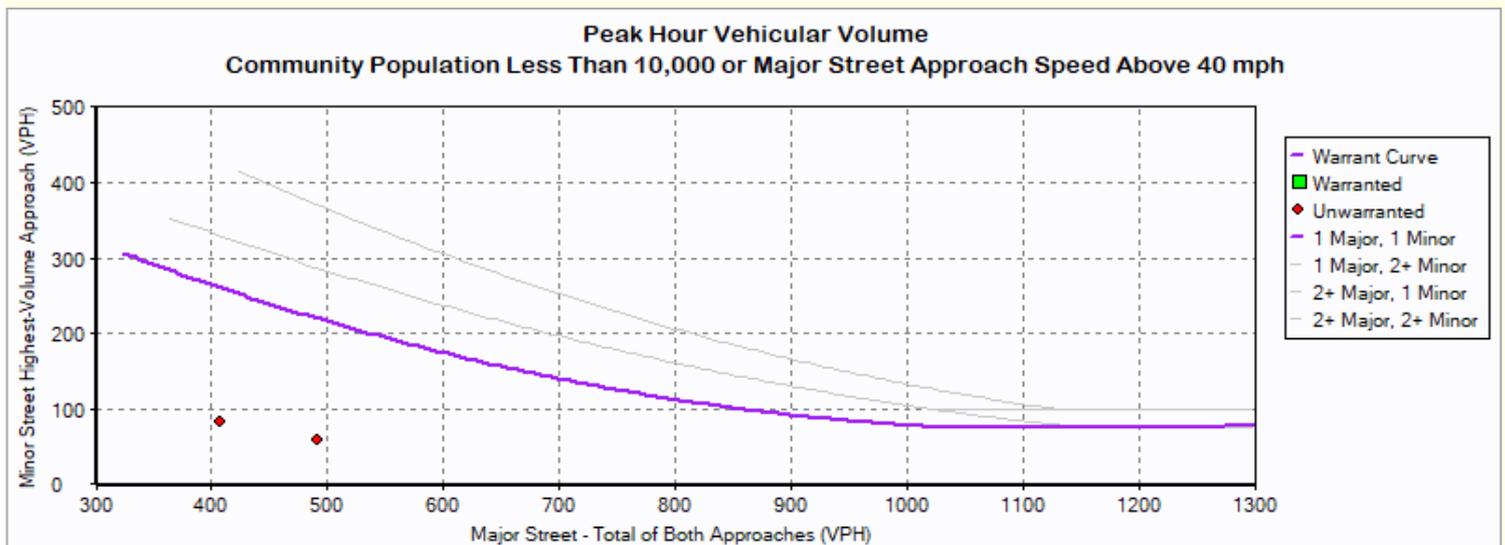
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lanes	1	1
Approach Speed	65	50

Warrant 3 Met? **No**

Details

Low Population?	Yes		
Condition A Met?	No	Condition B Met?	No
Notes	0 Hours met (1 required)	Notes	0 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Met		
Total Entering Intersection Volume Condition Met?	Not Met		



Warrant 3: Peak Hour

1: RD36 / SR145 2035+PROJECT

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:00	407	83
17:00	491	60

Warrant 4: Pedestrian Volume

1: RD36 / SR145 2035+PROJECT

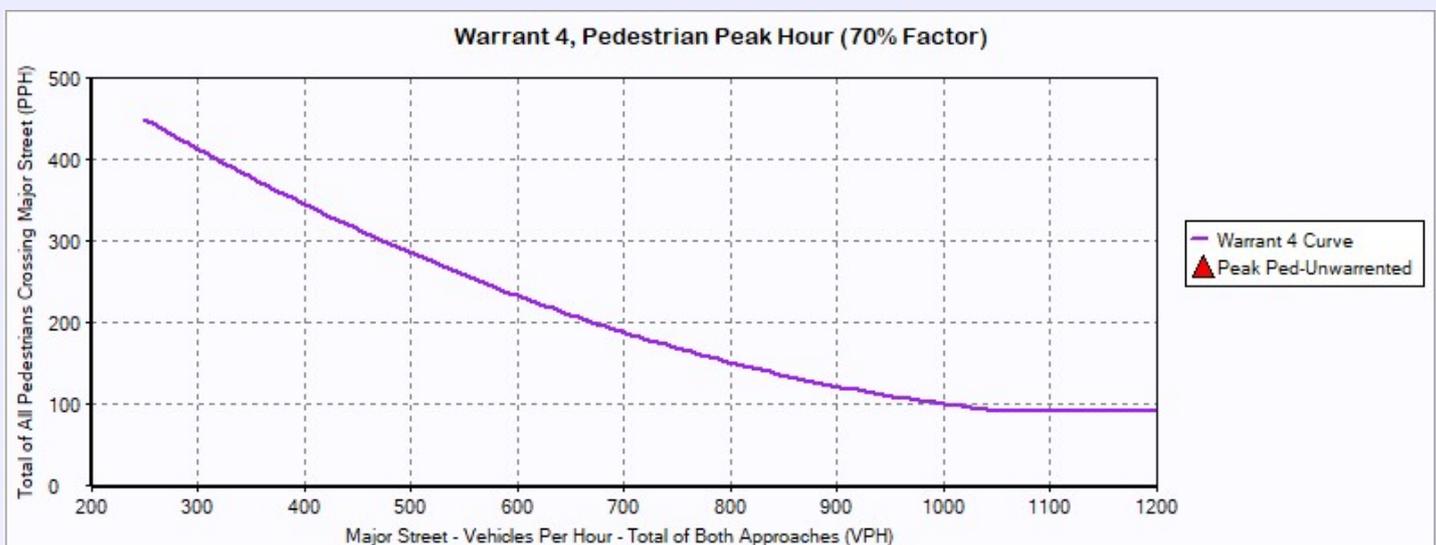
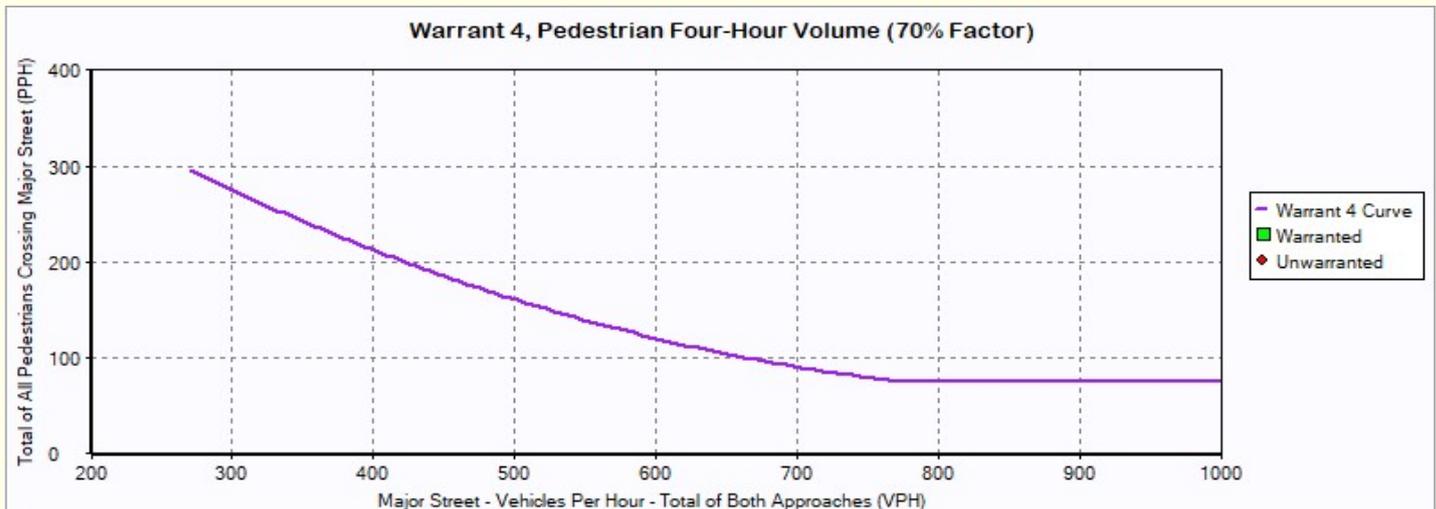
Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approch Speed	65	50

