

Exhibit L - 8

Traffic Impact Analysis Report

Tract 6376 (Single-Family Housing)

**Located on the Southwest Corner of
Armstrong Avenue and the San Joaquin Valley
Railroad**

In the City of Fresno, California

Prepared for:

Bonadelle Neighborhoods
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December 9, 2024

Project No. 004-223



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Traffic Engineering, Transportation Planning, & Parking Solutions

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For Tract 6376 located on the Southwest Corner of Armstrong Avenue and the San Joaquin Valley Railroad

In the City of Fresno, CA

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This Traffic Impact Analysis Report has been prepared under the direction of a licensed Traffic Engineer. The licensed Traffic Engineer attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data from which recommendations, conclusions and decisions are based.

Prepared by:

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Introduction and Summary

Introduction

This Report describes a Traffic Impact Analysis (TIA) prepared by JLB Traffic Engineering, Inc. (JLB) for Tract 6376 (Project) located on the southwest corner of Armstrong Avenue and the San Joaquin Valley Railroad in the City of Fresno. The Project proposes to develop approximately 202 single-family residential units. According to information provided to JLB, the Project is consistent with the City of *Fresno General Plan*. Figure 1 shows the location of the proposed Project site relative to the surrounding roadway network.

The purpose of the TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term and long-term roadway needs, determine potential roadway improvement measures and identify any critical traffic issues that should be addressed in the ongoing planning process. The TIA primarily focused on evaluating traffic conditions at study intersections that may potentially be impacted by the proposed Project. The Scope of Work was prepared via consultation with City of Fresno, Fresno County and Caltrans.

Summary

The potential traffic impacts of the proposed Project were evaluated in accordance with the standards set forth by the Level of Service (LOS) policies of the City of Fresno and Fresno County.

Existing Traffic Conditions

- JLB conducted a search of the Statewide Integrated Traffic Records System (SWITRS) to obtain collision reports for the most recent five-year period. Based on a review of the collision reports, a total of twenty-three (23) collisions were reported within the influence zone of the study intersections. Based on the number of correctable collisions, JLB does not recommended changes to the existing traffic controls at any of these intersections as a result of collision activity.
- At present, all study intersections operate at an acceptable LOS.
- At present, the study segment operates at an acceptable LOS.

Existing plus Project Traffic Conditions

- JLB analyzed the location of the existing and proposed roadways and access points. This review revealed that all access points are located at points that minimize traffic operational impacts to existing and future roadway networks.
- At buildout, the proposed Project is estimated to generate a maximum of 1,905 daily trips, 141 AM peak hour trips and 190 PM peak hour trips.
- It is recommended that the Project implement a Class II Bikeways along its frontages to Armstrong Avenue and California Avenue.
- It is recommended that left-turn pockets with a storage capacity of 150 feet be included as part of the design of California Avenue at its intersections with Burgan Avenue and Cypress Avenue.
- It is recommended that the Project implement ADA compliant pedestrian sidewalks along internal streets connecting all uses to external sidewalks and along its frontages to Armstrong Avenue and California Avenue.

- It is recommended that the Project and SUSD look into funding sources to enhance the walkways for Middle and High School students for and from the new Sanger West High School and Middle School Project.
- Under this scenario, all study intersections are projected to continue operating at an acceptable LOS.
- Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

Near Term plus Project Traffic Conditions

- The total trip generation for the Near Term Projects is 96,426 weekday daily trips, 6,883 weekday AM peak hour trips and 8,598 weekday PM peak hour trips.
- Under this scenario, the intersections of Temperance Avenue at Hamilton Avenue and Armstrong Avenue at Church Avenue are projected to exceed their LOS threshold during AM peak period. Additional details as to the recommended improvements for these intersections are presented later in this Report.
- Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

Cumulative Year 2046 plus Project Traffic Conditions

- Under this scenario, the intersections of Temperance Avenue at Hamilton Avenue, Temperance Avenue at California Avenue and Armstrong Avenue at Church Avenue are projected to exceed their LOS threshold during one or both peak periods. Additional details as to the recommended improvements for this intersection are presented later in this Report.
- Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

Scope of Work

The TIA focused on evaluating traffic conditions at study intersections that may potentially be impacted by the proposed Project. Previously, a Draft Scope of Work was provided to the City of Fresno, County of Fresno and Caltrans on July 7, 2021 for their review and comment. Caltrans approved the draft scope of work without changes. The comments that were provided by the City of Fresno and the County of Fresno in that initial analysis were included in the Draft Scope of Work for this version of the TIA. On July 25, 2024, a Draft Scope of Work for the preparation of a Traffic Impact Analysis for this Project was provided to the City of Fresno. On September 20, 2024, a Draft Scope of Work for the preparation of a Traffic Impact Analysis for this Project was provided to the Fresno County for their review and comment.

On August 15, 2024, the City of Fresno requested that JLB include the intersection of Fowler Avenue at Hamilton Avenue as one of the study intersections to the Draft Scope of Work. On September 30, 2024, the County of Fresno replied with the request that we include the segment of Armstrong Avenue between Church Avenue and Geary Street as a study segment to the Draft Scope of Work.

Based on the comments received, this TIA added the intersection of Fowler Avenue at Hamilton as a study intersection and the segment of Armstrong Avenue between Geary Avenue and Church Street as a study segment. JLB also coordinated with the City of Fresno Planning Department to verify the list of pending/approved projects. The Scope of Work and the comments received from the lead agency and responsible agencies are included in Appendix A.

Study Facilities

The existing intersection peak hour turning movement and segment volume counts were conducted at the study intersections and segments in June, August and September of 2024 while schools the vicinity of the Project site were in session. The intersection turning movement counts included pedestrian and bicycle volumes. The traffic counts for the existing study intersections and segments are contained in Appendix B. The existing intersection turning movement volumes, intersection geometrics and traffic controls are illustrated in Figure 2.

Study Intersections

1. Fowler Avenue / Hamilton Avenue
2. Armstrong Avenue / Hamilton Avenue
3. Temperance Avenue / Hamilton Avenue
4. Armstrong Avenue / California Avenue
5. Temperance Avenue / California Avenue (future intersection)
6. Fowler Avenue / Church Avenue
7. Armstrong Avenue / Church Avenue

Study Segments

1. Armstrong Avenue between Geary Avenue and Church Avenue

Study Scenarios

Existing Traffic Conditions

This scenario evaluates the Existing Traffic Conditions based on existing traffic volumes and roadway conditions from traffic counts and field surveys conducted in June, August and September of 2024. The traffic counts for the existing study intersections and segments are contained in Appendix B.

Existing plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Existing plus Project Traffic Conditions. The Existing plus Project traffic volumes were obtained by adding the Project Only Trips to the Existing Traffic Conditions. The Project Only Trips to the study facilities were developed based on existing travel patterns, the Project Select Zone, the surrounding roadway network, engineering judgment, data provided by the developer, knowledge of the study area, existing residential and commercial densities, and the *Fresno General Plan Circulation Element* in the vicinity of the Project site. The Fresno COG Project Select Zone results are contained in Appendix C.

Near Term plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Near Term plus Project Traffic Conditions. The Near Term plus Project traffic volumes were obtained by adding the Near Term related trips to the Existing plus Project Traffic Conditions scenario.

Cumulative Year 2046 plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadways conditions based on the Cumulative Year 2046 plus Project Traffic Conditions. The Cumulative Year 2046 plus Project traffic volumes were obtained by using a combination of the Fresno COG activity-based model (ABM) (Base Year 2019 and Cumulative Year 2046) and existing traffic counts. Under this scenario, the increment method, as recommended by the Model Steering Committee was utilized to determine the Cumulative Year 2046 traffic volumes. The Fresno COG ABM results provided by Kittelson & Associates are contained in Appendix C.

LOS Methodology

LOS is a qualitative index of the performance of an element of the transportation system. LOS is a rating scale running from “A” to “F”, with “A” indicating no congestion of any kind and “F” indicating unacceptable congestion and delays. LOS in this study describes the operating conditions for signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM) 7th Edition is the standard reference published by the Transportation Research Board and contains the specific criteria and methods to be used in assessing LOS. U-turn movements were analyzed using HCM 2000 methodologies and would yield more accurate results for the reason that HCM 7th Edition methodologies do not allow the analysis of U-turns. Lane configurations not reflective of existing conditions are a result of software limitations and thus represent a worst-case scenario. Synchro software was used to define LOS in this study. Details regarding these calculations are included in Appendix D.

While LOS is no longer the criteria of significance for traffic impacts in the state of California, the City of Fresno continues to apply congestion-related conditions or requirements for land development projects through planning approval processes outside of CEQA Guidelines in order to continue the implementation of *Fresno General Plan* policies.

LOS Thresholds

The *Fresno General Plan* has established various degrees of acceptable LOS on its major streets, which are dependent on four (4) Traffic Impact Zones (TIZ) within the City (City of Fresno, 2014). The standard LOS threshold for TIZ I is LOS F, that for TIZ II is LOS E, that for TIZ III is LOS D, and that for TIZ IV is LOS E. Additionally, the 2035 MEIR made findings of overriding consideration to allow a lower LOS threshold than that established by the underlying TIZ's. For those cases in which a LOS criterion for a roadway segment differs from that of the underlying TIZ, such criteria are identified in the roadway description. As all the study facilities fall within TIZ III, LOS D is used to evaluate the potential LOS impacts for the study intersections within the City of Fresno pursuant to the *Fresno General Plan*.

The *Fresno County General Plan* has established LOS C as the acceptable level of traffic congestion on county roads and streets that fall entirely outside the Sphere of Influence (SOI) of a City (Fresno County 2000). For those areas that fall within the SOI of a City, the LOS threshold of the City is used in this report. In this case, no study facilities fall within the County of Fresno SOI, therefore, the City of Fresno LOS thresholds are utilized.

Caltrans no longer considers delay as a significant impact to the environment for land use project plans. According to the Caltrans document *VMT Focused Transportation Impact Study Guidelines* dated May 2020, Caltrans review of land use projects and plans is focused on a VMT metric consistent with CEQA. In this TIA, however, all study intersections fall within the City of Fresno SOI. Therefore, the City of Fresno LOS thresholds are utilized.

Operational Analysis Assumptions and Defaults

The following operational analysis values, assumptions and defaults were used in this study to ensure a consistent analysis of LOS among the various scenarios.

- Yellow time consistent with the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) based on approach speeds (Caltrans, 2024)
- Yellow time of 3.2 seconds for left-turn phases
- All-red clearance intervals of 1.0 second for all phases
- Walk intervals of 7.0 seconds
- Flashing Don't Walk based on 3.5 feet/second walking speed with yellow plus all-red clearance subtracted and 2.0 seconds added
- At existing intersections, the heavy vehicle factor observed for each intersection or a minimum of 3 percent were utilized under all scenarios.
- The number of observed pedestrians at existing intersections was utilized under all study scenarios.
- An average of 10 pedestrian calls per hour at signalized intersections.
- At existing intersections, the observed approach Peak Hour Factor (PHF) is utilized in the Existing, Existing plus Project and Near Term plus Project scenarios.
- For the Cumulative Year 2046 scenario, the following PHF was utilized to reflect traffic operations and an increase in future traffic volumes. As roadways start to reach their saturated flow rates, PHF's tend to increase to 0.90 or higher in urban settings. A PHF of 0.92, or the existing PHF if higher, is utilized for all remaining study intersections.
 - For the intersections Temperance Avenue at California Avenue, Fowler Avenue at Church Avenue and Armstrong Avenue at Church Avenue, the following PHF's were utilized due to their proximity to schools:
 - A PHF of 0.86, or the existing if higher, is utilized during the AM peak.
 - A PHF of 0.90, or the existing if higher, is utilized during the PM peak.
 - A PHF of 0.92, or the existing if higher, is utilized for all remaining study intersections.

Existing Traffic Conditions

Roadway Network

The Project site and surrounding study area are illustrated in Figure 1. Important roadways serving the Project are discussed below.

Fowler Avenue is an existing north-south three-lane divided arterial in the vicinity of the proposed Project site. In this area, Fowler Avenue is a four-lane divided arterial between the State Route 180 Interchange and Kings Canyon Road, a two to three-lane arterial divided by a two-way left-turn lane between Kings Canyon Road and the San Joaquin Valley Railroad, a two to three-lane divided arterial between the San Joaquin Valley Railroad and Jensen Avenue and a two-lane undivided arterial between Jensen Avenue and North Avenue. The *Fresno General Plan* Circulation Element designates Fowler Avenue as a four-lane divided arterial between State Route 180 and Kings Canyon Road, a two-lane arterial between Kings Canyon Road and Hamilton Avenue and Hamilton Avenue, a four-lane arterial between Hamilton Avenue and Jensen Avenue and a two-lane collector between Jensen Avenue and North Avenue.

Armstrong Avenue is an existing north-south three-lane undivided collector adjacent to the proposed Project. In this area, Armstrong Avenue is a three- to four-lane undivided collector between Kings Canyon Road and Hamilton Avenue, a three to four-lane collector divided by a two-way left-turn lane between Hamilton Avenue and Truman Avenue, a two-lane undivided collector between Truman Avenue and North Avenue. The *Fresno General Plan* Circulation Element designates Armstrong Avenue as a four-lane collector between Kings Canyon Road and Jensen Avenue and a two-lane collector between Jensen Avenue and North Avenue.

Temperance Avenue is an existing north-south two-lane undivided super arterial in the vicinity of the proposed Project. In this area, Temperance Avenue is a two-lane undivided super arterial between Kings Canyon Road and Butler Avenue, a four-lane divided super arterial between Butler Avenue and Hamilton Avenue and a two-lane undivided super arterial between Hamilton Avenue and North Avenue. The *Fresno General Plan* Circulation Element designates Temperance Avenue as a six-lane super arterial between Kings Canyon Road and Jensen Avenue and a four-lane super arterial between Jensen Avenue and North Avenue.

Hamilton Avenue is an existing east-west two-lane collector divided by a two-way left-turn lane in the vicinity of the proposed Project. In this area, Hamilton Avenue exists as a two-lane collector divided by a two-way left-turn lane between Fowler Avenue and Temperance Avenue. The *Fresno General Plan* Circulation Element designates Hamilton Avenue as a two-lane collector between Fowler Avenue and Temperance Avenue.

California Avenue is an existing east-west four-lane collector west of Fowler Avenue and east of Armstrong Avenue. Through the Project, California Avenue is proposed to be designed as a modified collector which will include a single vehicle lane in each direction divided by a 16-foot wide raised median with landscaping and a curbside Class II or Class IV bikeways. In this area, California Avenue exists between Armstrong Avenue and approximately 100 feet west of Temperance Avenue. The *Fresno General Plan* Circulation Element designates California Avenue as a four-lane collector between Fowler Avenue and

Temperance Avenue. However, the Fresno COG traffic forecasting and the LOS operations within this TIA support the proposed cross section with a maximum of one vehicular lane per direction. Based on information provided by City of Fresno staff, the easterly extension of California Avenue to Temperance Avenue will be constructed and operational by early 2026.