WARRANT 4 MET ? No

Details

Pedestrian Four Hour Volume Warrant Met?	No	
Pedestrian Peak Hour Warrant Met?	No	Notes 0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	Yes	



Warrant 5: School Crossing

1: RD36 / SR145 2035+PRO

Intersection Information

Major Street Name SR 145

Major Street Direction EB/WB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min) 0

Number of Students Crossing in Time Period 0

Number of Adequate Gaps in Time Period 0

Other Remedial Measures Attempted? **No**

Adjacent Signal on EB approach? **No**

Distance to signal on EB Approach (ft) -

Adjacent Signal on WB approach? **No**

Distance to signal on WB Approach (ft) -

Will New Signal Restrict Progressive Traffic? **No**

Warrant 6: Coordinated Signal System

1: RD36 / SR145 2035+PROJECT

Intersection Information

Major Street Name SR 145
Major Street Direction EB/WB

WARRANT 6 MET? **No**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
NB Approach (Rd 36)	Yes	No	N/A
WB Approach (SR 145)	Yes	No	N/A
EB Approach (SR 145)	Yes	No	N/A

Unacceptable Platooning?
(At least one approach)

No

Distance to Closest Signal
(Must be N/A or > 1000)

N/A

Warrant 7: Crash Experience

1: RD36 / SR145 2035+PROJECT

Intersection Information

Major Street Name SR 145
 Major Street Direction EB/WB
 Minor Street Direction NB

WARRANT 7 MET? No

Details:

Low Population? **Yes** Traffic Volume Condition Met? **No**
 Major Street Speed Limit 65 2 Hours Met (8 Required)
 Major Street 85th-% tile Speed 0.00 Ped Volume Condition Met? **No**
 0 Hours Met (8 Required)
 Qualifying Crashes **0**
 Adequate Alternative Trials? **No**

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Northbound Ped Volumes			
			Condition A	Condition B	Peds	> 80?	Peds	> 80?
07:00 to 08:00	545	0	No	No	0	No	0	No
07:15 to 08:15	408	0	No	No	0	No	0	No
07:30 to 08:30	273	0	No	No	0	No	0	No
07:45 to 08:45	136	0	No	No	0	No	0	No
17:00 to 18:00	590	0	No	No	0	No	0	No
17:15 to 18:15	443	0	No	No	0	No	0	No
17:30 to 18:30	296	0	No	No	0	No	0	No
17:45 to 18:45	148	0	No	No	0	No	0	No

Warrant 8: Roadway Network

1: RD36 / SR145 2035+PROJECT

Intersection Information

Major Street Name SR 145
 Major Street Direction EB/WB
 Minor Street Direction NB

WARRANT 8 MET? (A or B) No

Details:

	Growth Rates % (per year)		
	NB	EB	WB
L	0.00	0.00	0.00
T	0.00	0.00	0.00
R	0.00	0.00	0.00

Condition A, Total Entering Volume		Condition B, Non-normal Business Day		
			Existing	Future
Existing Peak Hour	700	Highest Hour	0	0
Years	0.00	Second Highest Hour	0	0
Future Peak Hour	700	Third Highest Hour	0	0
Warrant 1 in 5 Years?	No	Fourth Highest Hour	0	0
Warrant 2 in 5 Years?	No	Fifth Highest Hour	0	0
Warrant 3 in 5 Years?	No	Yearly Growth Rate (%)	0.00	
		Years	0.00	

Condition A Met? No Condition B Met? No

Warrant 9: Intersection Near a Grade Crossing

1: RD36 / SR145 2035+PROJECT

Intersection Information

	Major Street	Minor Street
Street Name	SR 145	Rd 36
Direction	EB/WB	NB
Number of Lane:	1	1
Approach Speed	65	50

WARRANT 9 MET ? **No**

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

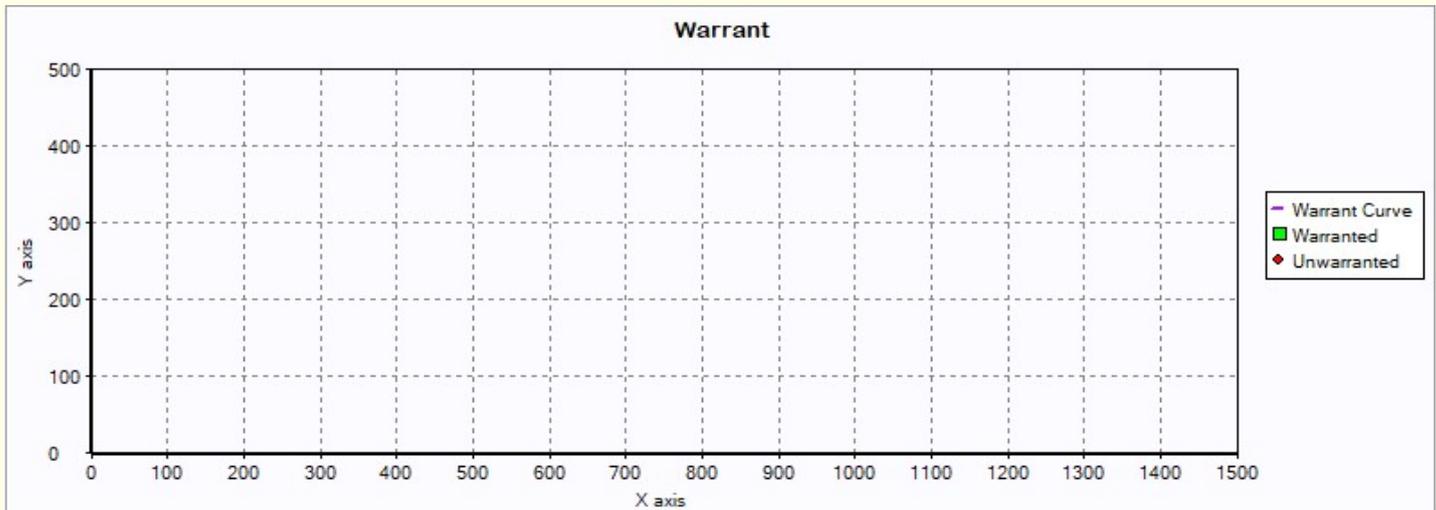
Distance from the center of the track to the stop or yield line Interpolated

Number of occurrences of rail traffic per day Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) Adjustment Factor

The rail traffic arrival times are unknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

Bicycle Warrant

1: RD36 / SR145 2035+PROJECT

Intersection Information

Major Street Name: SR 145
Major Street Direction: EB/WB
Minor Street Direction: NB

BICYCLE WARRANT MET? **No**

Details:

Collision (2 or more counts) 0
Geometric Path **No**
Volume Condition Met? **No**
Notes: No hour met

Hour	<u>Traffic Volumes</u>	<u>Bicycle Volumes</u>	<u>Condition</u>	
	Vehicles entering the intersection (V)	Bicycles entering the intersection (B)	B * V > 50,000?	B >= 50?
07:00 to 08:00	684	0	No	No
07:15 to 08:15	513	0	No	No
07:30 to 08:30	343	0	No	No
07:45 to 08:45	171	0	No	No
17:00 to 18:00	700	0	No*	No*
17:15 to 18:15	526	0	No	No
17:30 to 18:30	351	0	No	No
17:45 to 18:45	175	0	No	No

All-Way Stop Control Warrant: Multiway Stop Applications

1: RD36 / SR145 2035+PROJECT

Intersection Information

Major Street Name: SR 145
 Major Street Direction: EB/WB
 Minor Street Direction: NB

AWSC WARRANT MET? No

Details:

Condition A Met?	No	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	65
Notes: 0 Hours Met (8 Required)			

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	East Bound Bicycle Volumes	North Bound Bicycle Volumes	East Bound Ped Volumes	North Bound Ped Volumes	Major Street Veh Vol > 210	Avg(Veh + Ped + Bicycle) > 200	Minor Street Delay > 30

Warrants Summary Report

2: RD36 / AVE15 2035+PROJECT

Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	30	30

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	1 Hours met (8 required)
Condition A and B Met?	No	1 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	2 Hours met (4 required)
Warrant 3, Peak Hour		
	Yes	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	Yes	2 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

No

Warrant 7, Crash Experience

No

Traffic Volume Condi **No** 2 Hours met (8 required)

Ped Condition? **No** 0 Hours met (8 required)