Church Avenue is an existing east-west two-lane undivided collector in the vicinity of the proposed Project site. In this area, Church Avenue is a four-lane collector divided by a two-way left-turn lane between Peach Avenue and Sunnyside Avenue, a three-lane divided collector between Sunnyside Avenue and Fowler Avenue, a two-lane undivided collector between Fowler Avenue and Temperance Avenue and a two-lane undivided roadway between Temperance Avenue and Leonard Avenue. The *Fresno General Plan* Circulation Element designates Church Avenue as a four-lane collector between Willow Avenue and Temperance Avenue and a two-lane local roadway between Temperance Avenue and Highland Avenue.

Collision Analysis

JLB conducted a search of SWITRS to obtain collision reports for the most recent five-year period (January 1st, 2019 to December 31st, 2023). The SWITRS “is a database that serves as a means to collect and process data gathered from a collision scene. The internet SWITRS application is a tool by which the California Highway Patrol (CHP) staff and members of its Allied Agencies throughout California can request various types of statistical reports in an electronic format.” All collision reports between January 1st, 2019 and December 31st, 2023 were included in the collision analysis. In the five-year period, a total of twenty-three (23) collisions were reported within the influence zone (assumed to be within 250 feet) of the study intersections. The SWITRS collision data are found in Appendix E.

Table I summarizes the type of collision, severity, violation, and identifies involvement with another vehicle, a pedestrian/bicyclist or a fixed object. Based on the five-year collision data contained within SWITRS, most study intersections have experienced a relatively low number and severity of collisions per year. After thorough review of the data contained within the collision reports for the five-year analysis period, no changes are recommended to the study intersections as a result of collision activity.

Table I: Five-Year (2019-2023) Intersection Collision Analysis

ID	Intersection	Number of Collisions	Type of Collision						Severity				Type of Violation						Motor Vehicle Involved with...				
			Broadside	Rear End	Head-On	Hit Object	Sideswipe	Other	Fatal	Severe Injury	Other Visible Injury	Complaint of Pain/Injury	Property Damage Only	Traffic Signals & Signs	Right of Way	Unsafe Speed	Improper Turning	Driving Under Influence	Other	Pedestrian/Bicyclist	Other Motor Vehicle	Fixed Object	Other
1	Fowler Avenue / Hamilton Avenue	5	1	-	-	4	-	-	-	-	1	-	4	-	-	3	1	1	-	-	1	4	-
2	Armstrong Avenue / Hamilton Avenue	3	2	-	1	-	-	-	-	-	-	1	2	1	1	-	-	1	-	-	3	-	-
3	Temperance Avenue / Hamilton Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	Armstrong Avenue / California Avenue	3	1	-	-	2	-	-	-	1	-	-	2	-	2	-	1	-	-	-	1	2	-
5	Temperance Avenue / California Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	Fowler Avenue / Church Avenue	7	2	-	-	5	-	-	-	-	2	-	5	2	1	-	2	1	1	1	2	4	-
7	Armstrong Avenue / Church Avenue	5	2	2	-	-	1	-	-	-	1	-	4	-	2	2	1	-	-	-	5	-	-
Totals		23	8	2	1	11	1	0	0	1	4	1	17	3	6	5	5	3	1	1	12	10	0

Traffic Signal Warrants

The CA MUTCD indicates that an engineering study of traffic conditions, pedestrian characteristics and physical features of an intersection shall be conducted to determine whether the installation of traffic signal controls are justified. The CA MUTCD provides a total of nine (9) warrants to evaluate the need for traffic signal controls. These warrants include 1) Eight-Hour Vehicular Volume, 2) Four-Hour Vehicular Volume, 3) Peak Hour, 4) Pedestrian Volume, 5) School Crossing, 6) Coordinated Signal System, 7) Crash Experience, 8) Roadway Network and 9) Intersection Near a Grade Crossing. Signalization of an intersection may be appropriate if one or more of the signal warrants is satisfied. However, the CA MUTCD also states that “[t]he satisfaction of a signal warrant or warrants shall not in itself require the installation of a traffic control signal” (Caltrans, 2021).

If traffic signal warrants are satisfied when a LOS threshold impact is identified at an unsignalized intersection, then installation of a traffic signal control may serve as an improvement measure. For instances where traffic signal warrants are satisfied, a traffic signal control is not considered to be the default improvement measure. Since the installation of a traffic signal control typically requires the construction of additional lanes, an attempt is made to improve the intersection approach lane geometrics in order to improve its LOS while maintaining the existing intersection controls. If the additional lanes did not result in acceptable LOS at the intersection, then in those cases implementation of a traffic signal control would be considered.

Warrants 1, 2 and 3 were prepared for the unsignalized intersections under the Existing Traffic Conditions scenario. These warrants are contained in Appendix J. At present, Warrant 1 is met for the study intersections of Fowler Avenue at Hamilton Avenue and Fowler Avenue at Church Avenue. Warrant 2 is

met for the study intersections of Fowler Avenue at Hamilton Avenue, Temperance Avenue at Hamilton Avenue and Fowler Avenue at Church Avenue. Warrant 3 is met for the study intersections of Fowler Avenue at Hamilton Avenue, Temperance Avenue at Hamilton Avenue, Fowler Avenue at Church Avenue and Armstrong Avenue at Church Avenue under one or both peak periods. Based on the operational analysis and engineering judgment, it is not recommended that any study intersection be signalized since all unsignalized study intersections operate at an acceptable LOS under both peak periods with the exception of Fowler Avenue at Church Avenue. It is recommended that the Sanger Unified School District continue with its construction of the signalization of the intersection of Fowler Avenue at Church Avenue in an effort to improve pedestrian safety as its student population continues to increase.

Results of Existing Level of Service Analysis

Figure 2 illustrates the Existing Traffic Conditions turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing Traffic Conditions scenario are provided in Appendix F. Table II presents a summary of the Existing peak hour LOS at the study intersections. Table III presents a summary of the Existing LOS for the study segment.

At present, all study intersections operate at an acceptable LOS.

It is important to note that Synchro has a three-lane limitation on all-way stop intersections. Therefore, the intersection of Armstrong Avenue at Hamilton Avenue and Fowler Avenue at Church Avenue is coded with three lanes on legs that currently contain four lanes. These legs include the north leg of the intersection of Fowler Avenue at Church Avenue as well as the north and south legs of the intersection of Armstrong Avenue at Hamilton Avenue.

Table II: Existing Intersection LOS Results

ID	Intersection	Intersection Control	AM (7 - 9) Peak Hour		PM (4 - 6) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Fowler Avenue / Hamilton Avenue	One-Way Stop	17.6	C	16.0	C
2	Armstrong Avenue / Hamilton Avenue	All-Way Stop	11.1	B	10.1	B
3	Temperance Avenue / Hamilton Avenue	All-Way Stop	14.8	B	10.3	B
4	Armstrong Avenue / California Avenue	One-Way Stop	12.0	B	9.9	A
5	Temperance Avenue / California Avenue	Does Not Exist	-	-	-	-
6	Fowler Avenue / Church Avenue	All-Way Stop	33.1	D	13.5	B
7	Armstrong Avenue / Church Avenue	All-Way Stop	26.9	D	8.3	A

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

At present, the study segment operates at an acceptable LOS.

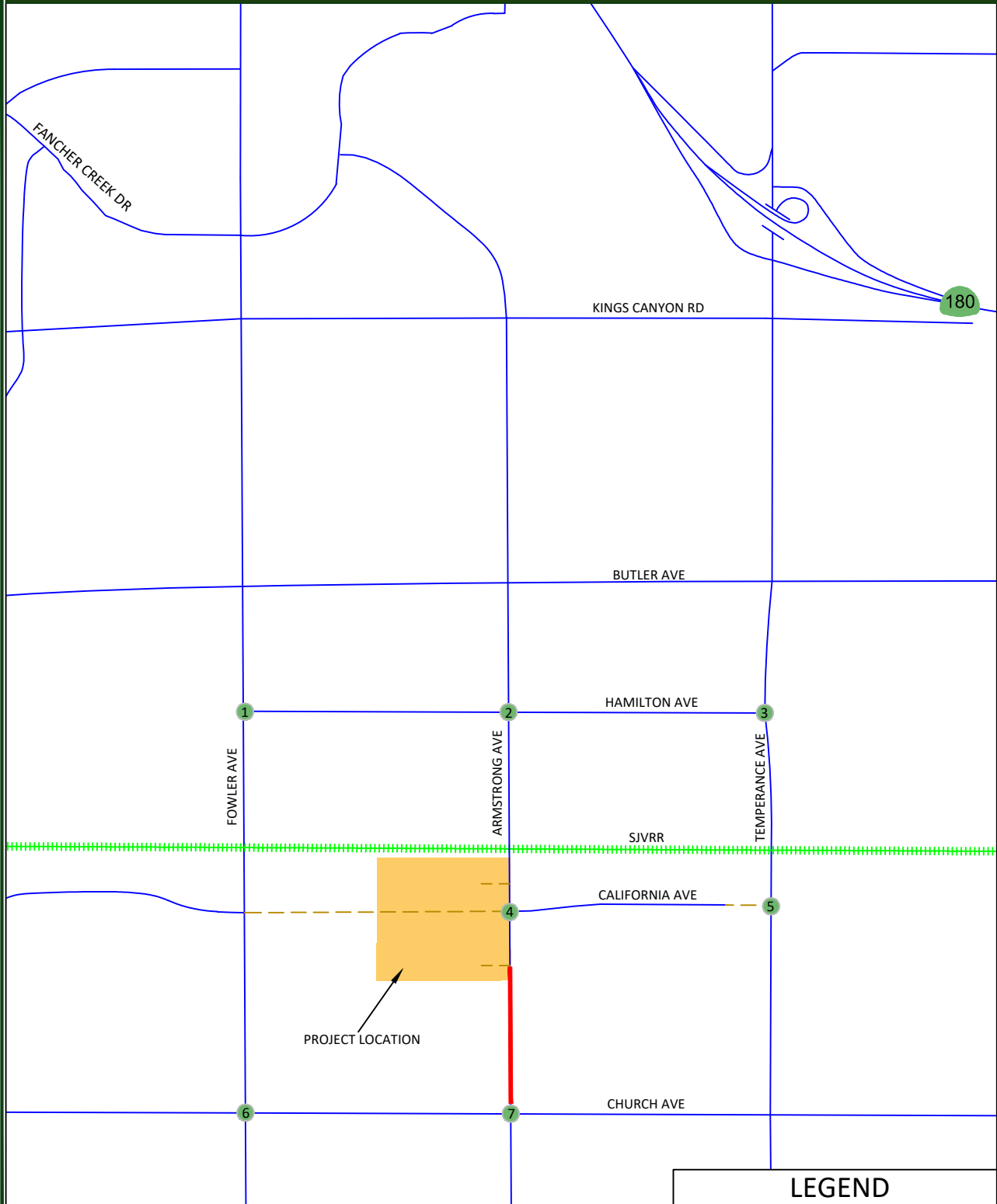
Table III: Existing Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	AM Peak Volume	AM LOS	PM Peak Volume	PM LOS
1	Armstrong Avenue	Geary Avenue and Church Avenue	2	3,870	577	C	246	A

Note: LOS = Level of Service per HCM 6th Edition methodologies in HCS7 software

Tract 6376 - City of Fresno Vicinity Map

Figure 1



LEGEND

- # = STUDY INTERSECTION
- - - = FUTURE ROADWAY
- = STUDY SEGMENT



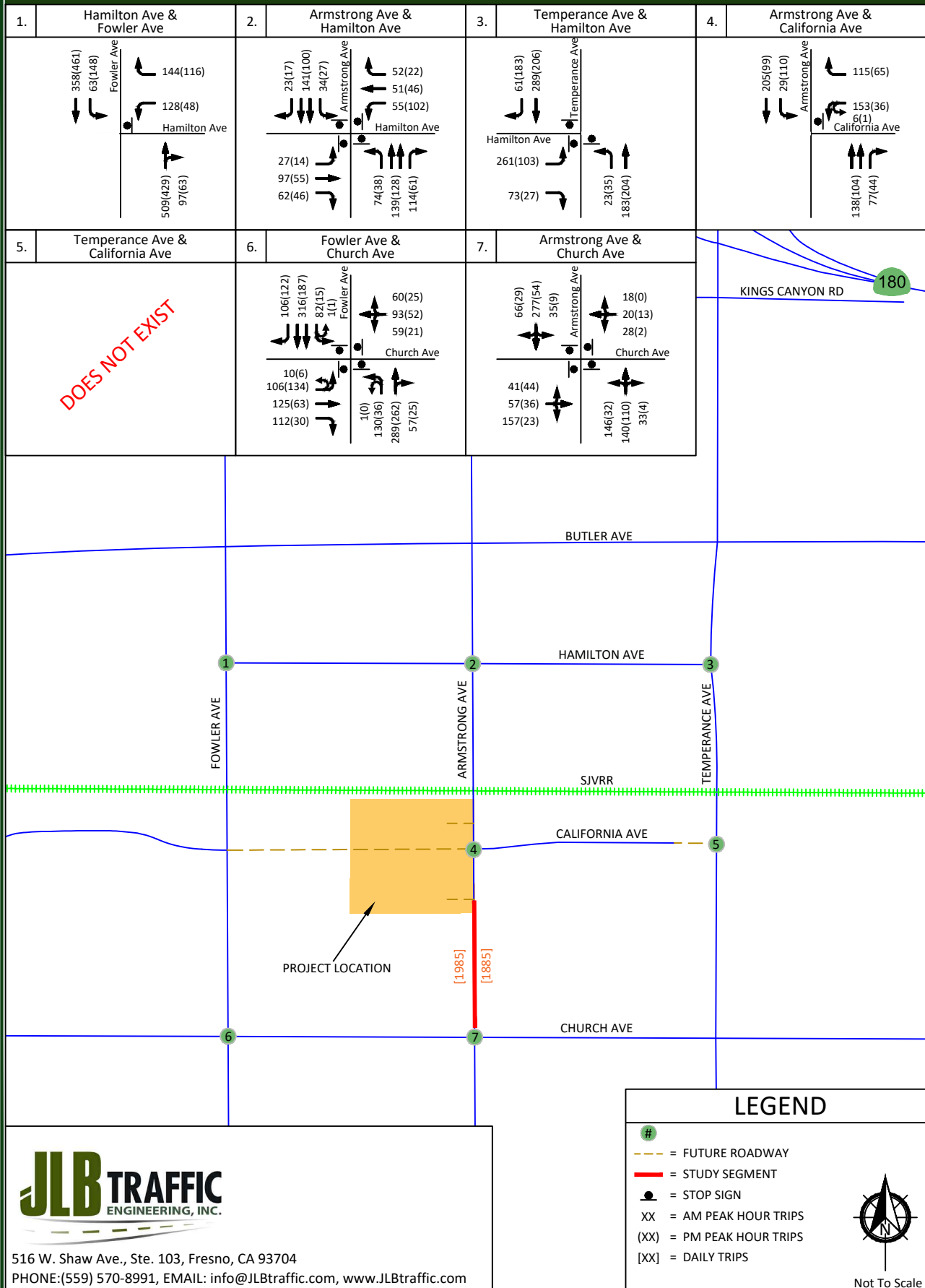
Not To Scale



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Tract 6376 - City of Fresno Existing - Traffic Volumes, Geometrics and Controls

Figure 2



Existing plus Project Traffic Conditions

Project Description

The Project is proposing to develop 202 single-family residential units. However, the site plan that this study was based off contains 203 dwelling units. Therefore, this analysis shall present a conservative analysis. Based on information provided to JLB, the Project is consistent with the *Fresno General Plan*. Figure 3 illustrates the latest Project Site Plan.

Project Access

Access to and from the proposed Project site will be from four (4) access points along future California Avenue west of Armstrong Avenue and 2 (two) along the west side of Armstrong Avenue at buildout. The Project proposes to construct California Avenue west of Armstrong Avenue within the Project site for approximately 1,300 feet. The four (4) access points along California Avenue include two (2) access points located on either side of future California Avenue approximately 1,150 feet west of Armstrong Avenue and two (2) access point located on either side of future California Avenue approximately 550 feet west of Armstrong Avenue. All four (4) access points are proposed to have full access to California Avenue. The two (2) access points proposed along the west side of Armstrong Avenue are located approximately 330 feet north of California Avenue and approximately 600 feet south of California Avenue. Both of these access points are proposed to have full access to Armstrong Avenue. Furthermore, one (1) outlet on the south, one (1) outlet on the west and California Avenue on the west can all be connected to for more access in the future.

JLB analyzed the location of the existing and proposed roadways and access points relative to those in the vicinity of the Project site. A review of the existing and proposed roadways and access points indicates that they are located at points that minimize traffic operational impacts to existing and future roadway networks. A Project Site Plan with the Project's opening day trip assignment can be found in Figure 3. It is recommended that left-turn pockets with a storage capacity of 150 feet be included as part of the design of California Avenue at its intersections with Burgan Avenue and Cypress Avenue.

Project Trip Generation

The trip generation rates for the proposed Project were obtained from the 11th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table IV presents the trip generation for the proposed Project with trip generation rates for 202 Single-Family Detached Housing dwelling units. At buildout, the proposed Project is estimated to generate approximately 1,905 daily trips, 141 AM peak hour trips and 190 PM peak hour trips.

Table IV: Project Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		AM (7-9) Peak Hour						PM (4-6) Peak Hour					
			Rate	Total	Trip Rate	In	Out	In	Out	Total	Trip Rate	In	Out	In	Out	Total
						%						%				
Single-Family Detached Housing (210)	202	d.u.	93.43	1,905	0.70	26	74	37	104	141	0.94	63	37	120	70	190
Total Driveway Trips				1,905				37	104	141				120	70	190

Note: d.u. = Dwelling Units

Trip Distribution

The trip distribution assumptions were developed based on existing travel patterns, the Fresno COG Project Select Zone, the existing roadway network, engineering judgment, data provided by the developer, knowledge of the study area, existing residential and commercial densities and the *Fresno General Plan* Circulation Element in the vicinity of the Project site. The Project's trip generation data was provided to Fresno COG to conduct a Project-specific Traffic Analysis Zone (TAZ) analysis using the Fresno COG ABM (Cumulative Year 2046). The Fresno COG Project Select Zone results are contained in Appendix C. Figure 4 illustrates the Project Only Trips at the study intersections.

Active Transportation Plan

The Fresno Active Transportation Plan (ATP) is an extensive guide detailing the conception for active transportation in the City of Fresno that was adopted in December 2016. This ATP aims to improve the safety, increase non-motorized trips, improve access and fill in gaps in networks for Fresno's pedestrians and bicyclists. In order to achieve these goals for active transportation, this ATP proposes a comprehensive network of citywide bikeways, trails and sidewalks. The recommended network would add 166 miles of Class I Bike Paths, 691 miles of Class II Bike Lanes, 69 miles of Class III Bike Routes, 21 miles of Class IV Separated Bikeways and 661 miles of sidewalks. This ATP also recommends bicycle detection at traffic signals, destination signage, bicycle parking, showers and changing facilities and bikeway maintenance. This network will be constructed in conjunction with adjacent land developments, roadway maintenance and active transportation infrastructure projects using funds from different local, state and federal sources.

Bikeways

The *Fresno ATP* classifies bicycle facilities into the following types:

- Class I Bikeway (Bike Path) – Provides a completely separated right-of-way for exclusive use of bicycles and pedestrians with crossflow minimized.
- Class II Bikeway (Bike Lane) – Provides a striped lane for one-way bike travel on a street or highway.
- Class III Bikeway (Bike Route) – Provides a shared use with pedestrians or motor vehicle traffic, typically on lower volume roadways.
- Class IV Bikeways (Separated Bikeways) – Provides a protected lane for one-way bike travel (one-way cycle track) and protected lanes for two-way bike travel (two-way cycle track) on a street or highway.

Class II (Bike Lane) Bikeways exist in the vicinity of the Project site. In the vicinity of the Project site, Class II Bikeways exist along portions of Fowler Avenue, Armstrong Avenue, Hamilton Avenue, California Avenue and Church Avenue. The *Fresno ATP* recommends that Class II Bikeways be implemented adjacent to and in the vicinity of the Project site (City of Fresno, 2016). Adjacent to the Project site, a Class II Bikeway is planned along the west side of Armstrong Avenue. In the vicinity of the Project site, Class II Bikeways are planned on remaining stretches Fowler Avenue, Armstrong Avenue, Temperance Avenue, Hamilton Avenue, California Avenue and Church Avenue. In the vicinity of the Project site, a Class I Bikeway is planned on Temperance Avenue between SR 180 and North Avenue. Therefore, it is recommended that the Project construct a Class II Bikeway on its frontages to Armstrong Avenue and California Avenue.

Walkways

The *Fresno ATP* classifies pedestrian facilities into sidewalks and Class I Bike Paths. Pedestrian sidewalks exist in the vicinity of the Project site along portions of Fowler Avenue, Armstrong Avenue, Temperance Avenue, Hamilton Avenue, California Avenue and Church Avenue. The *Fresno ATP* recommends that pedestrian sidewalks be implemented in the vicinity of the Project site along remaining stretches of Fowler Avenue, Armstrong Avenue, Temperance Avenue, Hamilton Avenue, California Avenue and Church Avenue. Therefore, it is recommended the Project construct ADA compliant pedestrian sidewalks along internal streets connecting all uses to external sidewalks and along its frontages to Armstrong Avenue and California Avenue.

Transit

Fresno Area Express (FAX), is the transit operator in the City of Fresno. At present, there are two (2) FAX transit routes that operate in the vicinity of the proposed Project site, Routes 1 and 22. FAX Route 1, which runs on a portion of Kings Canyon Road, operates at 15-minute intervals on weekdays and weekends. The nearest stop on this route to the Project site is located along the north side of Kings Canyon Road approximately 750 feet east of Clovis Avenue. This route provides a direct connection to the River Park Shopping Center, Manchester Center, Fresno City College, Downtown Fresno, the Big Fresno Fair grounds and Sunnyside High School. FAX Route 22, which runs on Clovis Avenue, operates at 30-minute intervals on weekdays and weekends. The nearest stop on this route to the Project site is located along the west side of Burgan Avenue approximately 100 feet north of Lyell Avenue and is only used during peak hours. This route provides a direct connection Roosevelt High, the Amtrak Station, Central Library, Downtown Transit Center, Downtown Fresno, Community Center, Talking Book Library, West Lan Shopping Center and Fig Garden Library. It is worth noting that retention of the existing and expansion of future transit routes is dependent on transit ridership demand and available funding.

Safe Routes to School

Kindergarten through 12th grade students from the Project will be served by the Sanger Unified School District (SUSD). SUSD provides transportation for students who live in excess of an established radius zone. The zone is a radius of 0.5 miles for Kindergarten, 0.75 miles for grades 1 through 6, 1.5 miles for grades 7 through 8 and 2 miles for grades 9 through 12.

Based on attendance area boundaries at the time of the preparation of this TIA, elementary school students would attend Sequoia Elementary School located at the northeast quadrant of Armstrong Avenue at Jensen Avenue. Sequoia Elementary School is located 0.57 and 0.85 miles from the nearest and farthest home on the Project. Therefore, it is anticipated that elementary school students will need to walk, bike or be driven between the Project and the school.

The most direct path from the Project to the Sequoia Elementary School campus can begin from the southwest corner of Armstrong Avenue at California Avenue. Students would proceed to travel south on the west side of Armstrong Avenue until reaching the northwest corner of Armstrong Avenue at Church Avenue. The intersection of Armstrong Avenue at Church Avenue is controlled by an all-way stop that contains no marked crosswalks. Students would cross either the north and east legs or the west and south legs at this intersection to reach the southeast corner of Armstrong Avenue at Church Avenue. Students would proceed to travel south on the east side of Armstrong Avenue until reaching the entrance to the school campus.

At the time of this TIA, most middle school and high school students will attend Washington Academic Middle School and Sanger West High School, respectively. Washington Academic Middle School is located 6.39 and 6.67 miles from the nearest and farthest home on the Project. Sanger West High School is located 0.64 and 0.94 miles from the nearest and farthest home on the Project. Therefore, it is anticipated that these middle school students would be bussed between the Project and the school and some high school students will need to walk, bike or be driven to school. However, in the future, all middle school and high school students will attend the SUSD Educational Center located at the southeast corner of Fowler Avenue at Church Avenue. SUSD Educational Center is located 0.64 and 0.94 miles from the nearest and furthest home on the Project. Therefore, it is anticipated that eventually middle school and high school students attending SUSD Educational Center will need to walk, bike or be driven between the Project and the school.

The most direct path from the Project to the SUSD Educational Center campus can begin from southwest corner of Armstrong Avenue at California Avenue. Students would proceed to travel south on the west side of Armstrong Avenue until reaching the northwest corner of Armstrong Avenue at Church Avenue. The intersection of Armstrong Avenue at Church Avenue is controlled by an all-way stop that contains no marked crosswalks. Students would cross the west leg at this intersection to reach the southwest corner of Armstrong Avenue at Church Avenue. Students would proceed to travel west along the south side of Church Avenue until reaching an entrance to the school campus.

Stretches of Armstrong Avenue and Church Avenue that will be utilized by students to reach school campuses do not contain sidewalks. Also, the intersection of Armstrong Avenue at Church Avenue has no marked crosswalks. It is recommended that the Project and SUSD look into funding sources to enhance the walkways for Middle and High School students for and from the new Sanger West High School and Middle School.

Traffic Signal Warrants

Warrant 3 was prepared for the unsignalized intersections under the Existing plus Project Traffic Conditions scenario. These warrants are contained in Appendix J. Under this scenario, the intersections of Fowler Avenue at Hamilton Avenue, Temperance Avenue at Hamilton Avenue and Armstrong Avenue at Church Avenue are projected to satisfy Warrant 3 during one or both peak periods. Based on the traffic operational analysis and engineering judgment, it is not recommended that any study intersection be signalized since all unsignalized study intersections operate at an acceptable LOS under both peak periods.

Roadway Network

The Existing plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place except for improvements along Armstrong Avenue, an extension of California Avenue west of Armstrong and east to Temperance Avenue and the signalization of Fowler Avenue at Church Avenue. As part of the Project, it is anticipated that California Avenue will be extended approximately 1,300 feet west of Armstrong Avenue and a second southbound lane would be added within the Project limits. Furthermore, a southbound right-turn lane will be added at the intersection of Armstrong Avenue at California Avenue. The intersection of Armstrong Avenue at California Avenue will be modified to accommodate these improvements. Based on feedback from the City of Fresno, this scenario assumes that the extension of California Avenue east to Temperance Avenue is completed by early 2023. Furthermore, the intersection of Temperance Avenue at California Avenue will be controlled by a one-way stop with a stop sign on the west leg of California Avenue. Also, it is assumed that the intersection of Fowler Avenue at Church Avenue would be signalized as part of the Sanger West High School and Middle School Project. These roadway network changes result in a modification of existing traffic patterns. Figure 5 illustrates the assumed intersection geometrics and traffic controls for these intersections under this scenario.

Results of Existing plus Project Level of Service Analysis

Figure 5 illustrates the Existing plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing plus Project Traffic Conditions scenario are provided in Appendix G. Table V presents a summary of the Existing plus Project peak hour LOS at the study intersections. Table VI presents a summary of the Existing plus Project peak hour LOS at the study segment.

Under this scenario, all study intersections are projected to continue operating at an acceptable LOS.

It is important to note that Synchro has a three-lane limitation on all-way stop intersections. Therefore, the intersection of Armstrong Avenue at Hamilton Avenue is coded with three lanes on legs that currently contain four lanes. These legs include the north and south legs of the intersection of Armstrong Avenue at Hamilton Avenue.

Table V: Existing plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM (7 - 9) Peak Hour		PM (4 - 6) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Fowler Avenue / Hamilton Avenue	One-Way Stop	18.3	C	16.7	C
2	Armstrong Avenue / Hamilton Avenue	All-Way Stop	11.4	B	10.2	B
3	Temperance Avenue / Hamilton Avenue	All-Way Stop	14.8	B	11.2	B
4	Armstrong Avenue / California Avenue	Two-Way Stop	12.4	B	10.9	B
5	Temperance Avenue / California Avenue	One-Way Stop	13.4	B	12.3	B
6	Fowler Avenue / Church Avenue	Traffic Signal	25.1	C	27.4	C
7	Armstrong Avenue / Church Avenue	All-Way Stop	26.2	D	8.4	A