Warrant 8, Roadway Network

Yes

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

Yes

Condition A Met? **Yes**

Condition B Met? **No**

Condition C Met? **No**

BicycleWarrant

No 0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

2: RD36 / AVE15 2035+PROJECT

Intersection Information

Major Street Name: RD36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

WARRANT 1 MET? No

Details:

Condition A Met? No 1 Hours met (8 required)
 Condition B Met? No 1 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	70% Standard Met? Cond. A OR Cond. B		56% Standard Met? Cond. A AND Cond. B	
			Condition A 70% Column	Condition B 70% Column	Condition A 56% Column	Condition B 56% Column
07:00 to 08:00	343	340	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	Volume >= 70% column (525)?	No	Yes		
	Volume >= 56% column (280)?	Volume >= 56% column (420)?	Yes	Yes		
Condition B	Volume >= 70% column (525)?	Volume >= 70% column (53)?	No	Yes		
	Volume >= 56% column (420)?	Volume >= 56% column (42)?	No	Yes		
07:15 to 08:15	257	255	No	No	No	No
Condition A	Volume >= 70% column (350)?	Volume >= 70% column (525)?	No	Yes		
	Volume >= 56% column (280)?	Volume >= 56% column (420)?	No	Yes		
Condition B	Volume >= 70% column (525)?	Volume >= 70% column (53)?	No	Yes		
	Volume >= 56% column (420)?	Volume >= 56% column (42)?	No	Yes		
07:30 to 08:30	170	170	No	No	No	No
Condition A	Volume >= 70% column (350)?	Volume >= 70% column (525)?	No	Yes		
	Volume >= 56% column (280)?	Volume >= 56% column (420)?	No	Yes		
Condition B	Volume >= 70% column (525)?	Volume >= 70% column (53)?	No	Yes		
	Volume >= 56% column (420)?	Volume >= 56% column (42)?	No	Yes		
07:45 to 08:45	85	85	No	No	No	No
Condition A	Volume >= 70% column (350)?	Volume >= 70% column (525)?	No	No		
	Volume >= 56% column (280)?	Volume >= 56% column (420)?	No	Yes		
Condition B	Volume >= 70% column (525)?	Volume >= 70% column (53)?	No	Yes		
	Volume >= 56% column (420)?	Volume >= 56% column (42)?	No	Yes		

17:00 to 18:00	564		275	Yes*	Yes*	Yes*	Yes*
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	Yes	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

17:15 to 18:15	422		208	Yes	No	Yes	Yes
Condition A	Volume >= 70% column (350)?	Yes	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	Yes	Volume >= 56% column (42)?	Yes			

17:30 to 18:30	283		138	No	No	Yes	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	Yes			
	Volume >= 56% column (280)?	Yes	Volume >= 56% column (420)?	Yes			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

17:45 to 18:45	141		69	No	No	No	No
Condition A	Volume >= 70% column (350)?	No	Volume >= 70% column (525)?	No			
	Volume >= 56% column (280)?	No	Volume >= 56% column (420)?	No			
Condition B	Volume >= 70% column (525)?	No	Volume >= 70% column (53)?	Yes			
	Volume >= 56% column (420)?	No	Volume >= 56% column (42)?	Yes			

Warrant 2: Four-hour Vehicular Volume

2: RD36 / AVE15 2035+PROJECT

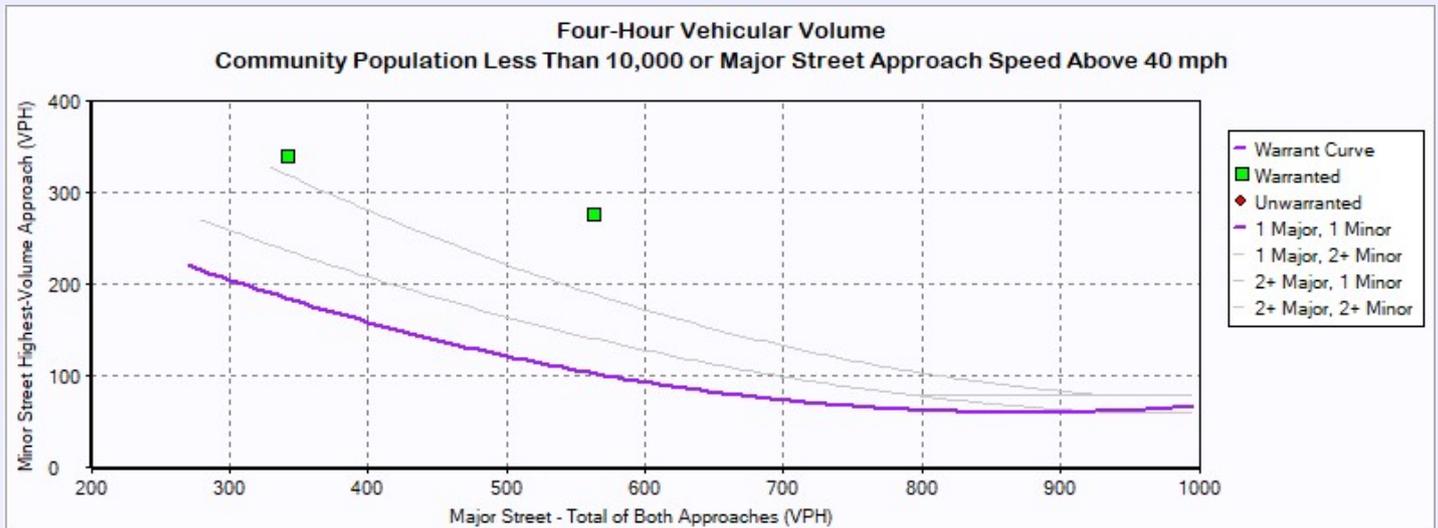
Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approch Speed	30	30

Warrant 2 Met? **No**

Details:

Notes	2 Hours met (4 required)
Low population	Yes



Hourly Volumes

Time	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	0	0
01:00:00 - 02:00:00	0	0
02:00:00 - 03:00:00	0	0
03:00:00 - 04:00:00	0	0
04:00:00 - 05:00:00	0	0
05:00:00 - 06:00:00	0	0
06:00:00 - 07:00:00	0	0
07:00:00 - 08:00:00	343	340
08:00:00 - 09:00:00	0	0
09:00:00 - 10:00:00	0	0
10:00:00 - 11:00:00	0	0
11:00:00 - 12:00:00	0	0
12:00:00 - 13:00:00	0	0
13:00:00 - 14:00:00	0	0
14:00:00 - 15:00:00	0	0
15:00:00 - 16:00:00	0	0
16:00:00 - 17:00:00	0	0
17:00:00 - 18:00:00	564	275
18:00:00 - 19:00:00	0	0
19:00:00 - 20:00:00	0	0
20:00:00 - 21:00:00	0	0
21:00:00 - 22:00:00	0	0
22:00:00 - 23:00:00	0	0
23:00:00 - 00:00:00	0	0

Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
07:00:00 - 08:00:00	343.00	340.00
17:00:00 - 18:00:00	564.00	275.00

Warrant 3: Peak Hour

2: RD36 / AVE15 2035+PROJECT

Intersection Information

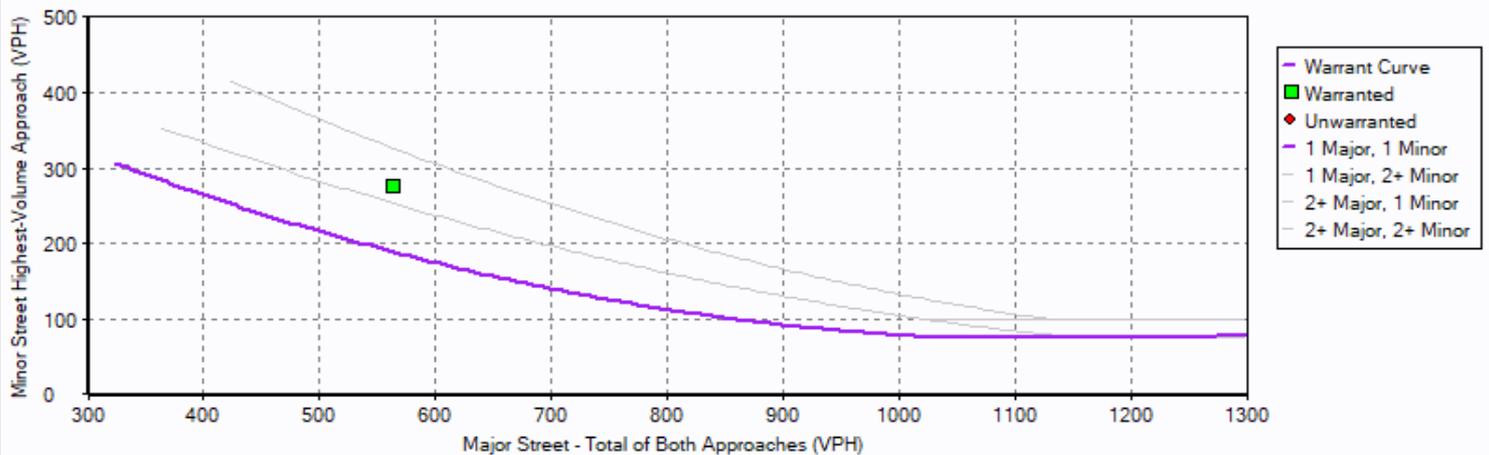
	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lanes	1	1
Approach Speed	30	30