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

Table VI: Existing plus Project Segment LOS Results

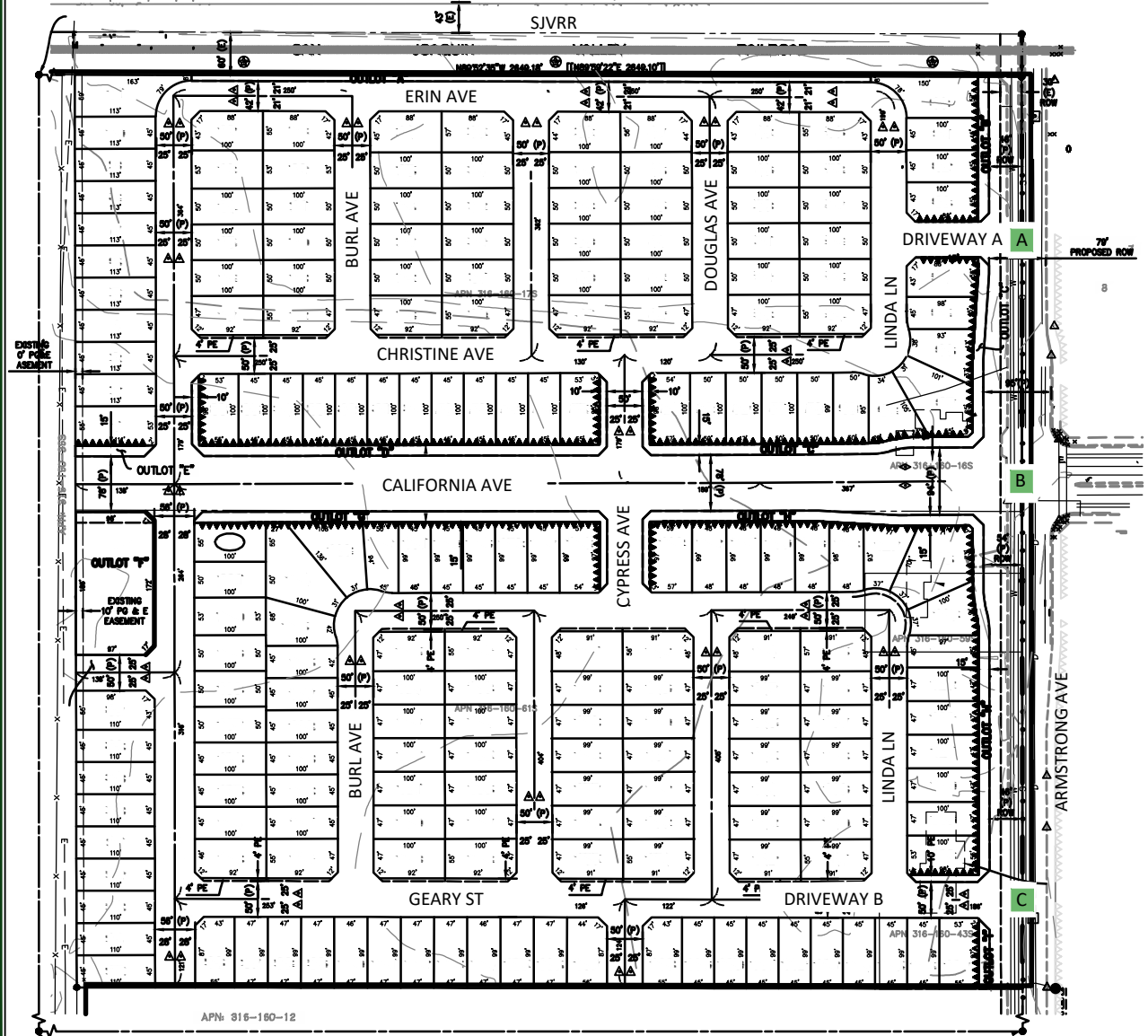
ID	Segment	Limits	Lanes	24-hour Volume	AM Peak Volume	AM LOS	PM Peak Volume	PM LOS
1	Armstrong Avenue	Geary Avenue and Church Avenue	2	4,138	576	C	275	A

Note: LOS = Level of Service per HCM 6th Edition methodologies in HCS7 software

Tract 6376 - City of Fresno Project Site Plan

Figure 3

A	Armstrong Ave & Driveway A	B	Armstrong Ave & California Ave	C	Armstrong Ave & Driveway B
7(20) 14(43) Armstrong Ave Driveway A 22(11) 4(3)		12(34) 6(12) Armstrong Ave California Ave 23(23) 14(6) 21(15)		2(11) 25(18) Armstrong Ave Driveway B 4(4) 17(9)	



LEGEND

- X = PROJECT DRIVEWAY
- XX = AM PROJECT ONLY TRIPS
- (XX) = PM PROJECT ONLY TRIPS



Not To Scale

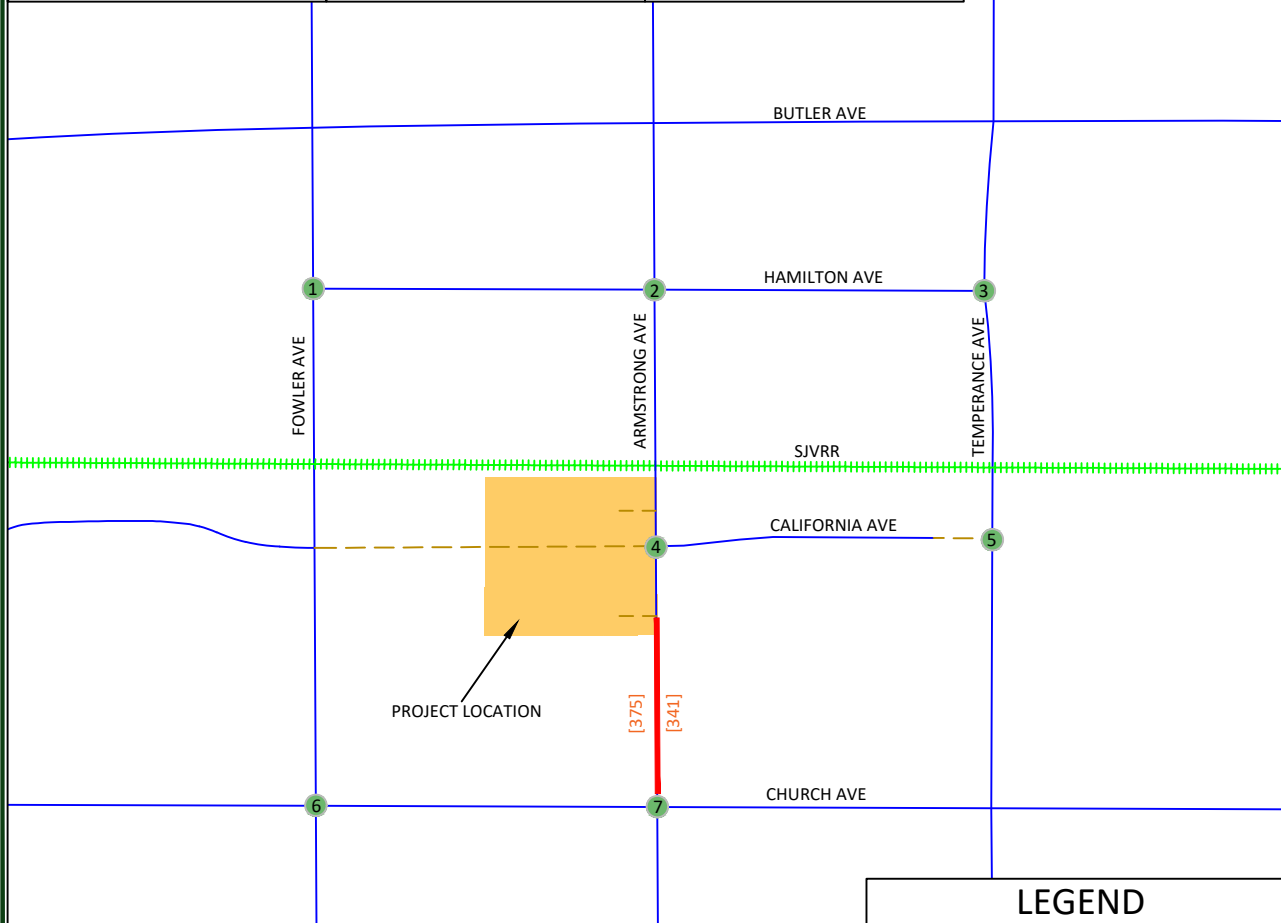


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Tract 6376 - City of Fresno Project Trip Distribution

Figure 4

1.	Fowler Ave & Hamilton Ave	2.	Armstrong Ave & Hamilton Ave	3.	Temperance Ave & Hamilton Ave	4.	Armstrong Ave & California Ave
5.	Temperance Ave & California Ave	6.	Fowler Ave & Church Ave	7.	Armstrong Ave & Church Ave		



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LEGEND

- # = STUDY INTERSECTION
- - - = FUTURE ROADWAY
- = STUDY SEGMENT
- XX = AM PROJECT ONLY TRIPS
- (XX) = PM PROJECT ONLY TRIPS
- [XX] = DAILY TRIPS

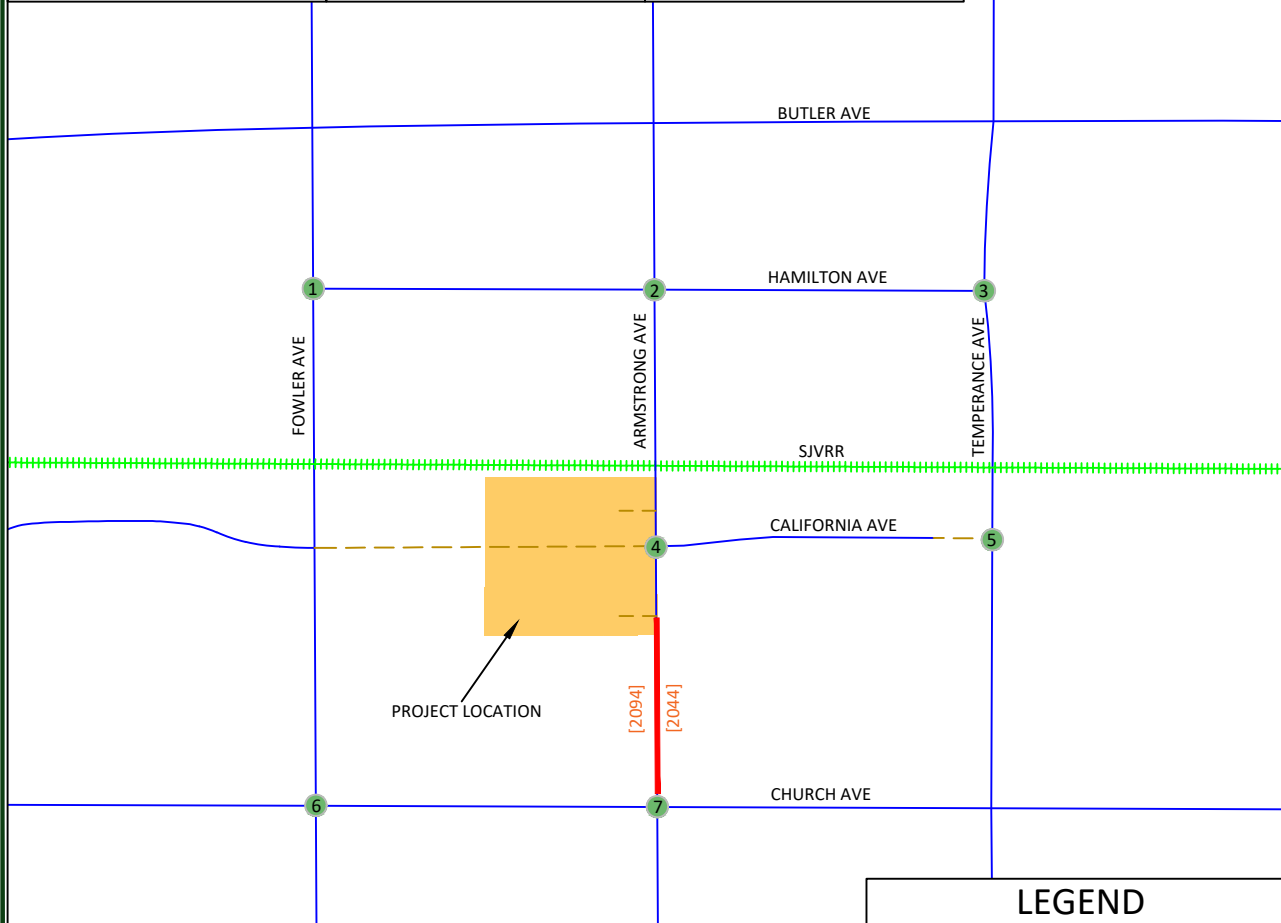


Not To Scale

Tract 6376 - City of Fresno Existing plus Project - Traffic Volumes, Geometrics and Controls

Figure 5

1.	Fowler Ave & Hamilton Ave 	2.	Armstrong Ave & Hamilton Ave 	3.	Temperance Ave & Hamilton Ave 	4.	Armstrong Ave & California Ave
5.	Temperance Ave & California Ave 	6.	Fowler Ave & Church Ave 	7.	Armstrong Ave & Church Ave 		



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- # = STUDY INTERSECTION
- - - = FUTURE ROADWAY
- - - = STUDY SEGMENT
- = STOP SIGN
- ⬆️⬆️⬆️ = TRAFFIC SIGNAL
- XX = AM PEAK HOUR TRIPS
- (XX) = PM PEAK HOUR TRIPS
- [XX] = DAILY TRIPS



Not To Scale

Near Term plus Project Traffic Conditions

Description of Near Term Projects

Near Term Projects consist of developments that are either under construction, built but not fully occupied, are not built but have final site development review (SDR) approval, or for which the lead agency or responsible agencies have knowledge of. The City of Fresno and County of Fresno staff were consulted throughout the preparation of this TIA regarding Near Term Projects that could potentially impact the study intersections. JLB staff conducted a reconnaissance of the surrounding area to confirm the Near Term Projects. Therefore, the Near Term Projects listed in Table VII were within the proximity of the Project site.

Table VII: Near Term Projects' Trip Generation

<i>Near Term Project ID</i>	<i>Near Term Project Name</i>	<i>Daily Trips</i>	<i>AM Peak Hour</i>	<i>PM Peak Hour</i>
A	Tract 5498 ¹	754	56	75
B	Tract 5717 (portion of) ¹	2,625	89	250
C	Tract 6201 (portion of) ²	1,510	118	158
D	Tract 6214 (portion of) ²	94	7	10
E	Tract 6219 ¹	1,207	90	120
F	Tract 6224 (portion of) ³	897	70	94
G	Tract 6298 ²	1,048	82	110
H	Tract 6299 (portion of) ²	481	38	50
I	Tract 6325 ¹	594	44	59
J	7/11 and Fuel Station ¹	2,566	157	213
K	BDM Builders ²	10,432	727	833
L	Fancher Creek Town Center (portion of) ¹	55,815	2,065	4,865
M	Fowler Commercial ¹	3,404	287	229
N	Fowler-McKinley Elementary School ²	605	214	54
O	Hale Property ¹	1,367	102	136
P	Lennar Homes (portion of) ¹	57	4	6
Q	Malaga ²	4,640	603	568
R	Ohanesian ²	1,879	147	197
S	SUSD Educational Center ³	5,128	1,514	452
T	SUSD Temperance Elementary School ²	1,323	469	119
Total Near Term Project Trips		96,426	6,883	8,598

Note: 1 = Trip Generation prepared by JLB Traffic Engineering, Inc. based on readily available information

2 = Trip Generation based on JLB Traffic Engineering, Inc. Traffic Impact Analysis Report

3 = Trip Generation based on a Traffic Impact Analysis Report by another Traffic Engineering Firm

The trip generation listed in Table VII is that which is anticipated to be added to the streets and highways by Near Term Projects between the time of the preparation of this Report and five (5) years after buildout of the proposed Project. As shown in Table VII, the total trip generation for the Near Term Projects is 96,426 weekday daily trips, 6,883 weekday AM peak hour trips and 8,598 weekday PM peak hour trips. Figure 6 illustrates the location of the Near Term Projects and their combined trip assignment to the study intersections under the Near Term plus Project Traffic Conditions scenario.

Traffic Signal Warrants

Warrant 3 was prepared for the unsignalized intersections under the Near Term plus Project Traffic Conditions scenario. These warrants are contained in Appendix J. Under this scenario, the intersections of Fowler Avenue at Hamilton Avenue, Armstrong Avenue at Hamilton Avenue, Temperance Avenue at Hamilton Avenue, Temperance Avenue at California Avenue and Armstrong Avenue at Church Avenue are projected to satisfy Warrant 3 during one or both peak periods. Based on the traffic signal warrants, operational analysis and engineering judgment, it is recommended that the intersections of Temperance Avenue at Hamilton Avenue and Armstrong Avenue at Church Avenue be signalized.

Roadway Network

The Near Term plus Project Traffic Conditions scenario assumes that the Existing plus Project Traffic Conditions roadway geometrics and traffic controls will remain in place. Figure 7 illustrates the assumed intersection geometrics and traffic controls for these intersections under this scenario.

Results of Near Term plus Project Level of Service Analysis

Figure 7 illustrates the Near Term plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Near Term plus Project Traffic Conditions scenario are provided in Appendix H. Table VIII presents a summary of the Near Term plus Project peak hour LOS at the study intersections. Table IV presents a summary of the Near Term plus Project peak hour LOS at the study segment.

Under this scenario, the intersections of Temperance Avenue at Hamilton Avenue and Armstrong Avenue at Church Avenue are projected to exceed their LOS threshold during the AM peak period. It is recommended that the following improvements be considered for implementation to improve the LOS at these intersections.

- Temperance Avenue / Hamilton Avenue
 - Open the southbound left-turn lane to allow southbound to northbound U-turns; and
 - Signalize the intersection with protective left-turn phasing in all directions.
- Armstrong Avenue / Church Avenue
 - Add an eastbound left-turn lane;
 - Modify the eastbound left-through-right lane to a through lane;
 - Add an eastbound right-turn lane;
 - Add a westbound left-turn lane;
 - Modify the westbound left-through-right lane to a through-right lane;
 - Add a northbound left-turn lane;
 - Modify the northbound left-through-right lane to a through-right lane;
 - Add a southbound left-turn lane;
 - Modify the southbound left-through-right lane to a through-right lane; and
 - Signalize the intersection with protective left-turn phasing in all directions.

It is important to note that Synchro has a three-lane limitation on all-way stop intersections. Therefore, the intersection of Armstrong Avenue at Hamilton Avenue is coded with three lanes on legs that currently contain four lanes. These legs include the north and south legs of the intersection of Armstrong Avenue at Hamilton Avenue.

Table VIII: Near Term plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM (7 - 9) Peak Hour		PM (4 - 6) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Fowler Avenue / Hamilton Avenue	One-Way Stop	22.3	C	20.5	C
2	Armstrong Avenue / Hamilton Avenue	All-Way Stop	14.0	B	11.4	B
3	Temperance Avenue / Hamilton Avenue	All-Way Stop	38.7	E	15.1	C
		Traffic Signal (Improved)	12.8	B	9.3	A
4	Armstrong Avenue / California Avenue	Two-Way Stop	18.3	C	12.7	B
5	Temperance Avenue / California Avenue	One-Way Stop	23.8	C	15.3	C
6	Fowler Avenue / Church Avenue	Traffic Signal	29.8	C	24.2	C
7	Armstrong Avenue / Church Avenue	All-Way Stop	>120.0	F	10.0	A
		Traffic Signal (Improved)	48.2	D	16.0	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

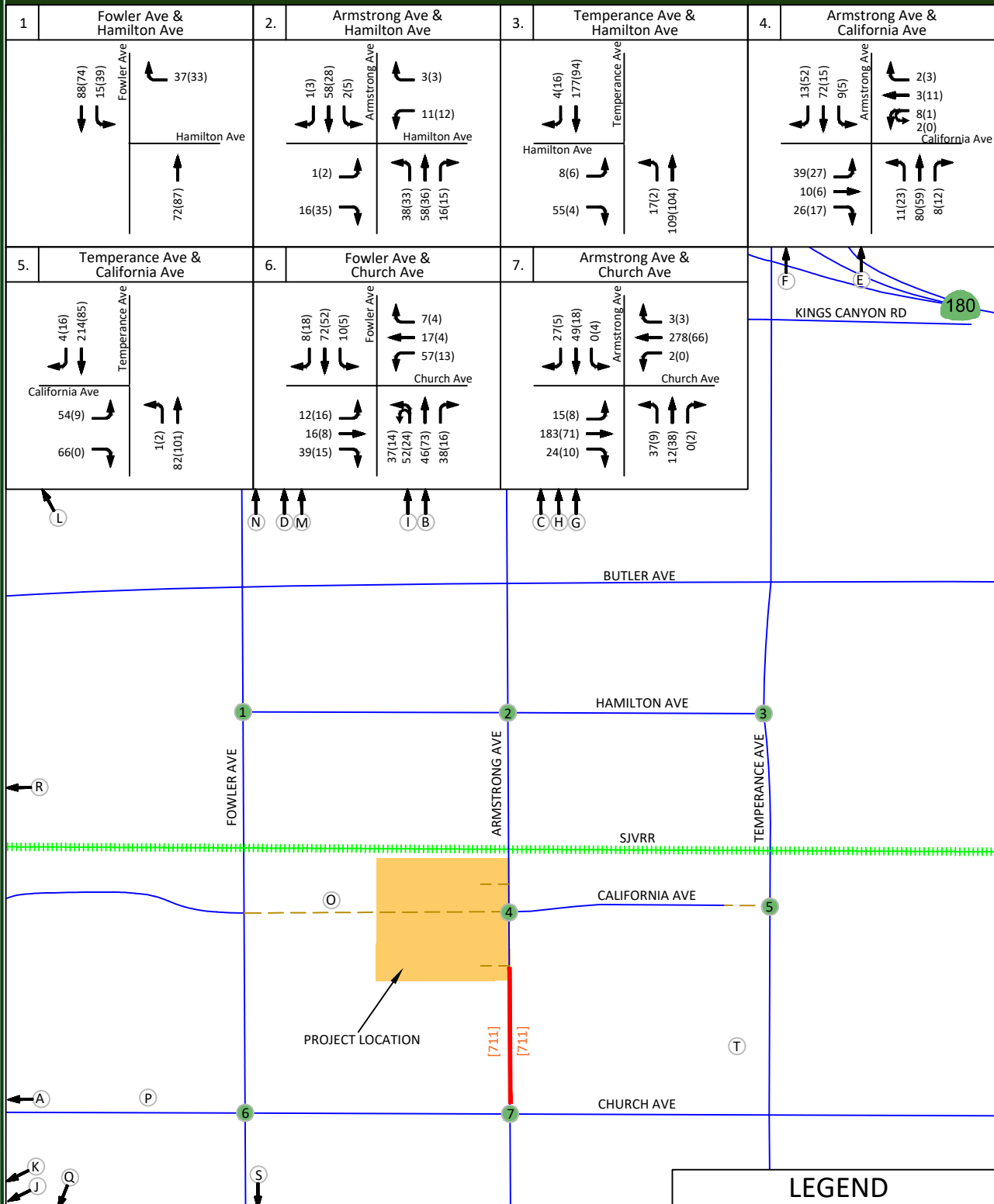
Table IX: Near Term plus Project Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	AM Peak Volume	AM LOS	PM Peak Volume	PM LOS
1	Armstrong Avenue	Geary Avenue and Church Avenue	2	5,560	682	C	351	A

Note: LOS = Level of Service per HCM 6th Edition methodologies in HCS7 software

Tract 6376 - City of Fresno Near Term Trip Distribution

Figure 6



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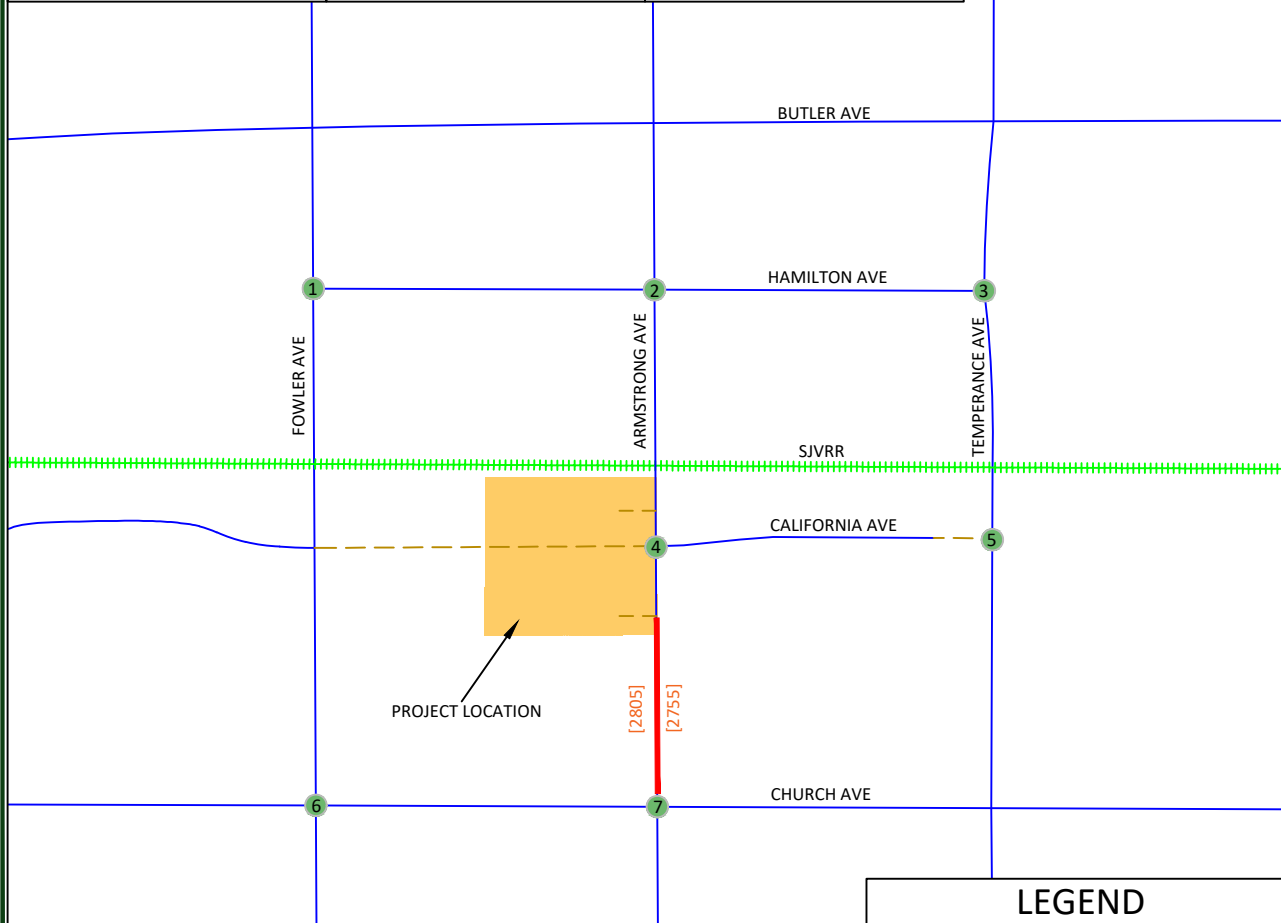
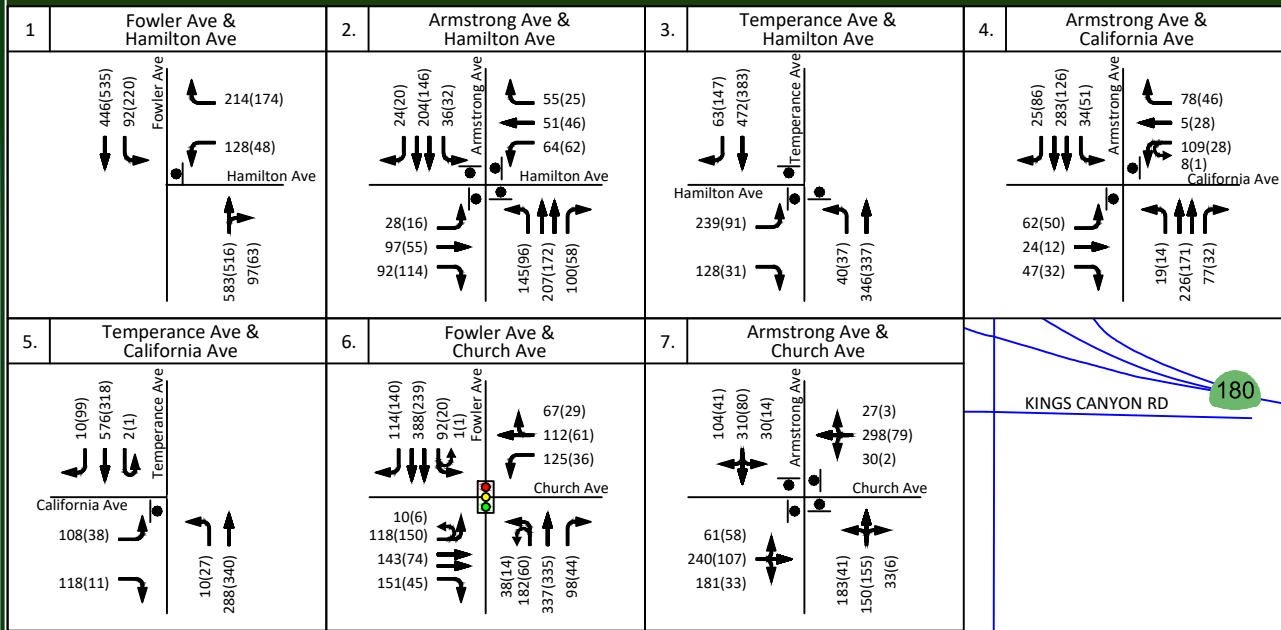
- # = STUDY INTERSECTION
- - - = FUTURE ROADWAY
- = STUDY SEGMENT
- XX = AM NEAR TERM TRIPS
- (XX) = PM NEAR TERM TRIPS
- [XX] = DAILY TRIPS
- ⊗ = NEAR TERM PROJECT LOCATION



Not To Scale

Tract 6376 - City of Fresno Near Term plus Project - Traffic Volumes, Geometrics and Controls

Figure 7



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- - - = STUDY SEGMENT
- = STOP SIGN
- ⬆️⬆️⬆️ = TRAFFIC SIGNAL
- XX = AM PEAK HOUR TRIPS
- (XX) = PM PEAK HOUR TRIPS
- [XX] = DAILY TRIPS



Not To Scale

Cumulative Year 2046 plus Project Traffic Conditions

Roadway Network

The Cumulative Year 2046 plus Project Traffic Conditions scenario assumes that the Near Term plus Project roadway geometrics and traffic controls will remain in place except for an extension of California Avenue. It is anticipated that California Avenue will be extended to connect to Temperance Avenue. This roadway network change results in a modification of existing traffic patterns. Figure 8 illustrates the 2046 Project Only Trips at the study intersections.

Traffic Signal Warrants

Warrant 3 was prepared for the unsignalized intersections under the Cumulative Year 2046 plus Project Traffic Conditions scenario. These warrants are contained in Appendix J. Under this scenario, the intersections of Fowler Avenue at Hamilton Avenue, Armstrong Avenue at Hamilton Avenue, Temperance Avenue at Hamilton Avenue, Armstrong Avenue at California Avenue, Temperance Avenue at California Avenue and Armstrong Avenue at Church Avenue are projected to satisfy Warrant 3 during one or both peak periods. Based on the traffic signal warrants, operational analysis and engineering judgment, it is recommended that the intersections of Temperance Avenue at Hamilton Avenue, Temperance Avenue at California Avenue and Armstrong Avenue at Church Avenue be signalized.