Warrant 3 Met? **Yes**

Details

Low Population?	Yes		
Condition A Met?	No	Condition B Met?	Yes
Notes	0 Hours met (1 required)	Notes	2 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Met		
Total Entering Intersection Volume Condition Met?	Not Met		

Peak Hour Vehicular Volume
Community Population Less Than 10,000 or Major Street Approach Speed Above 40 mph



Warrant 3: Peak Hour

2: RD36 / AVE15 2035+PROJECT

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:00	284	336
17:00	564	275

Warrant 4: Pedestrian Volume

2: RD36 / AVE15 2035+PROJECT

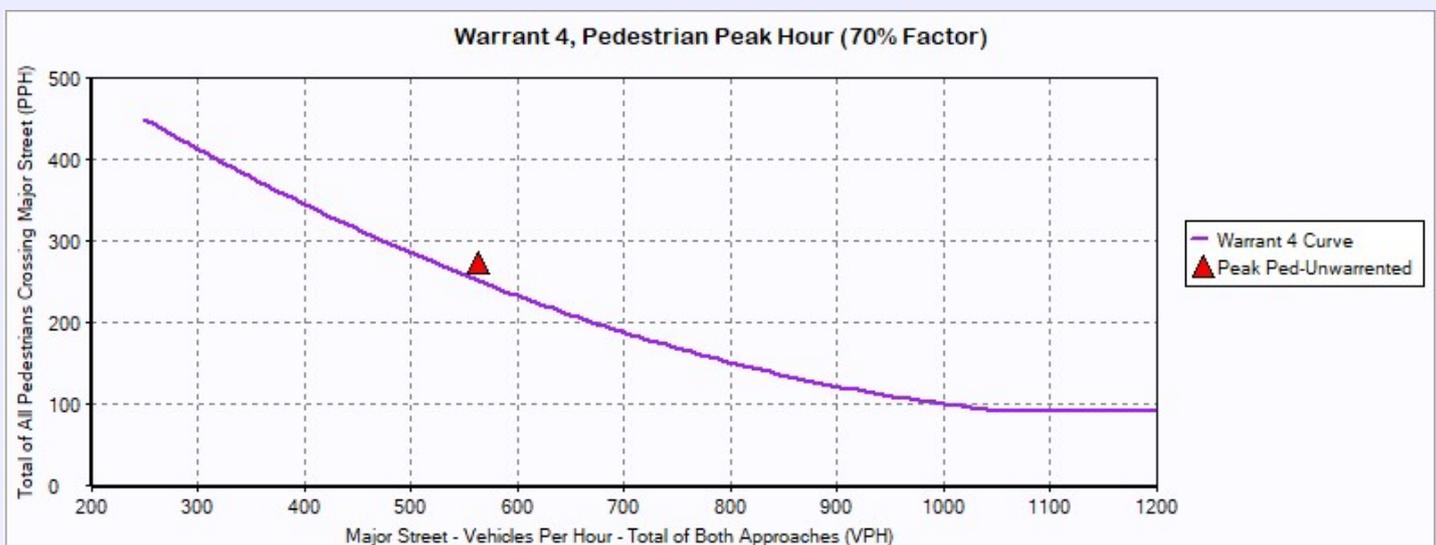
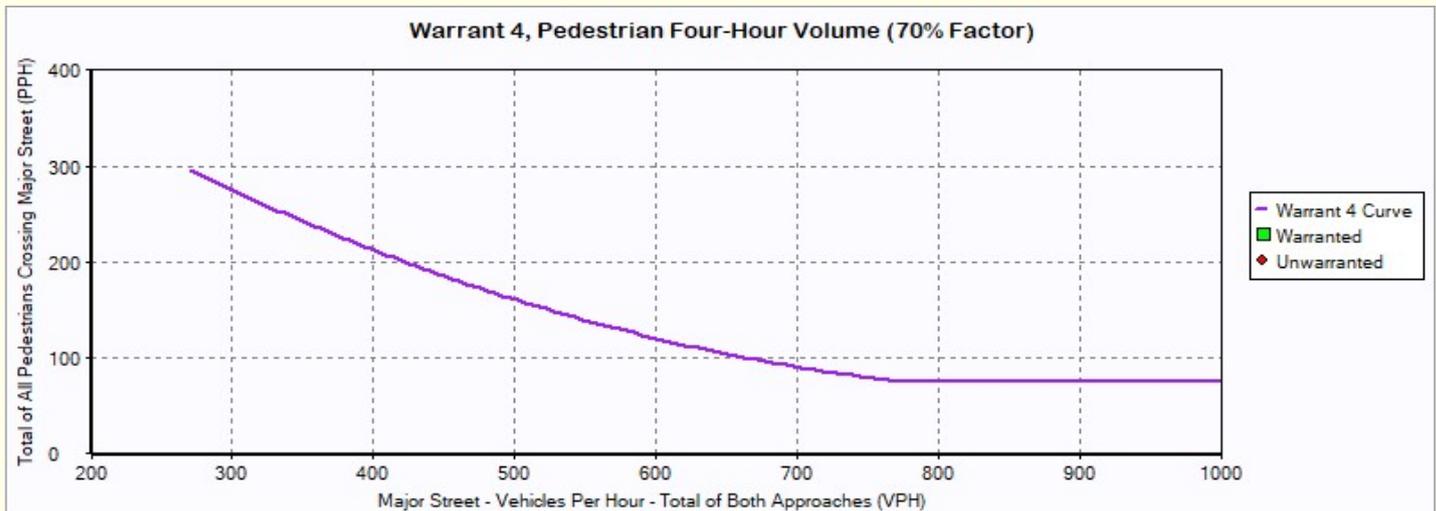
Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	30	30

WARRANT 4 MET ? No

Details

Pedestrian Four Hour Volume Warrant Met?	No	
Pedestrian Peak Hour Warrant Met?	No	Notes 0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	Yes	



Warrant 5: School Crossing

2: RD36 / AVE15 2035+PRO

Intersection Information

Major Street Name	RD36
Major Street Direction	NB/SB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min)	0
Number of Students Crossing in Time Period	0
Number of Adequate Gaps in Time Period	0
Other Remedial Measures Attempted?	No
Adjacent Signal on NB approach?	No
Distance to signal on NB Approach (ft)	-
Adjacent Signal on SB approach?	No
Distance to signal on SB Approach (ft)	-
Will New Signal Restrict Progressive Traffic?	No

Warrant 6: Coordinated Signal System

2: RD36 / AVE15 2035+PROJECT

Intersection Information

Major Street Name RD36
Major Street Direction NB/SB

WARRANT 6 MET? **No**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
SB Approach (RD36)	Yes	No	N/A
NB Approach (RD36)	Yes	No	N/A
WB Approach (AVE15)	Yes	No	N/A
EB Approach (AVE15)	Yes	No	N/A

Unacceptable Platooning?
(At least one approach)

No

Distance to Closest Signal
(Must be N/A or > 1000)

N/A

Warrant 7: Crash Experience

2: RD36 / AVE15 2035+PROJECT

Intersection Information

Major Street Name RD36
 Major Street Direction NB/SB
 Minor Street Direction EB/WB

WARRANT 7 MET? No

Details:

Low Population?	Yes	Traffic Volume Condition Met?	No
Major Street Speed Limit	30	2 Hours Met (8 Required)	
Major Street 85th-% tile Speed	0.00	Ped Volume Condition Met?	No
		0 Hours Met (8 Required)	
Qualifying Crashes		0	
Adequate Alternative Trials?		No	

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Eastbound Ped Volumes		Westbound Ped Volumes	
			Condition A	Condition B	Peds	> 80?	Peds	> 80?
07:00 to 08:00	343	0	No	No	0	No	0	No
07:15 to 08:15	257	0	No	No	0	No	0	No
07:30 to 08:30	170	0	No	No	0	No	0	No
07:45 to 08:45	85	0	No	No	0	No	0	No
17:00 to 18:00	564	0	No	No	0	No	0	No
17:15 to 18:15	422	0	No	No	0	No	0	No
17:30 to 18:30	283	0	No	No	0	No	0	No
17:45 to 18:45	141	0	No	No	0	No	0	No

Warrant 8: Roadway Network

2: RD36 / AVE15 2035+PROJECT

Intersection Information

Major Street Name RD36
 Major Street Direction NB/SB
 Minor Street Direction EB/WB

WARRANT 8 MET? (A or B) Yes

Details:

	Growth Rates % (per year)			
	NB	SB	EB	WB
L	0.00	0.00	0.00	0.00
T	0.00	0.00	0.00	0.00
R	0.00	0.00	0.00	0.00

Condition A, Total Entering Volume		Condition B, Non-normal Business Day		
			Existing	Future
Existing Peak Hour	1,051	Highest Hour	0	0
Years	0.00	Second Highest Hour	0	0
Future Peak Hour	1,051	Third Highest Hour	0	0
Warrant 1 in 5 Years?	No	Fourth Highest Hour	0	0
Warrant 2 in 5 Years?	No	Fifth Highest Hour	0	0
Warrant 3 in 5 Years?	Yes	Yearly Growth Rate (%)	0.00	
		Years	0.00	

Condition A Met? Yes

Condition B Met? No

Warrant 9: Intersection Near a Grade Crossing

2: RD36 / AVE15 2035+PROJECT

Intersection Information

	Major Street	Minor Street
Street Name	RD36	AVE15
Direction	NB/SB	EB/WB
Number of Lane:	1	1
Approach Speed	30	30

WARRANT 9 MET ? **No**

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

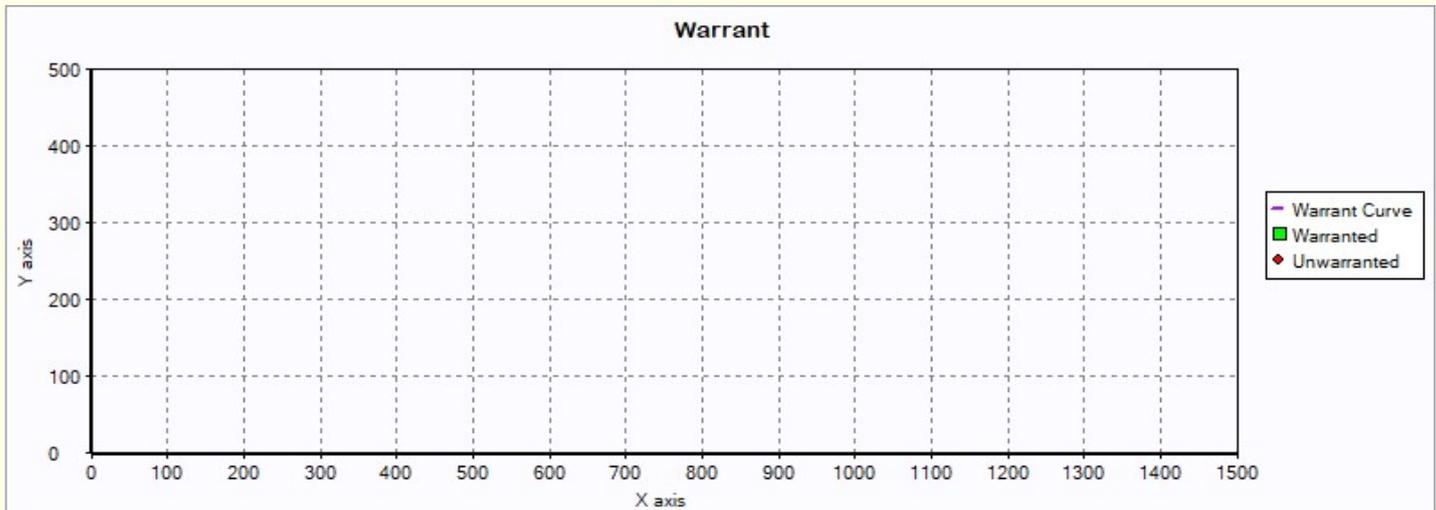
Distance from the center of the track to the stop or yield line Interpolated

Number of occurrences of rail traffic per day Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) Adjustment Factor

The rail traffic arrival times are unknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

Bicycle Warrant

2: RD36 / AVE15 2035+PROJECT

Intersection Information

Major Street Name: RD36
Major Street Direction: NB/SB
Minor Street Direction: EB/WB

BICYCLE WARRANT MET? **No**

Details:

Collision (2 or more counts) 0

Geometric Path **No**

Volume Condition Met? **No**

Notes: No hour met

Hour	<u>Traffic Volumes</u>	<u>Bicycle Volumes</u>	<u>Condition</u>	
	Vehicles entering the intersection (V)	Bicycles entering the intersection (B)	B * V > 50,000?	B >= 50?
07:00 to 08:00	905	0	No	No
07:15 to 08:15	678	0	No	No
07:30 to 08:30	451	0	No	No
07:45 to 08:45	225	0	No	No
17:00 to 18:00	1,051	0	No*	No*
17:15 to 18:15	789	0	No	No
17:30 to 18:30	527	0	No	No
17:45 to 18:45	263	0	No	No

All-Way Stop Control Warrant: Multiway Stop Applications

2: RD36 / AVE15 2035+PROJECT

Intersection Information

Major Street Name: RD36
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

AWSC WARRANT MET? Yes

Details:

Condition A Met?	Yes	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	30
Notes: 2 Hours Met (8 Required)			

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	North Bound Bicycle Volumes	East Bound Bicycle Volumes	North Bound Ped Volumes	East Bound Ped Volumes	Major Street Veh Volume > 300	Minor Street Avg(Veh + Ped + Bicycle) > 200	Minor Street Delay > 30
07:00 to 08:00	343	562	0	0	0	0	False	No	No
17:00 to 18:00	564	487	0	0	0	0	False	No	No



**Appendix F: Fresno COG “Model Steering Committee
Recommended Procedures for Using Traffic Projections from the
Fresno COG Travel Model dated December 2002”**



2100 Tulare Street, Suite 619
Fresno, California 93721-2111

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Model Steering Committee

Recommended Procedures

for Using Traffic Projections from the

Fresno COG Travel Model

Updated 12-2002

A recommended procedure for adjusting traffic volumes from the Council of Fresno County Governments (Fresno COG) travel model is presented.

1. BACKGROUND

The Fresno COG model has been validated to replicate overall existing traffic volumes in Fresno County. The model accurately represents overall traffic volumes on roads grouped by classification or across regional screenlines.



It is likely that a model will not be accurate enough in every location to reliably calculate LOS directly from model output.

Validated models will generate good estimates of changes in traffic volume in response to changes in land use or road network assumptions.

In many locations, the model also accurately estimates traffic on specific road segments. Therefore, it is recommended that adjustments be applied to model results prior to traffic operations analysis.

The primary reference for traffic model volume adjustments is National Cooperative Highway Research Program Report (NCHRP) 255: Highway Traffic Data for Urbanized Area Project Planning and Design (1982, now out of print). Some of the simplified procedures described in NCHRP 255 can be improved using current computer programs.

Member Agencies: The cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, Selma & Fresno County

The Fresno COG Model Steering Committee has adopted an adjustment process that should account for any validation errors.

The following procedures are suggested methods to use when using traffic projections from the Fresno COG Traffic Model:

2. LINK VOLUMES

There are two common procedures for adjusting link volumes from a model:

1. Growth Factor (adjust traffic counts by ratio of future year model to base year model)
2. Incremental (adjust traffic counts by increment from current year model to future year model)

2.1 Growth Factor Method

The growth factor or ratio method calculates the ratio of future model forecast volumes to base year model volumes and applies the ratio to the base year traffic count. For example, a segment of Shaw Avenue may have a 1998 traffic count of 24,000 daily vehicles. The validated 1998 base year model may estimate a 1998 volume of 19,500 (19% low) and a 2020 volume of 23,800 (lower than the 1998 count). The growth factor method would calculate an overall factor of $23,800/19,500 = 1.22$. Applying the factor of 1.22 to the count of 24,000 would result in an adjusted forecast of 29,280.