Results of Cumulative Year 2046 plus Project Level of Service Analysis

Figure 9 illustrates the Cumulative Year 2046 plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Year 2046 plus Project Traffic Conditions scenario are provided in Appendix I. Table X presents a summary of the Cumulative Year 2046 plus Project peak hour LOS at the study intersections. Table XI presents a summary of the Cumulative Year 2046 plus Project peak hour LOS at the study segment.

Under this scenario, the intersections of Temperance Avenue at Hamilton Avenue, Temperance Avenue at California Avenue and Armstrong Avenue at Church Avenue are projected to exceed their LOS threshold during one or both peak periods. It is recommended that the following improvements be considered for implementation to improve the LOS at these intersections.

- Temperance Avenue / Hamilton Avenue
 - Open the southbound left-turn lane to allow southbound to northbound U-turns;
 - Add a second southbound through lane with a receiving lane south of Hamilton Avenue;
 - Modify the southbound trap right-turn lane to a typical right-turn lane; and
 - Signalize the intersection with protective left-turn phasing in all directions.
- Temperance Avenue / California Avenue
 - Add a second southbound through lane with a receiving lane south of California Avenue; and
 - Signalize the intersection with protective left-turn phasing in all directions.

- Armstrong Avenue / Church Avenue
 - Add an eastbound left-turn lane;
 - Modify the eastbound left-through-right lane to a through lane;
 - Add an eastbound right-turn lane;
 - Add a westbound left-turn lane;
 - Modify the westbound left-through-right lane to a through-right lane;
 - Add a northbound left-turn lane;
 - Modify the northbound left-through-right lane to a through-right lane;
 - Add a southbound left-turn lane;
 - Modify the southbound left-through-right lane to a through-right lane; and
 - Signalize the intersection with protective left-turn phasing in all directions.

It is important to note that Synchro has a three-lane limitation on all-way stop intersections. Therefore, the intersection of Armstrong Avenue at Hamilton Avenue is coded with three lanes on legs that currently contain four lanes. These legs include the north and south legs of the intersection of Armstrong Avenue at Hamilton Avenue.

Table X: Cumulative Year 2046 plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM (7 - 9) Peak Hour		PM (4 - 6) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Fowler Avenue / Hamilton Avenue	One-Way Stop	29.3	D	20.5	C
2	Armstrong Avenue / Hamilton Avenue	All-Way Stop	12.6	B	10.9	B
3	Temperance Avenue / Hamilton Avenue	All-Way Stop	>120.0	F	>120.0	F
		Traffic Signal (Improved)	29.9	C	12.3	B
4	Armstrong Avenue / California Avenue	Two-Way Stop	20.6	C	14.0	B
5	Temperance Avenue / California Avenue	One-Way Stop	>120.0	F	>120.0	F
		Traffic Signal (Improved)	12.2	B	7.5	A
6	Fowler Avenue / Church Avenue	Traffic Signal	30.5	C	22.9	C
7	Armstrong Avenue / Church Avenue	All-Way Stop	>120.0	F	10.0	A
		Traffic Signal (Improved)	48.6	D	16.1	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls.
LOS for two-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

Table XI: Cumulative Year 2046 plus Project Segment LOS Results

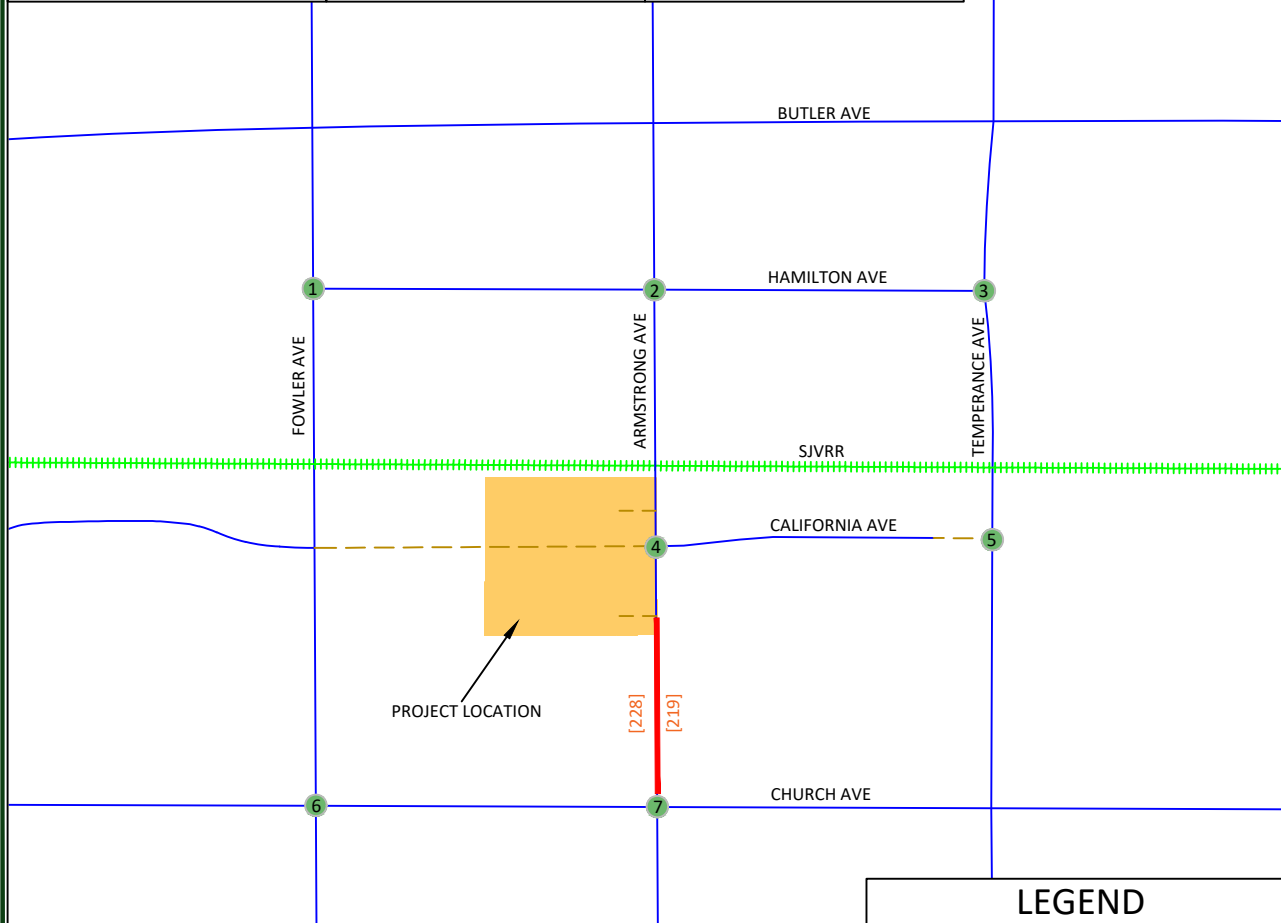
ID	Segment	Limits	Lanes	24-hour Volume	AM Peak Volume	AM LOS	PM Peak Volume	PM LOS
1	Armstrong Avenue	Geary Avenue and Church Avenue	2	5,439	672	C	336	A

Note: LOS = Level of Service per HCM 6th Edition methodologies in HCS7 software

Tract 6376 - City of Fresno 2046 Project Only Trips

Figure 8

1.	Fowler Ave & Hamilton Ave	2.	Armstrong Ave & Hamilton Ave	3.	Temperance Ave & Hamilton Ave	4.	Armstrong Ave & California Ave
5.	Temperance Ave & California Ave	6.	Fowler Ave & Church Ave	7.	Armstrong Ave & Church Ave		



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LEGEND

- # = STUDY INTERSECTION
- - - = FUTURE ROADWAY
- = STUDY SEGMENT
- XX = AM PROJECT ONLY TRIPS
- (XX) = PM PROJECT ONLY TRIPS
- [XX] = DAILY TRIPS

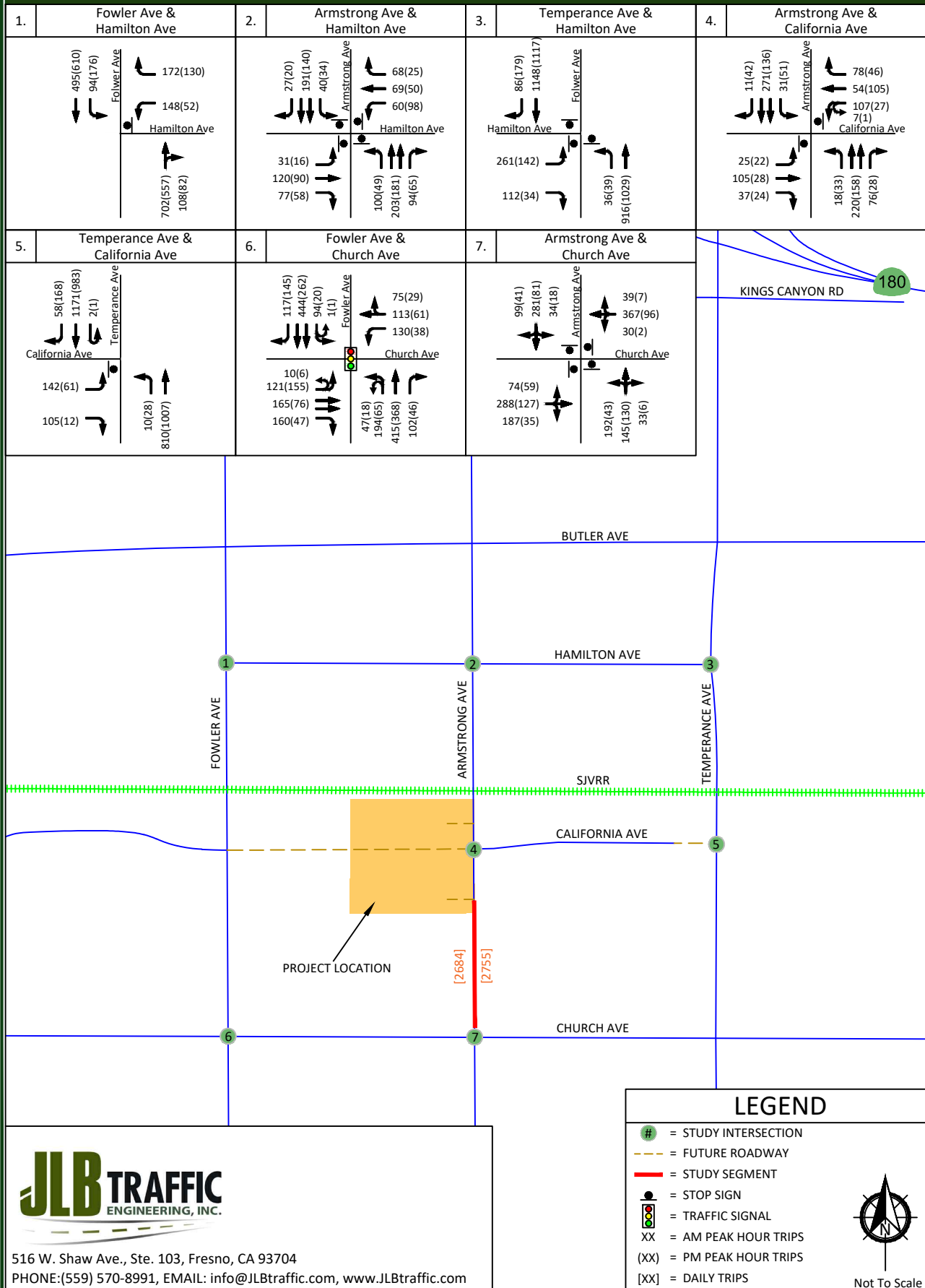


Not To Scale

Tract 6376 - City of Fresno

Cumulative Year 2046 plus Project - Traffic Volumes, Geometrics and Controls

Figure 9



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Queuing Analysis

Table XII provides a queue length summary for left-turn and right-turn lanes at the study intersections under all study scenarios. The queuing analyses for the study intersections are contained in the LOS worksheets for the respective scenarios. Appendix D contains the methodologies used to evaluate these intersections. Queuing analyses were completed using SimTraffic output information. Synchro provides both 50th and 95th percentile maximum queue lengths (in feet). According to the Synchro manual, “the 50th percentile maximum queue is the maximum back of queue on a typical cycle and the 95th percentile queue is the maximum back of queue with 95th percentile volumes” (Cubic ITS, Inc., 2023). The queues shown in Table XII are the 95th percentile queue lengths for the respective lane movements.

The *California Highway Design Manual* (CA HDM) provides guidance for determining deceleration lengths for the left-turn and right-turn lanes based on design speeds. According to the CA HDM, tapers for right-turn lanes are “usually unnecessary since main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift were needed, the approach taper would use the same formula as for a left-turn lane” (Caltrans, 2021). Therefore, a bay taper length pursuant to the CA HDM would need to be added, as necessary, to the recommended storage lengths presented in Table XII.

The storage capacity for the Cumulative Year 2046 plus Project Traffic Conditions shall be based on the SimTraffic output files and engineering judgment. The values in bold presented in Table XII are the projected queue lengths that will likely need to be accommodated by the Cumulative Year 2046 plus Project Traffic Conditions scenario. At the remaining approaches of the study intersections, the existing storage capacity will be sufficient to accommodate the maximum queue.

Table XII: Queuing Analysis

ID	Intersection	Existing Queue Storage Length (ft.)		Existing		Existing plus Project		Near Term plus Project		Cumulative Year 2046 plus Project	
				AM	PM	AM	PM	AM	PM	AM	PM
1	Fowler Avenue / Hamilton Avenue	Westbound Left	>500	127	66	172	58	427	76	320	91
		Westbound Right	100	87	65	141	87	236	73	198	86
		Northbound Through-Right	>500	10	0	23	22	15	22	19	24
		Southbound Left	250	48	77	71	75	72	92	62	76
		Southbound Through	>500	0	0	0	0	0	0	0	10
2	Armstrong Avenue / Hamilton Avenue	Eastbound Left	175	39	22	42	28	42	30	39	39
		Eastbound Through	>500	68	44	63	46	64	57	70	58
		Eastbound Right	175	47	42	52	45	55	54	47	52
		Westbound Left	200	44	47	37	41	44	44	58	51
		Westbound Through	>500	50	42	55	49	43	44	54	35
		Westbound Right	200	25	30	38	25	42	34	44	33
		Northbound Left	150	53	44	49	41	58	40	77	47
		Northbound Through	>500	55	52	74	56	94	68	81	66
		Northbound Right	150	59	38	40	27	50	36	50	49
		Southbound Left	200	38	38	34	34	46	32	45	32
		Southbound Through	>500	51	58	57	45	75	47	62	62
		Southbound Right	100	32	16	39	20	28	25	29	30
3	Temperance Avenue / Hamilton Avenue	Eastbound Left	190	85	28	83	35	140	84	248	130
		Eastbound Right	>500	50	19	33	24	61	16	170	43
		Northbound Left	200	42	48	37	43	50	53	61	123
		Northbound Through	>500	73	81	80	83	138	139	382	476
		Southbound Through	>500	112	61	102	93	193	165	270	272
		Southbound Through	*	*	*	*	*	*	*	262	248
		Southbound Right	>300	39	63	54	63	39	59	49	50

Note: * = Does not exist or is not projected to exist

Table XII: Queuing Analysis (continued)

ID	Intersection	Existing Queue Storage Length (ft.)		Existing		Existing plus Project		Near Term plus Project		Cumulative Year 2046 plus Project	
				AM	PM	AM	PM	AM	PM	AM	PM
4	Armstrong Avenue / California Avenue	Eastbound Left	*	*	*	41	37	61	51	42	40
		Eastbound Through	*	*	*	25	16	39	30	65	33
		Eastbound Right	*	*	*	38	24	43	32	39	34
		Westbound Left	>500	82	38	54	34	56	37	78	29
		Westbound Through	*	*	*	6	25	23	43	36	76
		Westbound Right	>500	54	25	35	25	33	25	37	25
		Northbound Left	*	*	*	19	14	25	25	15	30
		Northbound Through	>500	0	0	0	0	0	0	0	0
		Northbound Through	>500	0	0	0	0	0	0	0	0
		Northbound Right	150	0	0	0	0	0	0	0	0
		Southbound Left	230	23	37	24	22	30	33	21	24
		Southbound Through	>500	0	0	0	0	0	0	0	0
		Southbound Through	>500	0	0	0	0	0	0	0	0
		Southbound Right	*	*	*	0	4	0	7	0	4
5	Temperance Avenue / California Avenue	Eastbound Left	*	*	*	38	27	76	48	165	59
		Eastbound Right	*	*	*	32	19	83	20	81	14
		Northbound Left	*	*	*	12	21	16	40	24	75
		Northbound Through	*	*	*	0	0	0	0	278	408
		Southbound Left	*	*	*	0	0	0	9	14	8
		Southbound Through	*	*	*	*	*	*	0	184	221
		Southbound Through	*	*	*	0	0	0	0	199	242
		Southbound Right	*	*	*	0	0	0	0	38	48

Note: * = Does not exist or is not projected to exist

Table XII: Queuing Analysis (continued)

ID	Intersection	Existing Queue Storage Length (ft.)		Existing		Existing plus Project		Near Term plus Project		Cumulative Year 2046 plus Project	
				AM	PM	AM	PM	AM	PM	AM	PM
6	Fowler Avenue / Church Avenue	Eastbound Left	215	76	67	124	118	147	133	159	156
		Eastbound Through	>500	71	43	90	56	110	59	135	80
		Eastbound Through	*	*	*	49	8	34	13	66	14
		Eastbound Right	>300	56	44	42	30	69	40	59	32
		Westbound Left	*	*	*	94	40	147	48	157	58
		Westbound Left-Through-Right	>500	101	55	*	*	*	*	*	*
		Westbound Through-Right	*	*	*	114	69	176	76	140	95
		Northbound Left	240	71	33	141	45	198	91	244	76
		Northbound Through	*	*	*	267	148	248	161	306	199
		Northbound Through-Right	>500	148	82	*	*	*	*	*	*
		Northbound Right	*	*	*	44	20	41	21	36	22
		Southbound Left	240	64	29	135	39	136	60	142	36
		Southbound Through	>500	115	73	134	103	186	110	201	140
		Southbound Through	>500	90	81	114	35	155	70	166	115
		Southbound Right	170	0	0	54	67	64	51	82	73
7	Armstrong Avenue / Church Avenue	Eastbound Left	*	*	*	*	*	106	67	101	74
		Eastbound Through	*	*	*	*	*	206	80	193	58
		Eastbound Left-Through-Right	>500	77	41	104	62	*	*	*	*
		Eastbound Right	*	*	*	*	*	100	56	98	42
		Westbound Left	*	*	*	*	*	69	15	47	19
		Westbound Left-Through-Right	>500	49	28	49	36	*	*	*	*
		Westbound Through-Right	*	*	*	*	*	265	67	236	76
		Northbound Left	*	*	*	*	*	231	42	185	47
		Northbound Left-Through-Right	>500	93	60	94	47	*	*	*	*
		Northbound Through-Right	*	*	*	*	*	195	93	126	84
		Southbound Left	*	*	*	*	*	61	34	50	53
		Southbound Left-Through-Right	>500	107	56	112	43	*	*	*	*
		Southbound Through-Right	*	*	*	*	*	284	73	244	88

Note: * = Does not exist or is not projected to exist

Conclusions and Recommendations

Conclusions and recommendations regarding the proposed Project are presented below.

Existing Traffic Conditions

- JLB conducted a search of the Statewide Integrated Traffic Records System (SWITRS) to obtain collision reports for the most recent five-year period. Based on a review of the collision reports, a total of twenty-three (23) collisions were reported within the influence zone of the study intersections. Based on the number of correctable collisions, JLB does not recommended changes to the existing traffic controls at any of these intersections as a result of collision activity.
- At present, all study intersections operate at an acceptable LOS.
- At present, the study segment operates at an acceptable LOS.

Existing plus Project Traffic Conditions

- JLB analyzed the location of the existing and proposed roadways and access points. This review revealed that all access points are located at points that minimize traffic operational impacts to existing and future roadway networks.
- At buildout, the proposed Project is estimated to generate a maximum of 1,905 daily trips, 141 AM peak hour trips and 190 PM peak hour trips.
- It is recommended that left-turn pockets with a storage capacity of 150 feet be included as part of the design of California Avenue at its intersections with Burgan Avenue and Cypress Avenue.
- It is recommended that the Project implement a Class II Bikeways along its frontages to Armstrong Avenue and California Avenue.
- It is recommended that the Project implement ADA compliant pedestrian sidewalks along internal streets connecting all uses to external sidewalks and along its frontages to Armstrong Avenue and California Avenue.
- It is recommended that the Project and SUSD look into funding sources to enhance the walkways for Middle and High School students for and from the Sanger West High School and Middle School.
- Under this scenario, all study intersections are projected to continue operating at an acceptable LOS.
- Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

Near Term plus Project Traffic Conditions

- The total trip generation for the Near Term Projects is 96,426 weekday daily trips, 6,883 weekday AM peak hour trips and 8,598 weekday PM peak hour trips.
- Under this scenario, the intersections of Temperance Avenue at Hamilton Avenue and Armstrong Avenue at Church Avenue are projected to exceed their LOS threshold during AM peak period. It is recommended that the following improvements be considered for implementation to improve the LOS at these intersections.
 - Temperance Avenue / Hamilton Avenue
 - Open the southbound left-turn lane to allow southbound to northbound U-turns; and
 - Signalize the intersection with protective left-turn phasing in all directions.
 - Armstrong Avenue / Church Avenue
 - Add an eastbound left-turn lane;
 - Modify the eastbound left-through-right lane to a through lane;

- Add an eastbound right-turn lane;
 - Add a westbound left-turn lane;
 - Modify the westbound left-through-right lane to a through-right lane;
 - Add a northbound left-turn lane;
 - Modify the northbound left-through-right lane to a through-right lane;
 - Add a southbound left-turn lane;
 - Modify the southbound left-through-right lane to a through-right lane; and
 - Signalize the intersection with protective left-turn phasing in all directions.
- Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

Cumulative Year 2046 plus Project Traffic Conditions

- Under this scenario, the intersections of Temperance Avenue at Hamilton Avenue, Temperance Avenue at California Avenue and Armstrong Avenue at Church Avenue are projected to exceed their LOS threshold during one or both peak periods. It is recommended that the following improvements be considered for implementation to improve the LOS at these intersections.
 - Temperance Avenue / Hamilton Avenue
 - Open the southbound left-turn lane to allow southbound to northbound U-turns;
 - Add a second southbound through lane with a receiving lane south of Hamilton Avenue;
 - Modify the southbound trap right-turn lane to a typical right-turn lane; and
 - Signalize the intersection with protective left-turn phasing in all directions.
 - Temperance Avenue / California Avenue
 - Add a second southbound through lane with a receiving lane south of California Avenue; and
 - Signalize the intersection with protective left-turn phasing in all directions.
 - Armstrong Avenue / Church Avenue
 - Add an eastbound left-turn lane;
 - Modify the eastbound left-through-right lane to a through lane;
 - Add an eastbound right-turn lane;
 - Add a westbound left-turn lane;
 - Modify the westbound left-through-right lane to a through-right lane;
 - Add a northbound left-turn lane;
 - Modify the northbound left-through-right lane to a through-right lane;
 - Add a southbound left-turn lane;
 - Modify the southbound left-through-right lane to a through-right lane; and
 - Signalize the intersection with protective left-turn phasing in all directions.
- Under this scenario, the study segment is projected to continue operating at an acceptable LOS.

Study Participants

JLB Traffic Engineering, Inc. Personnel:

Jose Luis Benavides, PE, TE	Project Manager
Matthew Arndt, EIT	Engineer I/II
Adrian Benavides	Engineer I/II
Christian Sanchez, EIT	Engineer I/II
Arjun Dhillon	Engineering Aide
Diana Cortes	Engineering Aide

Persons Consulted:

John Bonadelle	Bonadelle Neighborhoods
Trent Walker	Bonadelle Neighborhoods
Jill Gormley, TE	City of Fresno
Sophia Pagoulatos	City of Fresno
Hector Luna	Fresno County
Mike Aronson, PE	Kittelson & Associates

References

Caltrans. 2019. "Highway Design Manual". Sacramento: State of California.

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Transportation Research Board. 2016. "Highway Capacity Manual". Washington: The National Academy of Sciences.

Appendix A: Scope of Work



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Fresno, CA 93704
(559) 570-8991

A p p | A

September 20, 2024

Mr. Jill Gormley, T.E.
City of Fresno
2600 Fresno Street
Fresno, CA 93721-3616

Via Email Only: Jill.Gormley@fresno.gov

Subject: *Proposed Scope of Work for the Preparation of a Traffic Impact Analysis for Residential Development in the City of Fresno (JLB Project 004-223)*

Dear Mr. Gormley,

JLB Traffic Engineering, Inc. (JLB) hereby submits this Draft Scope of Work for the preparation of a Traffic Impact Analysis (TIA) for the proposed Residential Development (Project) located on the southwest corner of Armstrong Avenue and the San Joaquin Valley Railroad in the City of Fresno. The Project proposes to construct 212 single-family housing units. Based on information provided to JLB, the proposed Project is consistent with the City of Fresno General Plan. An aerial of the Project vicinity and Project Site Plan are shown in Exhibits A and B, respectively.

The purpose of the TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the on-going planning process. To evaluate the on-site and off-site traffic impacts of the proposed Project, JLB proposes the following Scope of Work.

Scope of Work

- JLB will obtain recent (less than 12 months) or schedule conduct new traffic counts at the study facility(ies) when schools in the vicinity are in session. These counts will include pedestrians and vehicles.
- JLB will request a Fresno Council of Governments (Fresno COG) traffic forecast model run for the Project (Select Zone Analysis) which will include the Project and the streets to be analyzed. The Fresno COG traffic forecasting model will be used to forecast traffic volumes for the Base Year 2019 and Cumulative Year 2046 scenarios.
- JLB will perform a site visit to observe existing traffic conditions, especially during the AM and PM peak hours. Existing roadway conditions including speed limits, lane geometrics, turn prohibitions and traffic controls will be verified.
- JLB will conduct a qualitative safe routes to school evaluation from the Project site to the K-12 school(s) which would most likely serve the Project on opening day.
- JLB will evaluate on-site circulation and provide recommendations as necessary to improve circulation to and within the Project site.
- JLB will qualitatively analyze existing and planned transit routes in the vicinity of the Project.
- JLB will qualitatively analyze existing and planned walkways in the vicinity of the Project.



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Page | 1

- JLB will qualitatively analyze existing and planned bikeways in the vicinity of the Project.
- JLB will prepare California Manual on Uniform Traffic Control Devices (CA MUTCD) Warrant 1 “8-hour” and Warrant 2 “4-hour” for existing unsignalized study intersections under the Existing scenario.
- JLB will prepare CA MUTCD Warrant 3 “Peak Hour” for unsignalized study intersections under all study scenarios.
- JLB will forecast trip distribution based on turn count information and knowledge of the existing and planned circulation network in the vicinity of the Project. Exhibit C displays a trip distribution for the proposed Project.
- JLB will evaluate existing and forecasted levels of service (LOS) at the study intersection(s). JLB will use HCM 6th Edition or HCM 2000 methodologies (as appropriate) within Synchro to perform this analysis for the AM and PM peak hours. JLB will identify the causes of poor LOS.
- JLB will prepare a five-year collision analysis based on the Statewide Integrated Traffic Reporting System (SWITRS) database for all existing study facilities.

Study Scenarios

1. Existing Traffic Conditions with needed improvements (if any);
2. Existing plus Project Traffic Conditions with proposed improvements (if any);
3. Near Term plus Project Traffic Conditions with proposed improvements (if any); and
4. Cumulative Year 2046 plus Project Traffic Conditions with proposed improvements (if any).

Weekday peak hours to be analyzed (Tuesday, Wednesday or Thursday only)

1. 7 - 9 AM peak hour
2. 4 - 6 PM peak hour

Study Intersections

1. Fowler Avenue / Hamilton Avenue
2. Armstrong Avenue / Hamilton Avenue
3. Temperance Avenue / Hamilton Avenue
4. Armstrong Avenue / California Avenue
5. Temperance Avenue / California Avenue (future intersection)
6. Fowler Avenue / Church Avenue
7. Armstrong Avenue / Church Avenue

Queuing analysis is included in the proposed Scope of Work for the study intersection(s) listed above under all study scenarios. This analysis will be utilized to recommend minimum storage lengths for left-turn and right-turn lanes at all study intersections.

Study Segments

1. None

Project Only Trip Assignment to State Facilities

1. None

Project Trip Generation

Trip generation rates for the proposed Project land use were obtained from the 11th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table I presents the trip generation for the proposed Project with trip generation rates for 212 Single-Family Detached Housing units. At buildout, the proposed Project is estimated to generate approximately 1,999 daily trips, 148 AM peak hour trips and 199 PM peak hour trips.

Table I: Project Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		AM (7-9) Peak Hour						PM (4-6) Peak Hour					
			Rate	Total	Trip Rate	In	Out	In	Out	Total	Trip Rate	In	Out	In	Out	Total
						%						%				
Single-Family Detached Housing (210)	212	d.u.	9.43	1,999	0.70	26	74	39	109	148	0.94	63	37	125	74	199
Total Project Trips				1,999				39	109	148				125	74	199

Note: d.u. = Dwelling Units

Access to the Project

Access to and from the Project site will be from six (6) access points. Four (4) access points are located along future California Avenue west of Armstrong Avenue. The Project proposes to construct California Avenue west of Armstrong Avenue within the Project site for approximately 1,300 feet. The fifth access point is proposed along the west side of Armstrong Avenue approximately 350 feet north of California Avenue. The sixth access point is proposed along the west side of Armstrong Avenue approximately 550 feet south of California Avenue. All six (6) access points are proposed to allow full access. The City of Fresno General Plan planned California Avenue between Fowler Avenue and Armstrong Avenue as a four-lane collector.