<p>Example:</p> <p>Growth Factor Method</p>	<p>1998 Base Year Model = 19,500 (19% low)</p> <p>2025 Model Projection = 23,800 (lower than 1998 count)</p> <p>1998 Traffic Count = 24,000</p> <p>Growth Factor = $23,800/19,500 = 1.22$</p> <p>1.22 (factor) X 24,000 (traffic count) = 29,280 adjusted Forecast</p>
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The factor method can generate very odd results when either the traffic count or base year model volume is very low. The factor method also does not guarantee continuity of flow from one link to the next. Therefore, the increment method is recommended.

2.2 Incremental Method – Recommended

It is recommended that link volumes from the Fresno COG model be adjusted based on the increment method, for any link where traffic counts are available. Factors may be applied in locations where forecasts are needed and traffic counts are not available.

The following procedure is recommended for adjustment of all forecast volumes on all road types, including freeways, local streets, and intersection approach and departure volumes. A spreadsheet is useful for organizing the adjustments.

1. **Compile Current Year Model Volumes.** Enter the appropriate DAILY, A.M. peak hour or P.M. peak hour traffic volumes from the current year version of the Fresno COG traffic model. *The current year traffic model is available on the Fresno COG website at www.fresnocog.org/model/model.htm*
2. **Compile Future Year Model Volumes.** Enter the appropriate DAILY, A.M. peak hour or P.M. peak hour traffic volumes from the version of the Fresno COG model that is closest to the future study year. (Generally 2025)
3. **Calculate Increment from Current Year Model to Future Year Model.** Subtract the current year model volume on each link from the future year model volume. *[Future Year model (2025)] – [current Year model (2002)] = Increment*

Example Increment Method

<p>Calculate the Increment from the Current Year Model to the Future Year Model</p> <p>[Future Year Model] – [Current Year Model] = Increment</p> <p>Add Increment to Count</p> <p>[Increment] + [Count] = Adjusted Volume</p> <p>Check for Negative Increments</p>	<p>Future Year Model Volume = 43,800</p> <p>Current Year Model Volume = 20,000</p> <p>Increment = 23,800</p> <p>Count = 25,500</p> <p>Increment = 23,800</p> <p>Adjusted Volume = 49,300</p> <p>FY – CY = I</p> <p>C + I = AV</p>
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4. **Check Negative Increments.** In some cases, the model volumes will decrease between the current year and the future year. Decreases in traffic could be due to legitimate reasons, such as construction of a new facility that diverts traffic off of the road. There could also be legitimate but difficult-to-explain reasons, such as future traffic avoiding a road where the model is predicting significant future congestion. Or, decreases could be due to errors or discrepancies between the base year and future year land use assumptions. The analyst must determine whether to allow traffic to decrease consistent with the model assumptions, or to reset the negative increments to zero so that no future forecasts are lower than the current year traffic counts.
5. **Add Increment to Traffic Count.** Add the growth increment to the current year traffic count to calculate the final adjusted forecast volume. *[Increment] + [current Year Count] = Adjusted Volume*

2.3 Procedure for Links without Traffic Counts

For road segments that exist in the base year but do not have traffic counts, a factor method is recommended for adjusting future model volume forecasts.

1. **Adjust Links with Traffic Counts.** Calculate adjusted forecast volumes for links with traffic counts following the above procedure in Section 2.2.

2. **Select Representative Links.** Select one or more similar nearby links with adjusted forecasts. For example, adjacent freeway links should be used for adjustments on freeways. Ramps that serve the same general movements (such as "northbound off-ramp from downtown") should be used to adjust ramp volumes. Parallel arterials should be used to adjust arterial segments. Calculate the adjustment factor on those nearby links as the adjusted traffic volume divided by the unadjusted future year model volume.
3. **Apply Adjustment Factor.** Apply the average adjustment growth factor to the unadjusted future year model volume on the link without traffic counts. (Adjustment Factor = Adjusted Future Year Volume/Unadjusted Future Year volume, see Section 2.1)

For future roads that do not exist in the base year, it would generally be appropriate to use unadjusted model traffic volume forecasts.

3. INTERSECTION TURN VOLUMES

It is possible to create a travel model that estimates accurate link volumes on a majority of important road segments. However, it is very difficult to accurately estimate individual turn movements. This is primarily due to the aggregation of land uses into transportation analysis zones (TAZs), which means that the model cannot represent all of the individual paths that drivers use to reach individual parcels and driveways. Therefore an adjustment process is recommended.

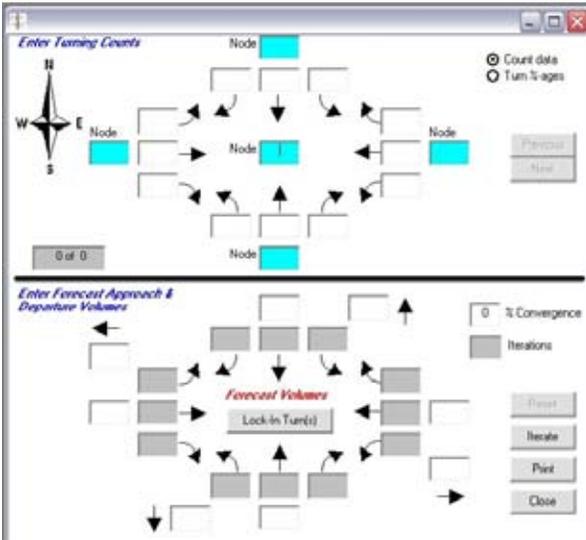
3.1 Procedure for Turn Movements

Forecasting Future Turns	Observed turns Link forecasts Software Version of NCHRP 255
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The procedure for intersection turn volumes is a two-step process. First, the link volumes entering and exiting the intersection are adjusted as described above. Second, existing turn movement counts are factored to match the adjusted entering and exiting volumes.

1. **Adjust Link Volumes.** Adjust the peak hour link volumes in and out of each leg of the intersection (generally eight segments for a standard four-way intersection) using the incremental adjustment process described in Section 2.2.
2. **Factor Turn Volumes.** Factor the base year turn movement count at the intersection until the total volumes in and out of each leg closely match the adjusted link volumes. A common factoring algorithm is named after its creator, Furness. Computer applications of the Furness procedure are available ("TurnsW32" on the Dowling Associates website, www.dowlinginc.com, or simplified versions can be programmed in spreadsheets.

Turnsw32 Free from <http://dowlinginc.com>



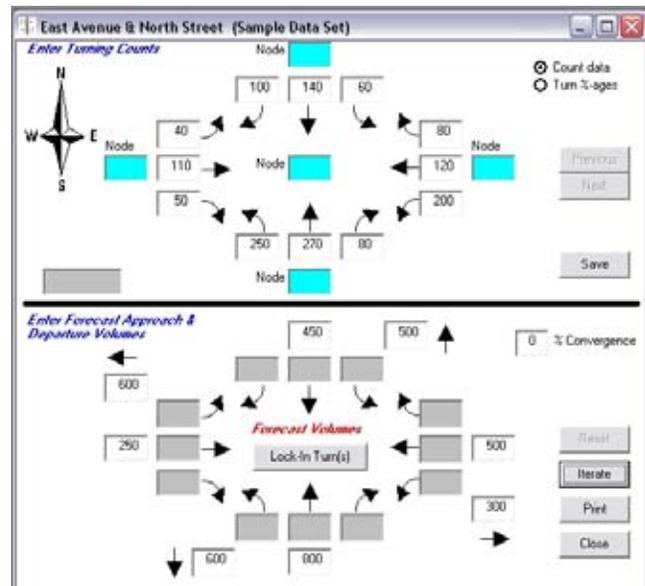
Turnsw32 computes forecast turning volumes from existing turning movement volumes and forecasted future approach and departure volumes, using the techniques described in NCHRP 255

Observed Turns data Entry

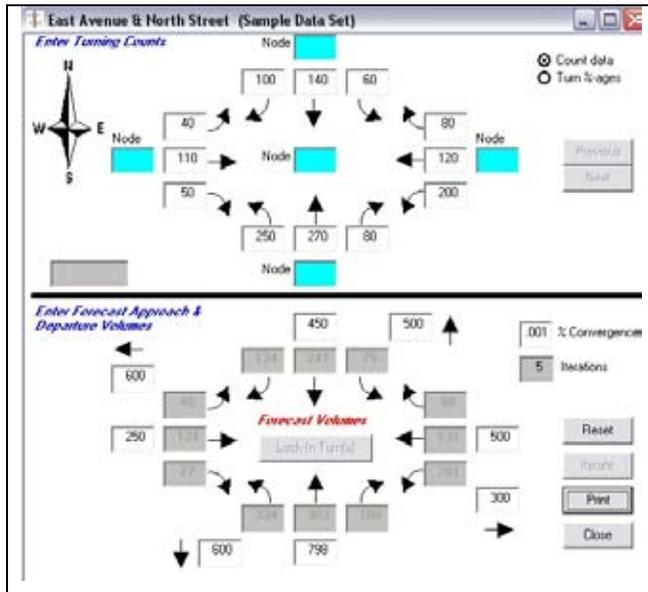
Step 1

Enter observed turning volumes.

Alternatively enter estimated percentages of future year's assigned inflows. Percentages must equal 100 on each approach.



Enter Forecast Approach and Departure Volumes



Step 2

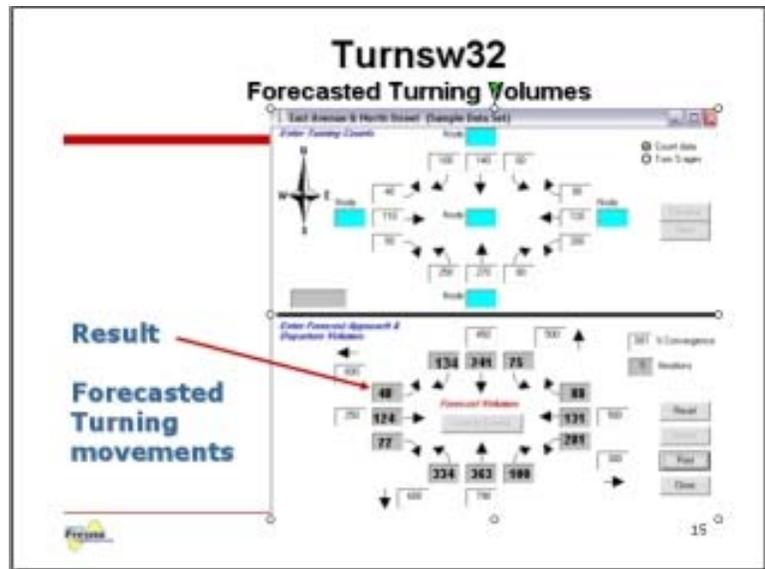
Enter forecasted approach and departure volumes.

Inflows must equal outflows.

User may “lock in” pre-determined turn volume for one or more movement.

Forecasted Turning Volumes

Result is the forecasted turning volumes



3. **Check Increments.** Some of the factored turn movements may end up lower than the base year traffic counts, due to large increases on certain exiting movements that divert traffic away from other movements. The analyst must decide if the forecast turn movements can decrease from the base year traffic counts, or if the forecast turn movements should be reset to be no lower than the base year traffic counts.

3.2 Procedure for Movements without Traffic Counts

If a new road segment is added in the future, there will be no traffic counts available for adjustment. The following procedure is recommended

1. **Model Traffic Assignment.** Assign future daily or peak hour traffic using the TP+ model and save turn movements at the selected intersections.
2. **Intersection with Existing Road.** If the new road will intersect an existing road, estimate current year traffic counts and adjusted forecast link volumes on as many movements as possible on the existing road at the new intersection based on traffic counts at adjacent locations.
3. **Substitute Model Volumes for Count.** Substitute model-estimated turn movement volumes as current year traffic counts for all turn movements to and from the new road.
4. **Factor Turn Movements.** Continue with the procedure described in Section 3.1.

3.3 Shortcut Procedure

The factoring procedure described in Section 3.1 will give the most representative results for intersection turn movement forecasts based on growth on individual legs. However, there may be times when the analyst may not have ready access to the adjustment software and needs a quick assessment of intersection conditions. The following procedure is recommended for "shortcut" analysis only:

1. **Calculate Factors.** Calculate the growth factors on each leg of the intersection as the adjusted future year model volume (or unadjusted future year model volumes if adjustments are not available) divided by the base year model volume (or base year traffic count if the base year model is not available). The factor can be calculated based on total two-way or directional one-way daily or peak hour model volumes.
2. **Apply Factors.** Apply the growth factor on each leg to the turn movement counts entering from that leg;

OR

Calculate the growth factor for each turn movement as the average of the two growth factors on the entering and exiting leg.
3. **Check Results.**

To: SWS Land Developments, Inc.
Madera, CA

From: Josh Hohn
San Francisco

Project/File: SWS Center

Date: July 3, 2023

Reference: SWS Center Lighting Consistency

SWS Land Developments, Inc. (SWS) is proposing the development of the Yosemite Commercial Center (SWS Center, or Project), consisting of a gas station, restaurant, coffee stand, convenience store, and associated facilities, located to the immediate southeast of the intersection of State Route 145 (SR 145) and County Road 36 (CR 36) in Madera County, California. This memo summarizes applicable County policies related to lighting and describes how the Project would be consistent with them.

Project Summary

The Project would be located in the northwest corner of the unincorporated community of Bonadelle Ranchos, an area zoned as a Planned Development District. This subdivision consists mainly of single-family homes with limited commercial, service-oriented developments. The Project site is current vacant. Set back from the intersection of SR 145 and CR 36, the proposed development would consist of four main areas: a fueling island near the center of the parcel; a restaurant with outdoor seating and food store along the southern edge of the site (Building 1); a coffee shop with a drive-through lane near the northeastern part of the developed area (Building 2); and storage and appurtenance facilities (e.g., fuel storage, ponding basin, and water tanks) in the southeastern corner of the site.

Two gas and site signs would be located along the northern edge of the developed area, oriented toward SR 145. A third sign would be just south of the site entrance along CR 36. These signs would be illuminated for nighttime visibility, either by internal bulb or installed lighting oriented toward the sign and hooded to prevent spillover. The fueling island would be covered by a canopy within which there would be downward-facing fluorescent lights. Both the orientation of the lights and the canopy edges would contain light to the area of the fueling area. Both Building 1 and Building 2 would be equipped with exterior wall lights, with lamp-like fixtures, mounted approximately every 10 to 20 feet. These lights would be installed for safety and navigation and bulbs used would be comparable to those used as exterior lights on homes and other residential structures. All lights would maintain consistent output. None would flash or be otherwise intermittently lit.

Applicable Madera County Zoning Ordinance Regulations

The Madera County Zoning Ordinance¹ does not specify lighting restrictions for parcels within a Planned Development District. Section 18.90.030.7, applicable to subdivisions, states:

¹ Madera County, 2023. Code of Ordinances / Title 18 – Zoning. Updated May 25, 2023. Available on-line: https://library.municode.com/ca/madera_county/codes/code_of_ordinances?nodetid=TIT18ZO

Reference: SWS Center Lighting Consistency

“Only incandescent bulb, mercury or sodium vapor, or fluorescent lighting shall be used to illuminate any temporary subdivision identification sign. All lights shall be hooded and directed to minimize glare.”

Section 18.94.020(c), which applies to conditional use requirements for automobile service stations, states:

“No lighting installation shall be permitted which creates a hazard to traffic or a nuisance to surrounding property.”

The Madera County General Plan² does not include any guidance related to commercial lighting.

Conclusions

Project lighting would be typical of similar commercial developments. Lighting would consist only of incandescent bulbs, mercury or sodium vapor, LED, and / or fluorescent lighting. It would be hooded or otherwise oriented in a focused direction for safety or navigation, hooded or otherwise shielded (e.g., by the fuel island canopy) to prevent spillover. Use of these bulbs with associated practices would not create a hazard to traffic or nuisance to the surrounding property.

Regards,

STANTEC CONSULTING SERVICES INC.

Josh Hohn AICP
Senior Planner
josh.hohn@stantec.com

² Madera County, 1995, as amended. Available on-line:
<https://www.maderacounty.com/government/community-economic-development-department/divisions/planning-division/planning-forms-and-documents/-folder-269>

May 5, 2023

Mr. Rajdeep Singh
SWS Land Developments, Inc.
32685 Avenue 7
Madera, CA 93637

RE: Yosemite Commercial Center Noise Memorandum

Dear Mr. Ranjeet Singh:

JK Consulting Group prepared the following Noise memorandum for the proposed Yosemite Commercial Center (Project) in Madera County. The Project includes the development of a 3,150-sf convenience market and gas station with 8 fueling pumps. The Project also proposes to construct a 924-sf restaurant and 2,220 sf coffee store with drive-thru, on approximately 2.53 acres. The Project site is located at the southeast corner of Road 36 and State Route (SR) 145.

PROJECT RELATED NOISE IMPACTS

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, are used to assess the potential significance of Project impacts pursuant to local General Plan policies, Municipal Code standards, or applicable standards of other agencies. Under CEQA, noise impacts would be considered significant if the project would:

- Generate 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?
- Generate excessive groundborne vibration or groundborne noise levels?
- Expose people residing or working in the project area to excessive noise levels 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?

Construction noise impacts (short-term) are related to development of the Project. The Project has the potential to result in short-term noise impacts to surrounding land uses due to construction activity. Construction noise represents a short-term impact on ambient noise levels and includes activities such as site preparation, grading, and other construction-related activities. Long-Term impacts relate to the operation of the Project and include noise generated from site operations and increased traffic in the study area as a result of the Project. Noise impacts associated with the construction and operation of the Project were evaluated to determine if the Project will result in significant impacts on the environment.

Madera County General Plan

Section 7, Noise, of the Madera County General Plan Policy Document provides noise guidelines for Madera County and establishes the following goals and policies that would be applicable to the Project:

- **7.A.5** – Noise which will be created by new non-transportation noise sources, or existing non-transportation noise sources which undergo modifications that may increase noise levels, shall be mitigated so as not to exceed the noise level standards of Table 1 on lands designated for noise-sensitive uses. This policy does not apply to noise levels associated with agricultural operations.
- **7.A.7** – Where the development of a project may result in land uses being exposed to existing or projected future noise levels exceeding the levels specified by the policies of the noise section of the General Plan, the County shall require an acoustical analysis early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit.
- **7.A.9** – Vibration perception threshold: The minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such direction means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be a motion velocity of one-tenth (0.1) inches per second over the range of one to one hundred Hz.
- **7.A.10** – Operation or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at the location where the sensitivity exists such as the property line of a residential development or from the location of residence constructed on agricultural property.

Noise Impacts

- 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?
- Short-Term (Construction) Impacts

Development or construction of the Project would temporarily increase ambient noise levels in the vicinity due to construction equipment use. On-site construction noise impacts were evaluated by determining the noise levels generated by the different types of construction activity and calculating the construction-related noise level at nearby sensitive receptor locations. The distance between construction site noise sources and surrounding sensitive receptors were measured using the Project site plan and Google Earth. Typical construction activities related to building construction generate noise levels of 74 to 84 dBA at 50 feet.

The following formula, taken from the Technical Noise Supplement to the Traffic Noise Analysis Protocol by the California Department of Transportation (Caltrans), calculates the change in noise level due to distance for point sources. This formula was used to calculate Project related construction noise levels at sensitive land uses adjacent to the Project site.

$$dBA2 = dBA1 + 10\log_{10}[(D1/D2)]^2 = dBA1 + 20\log_{10}(D1/D2)$$

Where:

dBA1 = noise level at distance D1

dBA2 = noise level at distance D2

Based on building construction noise levels described above and the noise attenuation formula, the nearest residence(s) to the south and southeast of the Project site (100 feet or more from building construction activities) would be subject to short-term noise levels reaching 68 to 78 dBA L_{max} from Project related construction activities. Although there would be a relatively high single-event noise exposure potential at a maximum of 78 dBA L_{max} at 100 feet, causing possible short-term intermittent annoyances, the effect on ambient noise levels would be less than 1 dBA when averaged over one hour or 24 hours. In other words, the changes in noise levels over 1 hour or 24 hours attributable to Project construction noise would not be perceptible to the normal human ear. Therefore, short-term construction-related impacts associated with the Project would result in a less than significant impact on noise-sensitive receptors adjacent to the Project site. As a result, mitigation measures are not required. Noise associated with Project construction should be limited to permitted construction hours, as determined by Madera County.

- Long-Term (Operational) Impacts

Caltrans' Traffic Census Programs shows that the existing peak hour traffic along SR 145 in the Project area is approximately 1,600 trips. SR 145 traverses through the San Joaquin Valley from Interstate 5 to SR 41 (north of Fresno). Traffic noise in the study area is primarily generated from traffic on SR 145 given its connectivity to numerous areas throughout Madera County. The noise section of the Austin Quarry Project Final EIR (3.10 Noise – Benchmark Resources) shows that the projected noise level along SR 145 near Road 36 in Future Year 2035 is approximately 68 dB L_{dn}. This is the anticipated noise level in the future at 100 feet from the SR 145 centerline. New trips generated by the Project would primarily use SR 145 as shown in the traffic study prepared for the Project.

Per the traffic study prepared by Vang Inc. Consulting Engineers (VICE), the Project will generate approximately 3,162 'new' weekday trips, 305 'new' AM Peak hour trips, and 226 'new' PM Peak hour trips. Section 6.3.3 (Fundamentals of Traffic Noise) of the Technical Noise Supplement to the Traffic Noise Analysis Protocol by Caltrans indicates that it takes a doubling of traffic to increase noise levels by 3 dB. Project peak hour trips represent approximately 19% of existing peak hour trips along SR 145. As a result, the increase in noise levels along SR 145 would be less than 3 dB with the addition of Project traffic. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible by the human ear.

Therefore, operation related noise impacts associated with the Project would result in a less than significant impact on noise-sensitive receptors adjacent to the Project site. Mitigation measures are not required.

- Project Related Stationary Point-Source Noise

Stationary point-source noise impacts were evaluated by identifying the noise levels generated by idling trucks from fuel and product delivery. To conservatively estimate noise levels associated with the Project, it was assumed that trucks idled for no longer than five (5) minutes. Typical noise levels for idling Tractor-Trailers at the noise source is 96 dBs. The noise attenuation formula shown above was used to calculate noise levels at sensitive land uses resulting from noise generated by idling Tractor-Trailers. Residences adjacent to the Project site (150 feet from diesel engines) would be subject to noise levels reaching 53 dBs from Project related diesel truck idling. Therefore, operation related noise impacts associated with diesel truck idling would result in a less than significant impact on noise-sensitive receptors adjacent to the Project site. As a result, mitigation measures are not required.

b) Generation of excessive ground-borne vibration or ground-borne noise levels?

Ground-borne vibration impacts were evaluated by identifying potential vibration sources and measuring the distance between vibration sources and surrounding structure locations. It should be noted that Madera County has established a criterion of 0.1 in/sec for vibration impacts. The vibration threshold of 0.1 in/sec was used to estimate the impact of vibrations from construction activities associated with the Project.

The predicted vibration velocity levels for the residences to the south of the Project are predicted to approach 0.011 in/sec using a Large Bulldozer vibration level (0.089 at 25ft). The level of vibration generated by the Project's construction phase is considered less than significant based on vibration velocity levels. As a result, mitigation measures are not 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?

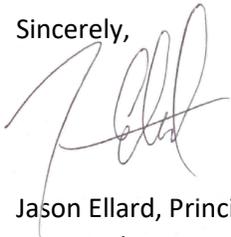
The nearest airport is located more than seven (7) miles from the Project site. As a result, aircraft noise is not expected to result in significant impacts in the Project Area. Therefore, mitigation measures are not required.

SUMMARY

The significance criteria established by the Madera County General Plan, is used for determining environmental significance. These screening criteria can be used to demonstrate that a project's noise impacts would not result in a significant impact as defined by CEQA. As discussed above, the Project will have a less than significant impact on the environment as it relates to Noise.

Should you have any further questions or comments, please contact me by phone at (559) 246-4204 or by email at jellard@jkconsultinggroupllc.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Ellard', is written over a light blue rectangular background.

Jason Ellard, Principal
JK Consulting Group, LLC