Near Term Projects to be Included

Based on our local knowledge of the study area and consultation with City of Fresno Planning & Development staff, JLB will include Near Term Projects in the vicinity of the proposed Project under the Near Term plus Project Traffic Conditions scenario. The Near Term Projects proposed to be included in the Near Term plus Project Traffic Conditions scenario are:

<u>Project Name</u>	<u>General Location</u>
1. TT 5498	NEC Peach Avenue and Church Avenue
2. TT 5638	NWC Armstrong Avenue and Church Avenue
3. TT 5717 (portion of)	NEQ Fowler Avenue and Clinton Avenue
4. TT 6201 (portion of)	NEQ Armstrong Avenue and Floradora Avenue
5. TT 6214 (portion of)	SEQ Fowler Avenue and Clinton Avenue
6. TT 6219 (portion of)	NWC Locan Avenue alignment and McKinley Avenue
7. TT 6224 (portion of)	SEC Temperance Avenue and Shields Avenue
8. TT 6298	NEQ Armstrong Avenue and Belmont Avenue
9. TT 6299	SEC Armstrong Avenue and Belmont Avenue
10. 7-Eleven and Fuel Station	NWC Clovis Avenue and Jensen Avenue
11. BDM Builders	NEC Maple Avenue and Jensen Avenue
12. Fancher Creek (portion of)	East of Clovis Avenue and Tulare Avenue
13. Hale Property	NEQ Fowler Avenue and Church Avenue

- | | |
|--|---|
| 14. Lennar Heirloom Homes | NWC Fowler Avenue and Church Avenue |
| 15. Malaga Industrial | SEC Minnewawa Avenue at North Avenue |
| 16. Fowler-McKinley Elementary School | NEC Fowler Avenue and McKinley Avenue alignment |
| 17. Mixed-Use Development (portion of) | SEC Fowler Avenue and Shields Avenue |
| 18. SUSD Educational Center (portion of) | NEQ Fowler Avenue and Jensen Avenue |

Other Near Term Projects the City, County or Caltrans has knowledge and for which it is anticipated that said project(s) is/are projected to be whole or partially built by the Near Term Project Year 2026, City, County and Caltrans, as appropriate, would provide JLB with project details such as a project description, location, proposed land uses with breakdowns and type of residential units and number of square footages for non-residential uses.

The Scope of Work is based on our understanding of this Project and our experience with similar Reports. We kindly ask that all responsible agencies submit any comments by October 11, 2024. If you have any questions or require additional information, please contact me by phone at (559) 317-6243, or via email at marndt@jlbtraffic.com.

Sincerely,



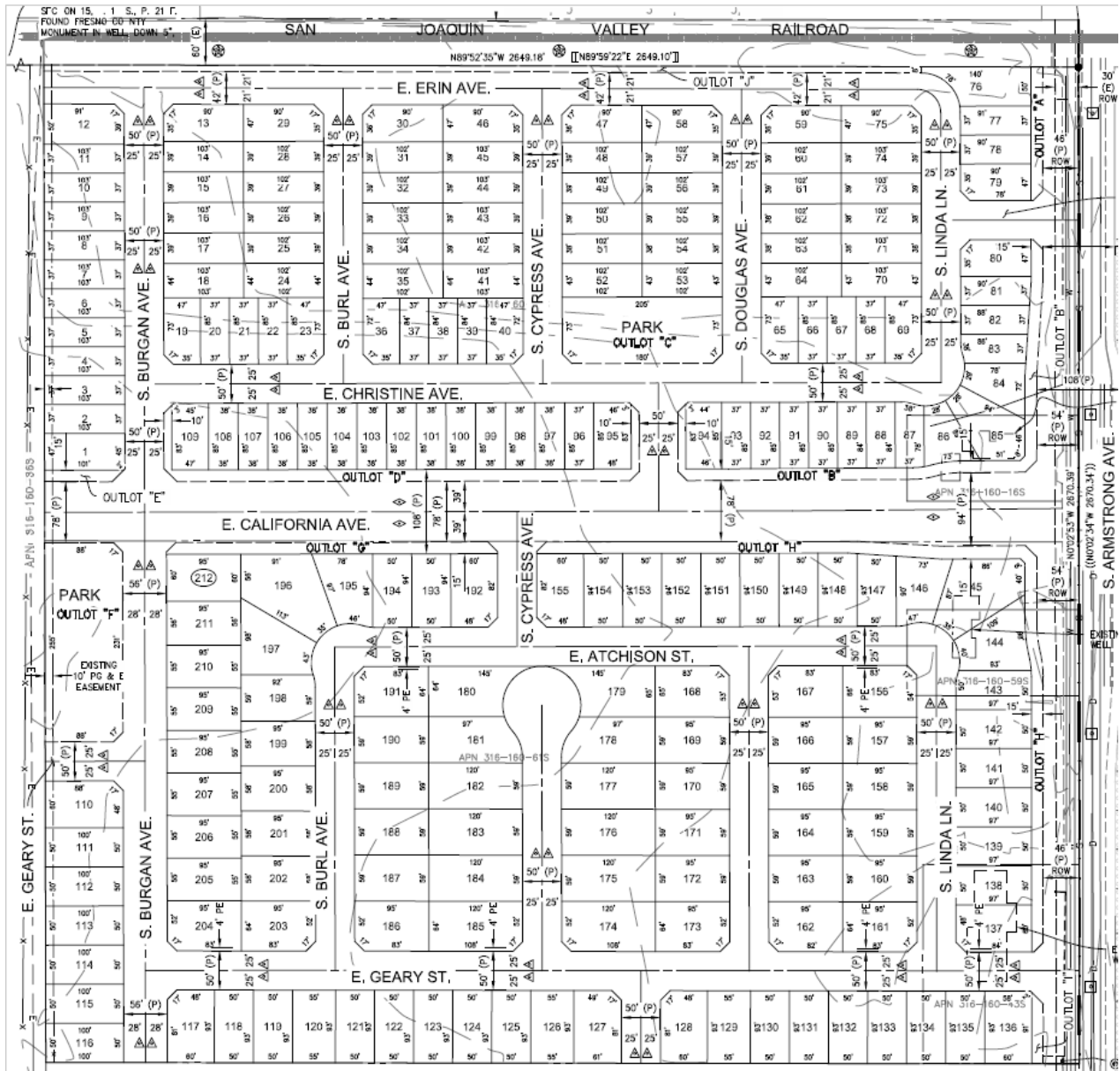
Matthew Arndt, EIT
JLB Traffic Engineering, Inc.

cc: Jose Luis Benavides, JLB Traffic Engineering, Inc.

Exhibit A – Project Site Aerial

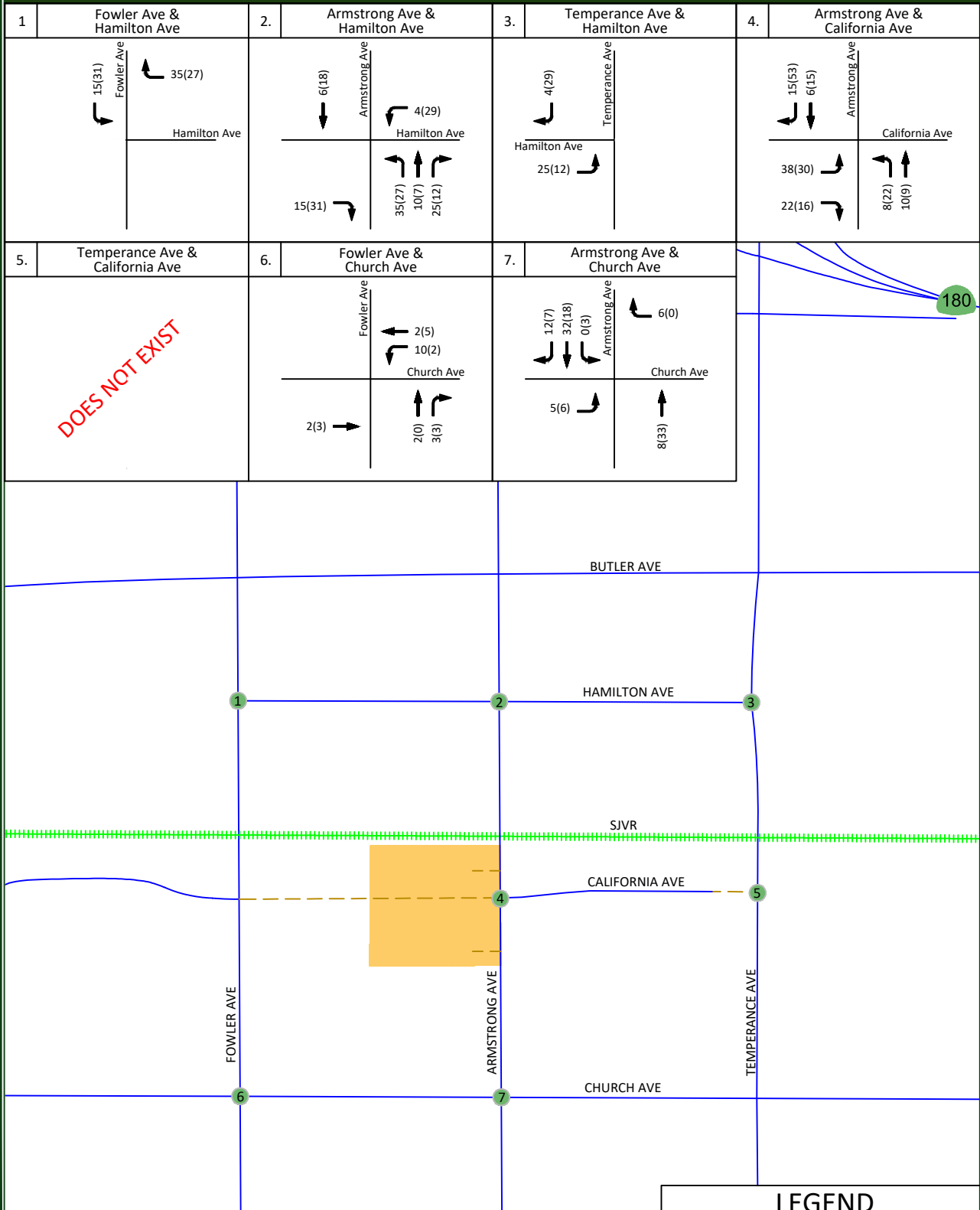


Exhibit B – Project Site Plan



Simonian TIA - City of Fresno Project Trip Distribution

Exhibit C



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LEGEND

- # = STUDY INTERSECTION
- = FUTURE ROADWAY
- XX = AM PROJECT ONLY TRIPS
- (XX) = PM PROJECT ONLY TRIPS



Not To Scale

Matt Arndt

From: Jill Gormley <Jill.Gormley@fresno.gov>
Sent: Thursday, August 15, 2024 5:34 PM
To: Matt Arndt
Cc: Jose Benavides
Subject: RE: Simonian TIA Draft Scope of Work

Hi Matt,

Please add Fowler/Hamilton to the list of study locations. With that addition I'll have no more comments.

Jill Gormley, TE

Assistant Director
Traffic & Engineering Services, Public Works Department
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Fresno, CA 93721-3623
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Building a Better Fresno



From: Matt Arndt <marndt@jlbtraffic.com>
Sent: Tuesday, August 6, 2024 5:33 PM
To: Jill Gormley <Jill.Gormley@fresno.gov>
Cc: Jose Benavides <jbenavides@jlbtraffic.com>
Subject: RE: Simonian TIA Draft Scope of Work

External Email: Use caution with links and attachments

Hello Jill,

Attached is the prior model run for 172 dwelling units (TAZ A and TAZ B are a part of the 172 dwelling units). We are still waiting on the updated model run to be completed. I also reattached the draft scope of work as this trip distribution in this letter takes the prior model distribution and prorates it up to 212 dwelling units.

Let me know if you have any further questions.

Sincerely,

Matthew Arndt



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From: Jill Gormley <Jill.Gormley@fresno.gov>

Sent: Tuesday, August 6, 2024 5:24 PM

To: Matt Arndt <marndt@jlbtraffic.com>

Cc: Jose Benavides <jbenavides@jlbtraffic.com>

Subject: RE: Simonian TIA Draft Scope of Work

Hi Matt,

Can you provide the select zone model run.

Jill

From: Matt Arndt <marndt@jlbtraffic.com>

Sent: Tuesday, August 6, 2024 4:20 PM

To: Jill Gormley <Jill.Gormley@fresno.gov>

Cc: Jose Benavides <jbenavides@jlbtraffic.com>

Subject: RE: Simonian TIA Draft Scope of Work

External Email: Use caution with links and attachments

Hello Jill,

Just following up with the call I placed to your office to see if you had any thoughts on my email below. Please let me know if you have any questions or concerns. Look forward to hearing from you.

Sincerely,

Matthew Arndt



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From: Matt Arndt

Sent: Thursday, July 25, 2024 3:46 PM

To: Jill Gormley <Jill.Gormley@fresno.gov>

Cc: Jose Benavides <jbenavides@jlbtraffic.com>

Subject: Simonian TIA Draft Scope of Work

Hello Jill,

Attached is the Draft Scope of Work for the Simonian TIA in the City of Fresno. This Project was originally analyzed in late 2021/early 2022. The items within this scope of work contains all items that were approved or requested to be included in 2021 by the City of Fresno, County of Fresno and Caltrans. Since then, the Project has increased from 172 dwelling units to 212 dwelling units. Let me know if you will allow us to use the Draft Scope of Work that includes all items in the previously approved scope or if you prefer that we go through the scoping process again and share this Draft Scope of Work with all responsible agencies again.

If you have any questions or require any additional information, please let us know.

Sincerely,

Matthew Arndt



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Matt Arndt

From: Hines, Brody <bhines@fresnocountyca.gov>
Sent: Monday, September 30, 2024 1:22 PM
To: Matt Arndt; Luna, Hector
Subject: RE: Simonian TIA Draft Scope of Work

Good afternoon Matt,

The county would like to request that the segment of Armstrong between Church and Geary be included in the scope of work for analysis.

Thank you,



Brody Hines | Planner
Department of Public Works and Planning |
Water and Natural Resources Division |
Transportation Planning Unit
2220 Tulare St. 8th Floor Fresno, CA 93721
Main Office: (559) 600-4292 | Direct: (559) 600-2184
Email: bhines@FresnoCountyCa.gov
[Your input matters! Customer Service Survey](#)

From: Matt Arndt <marndt@jlbtraffic.com>
Sent: Monday, September 30, 2024 12:07 PM
To: Luna, Hector <HLuna@fresnocountyca.gov>
Cc: Hines, Brody <bhines@fresnocountyca.gov>
Subject: RE: Simonian TIA Draft Scope of Work

Hello Hector,

Just wanted to follow up this week to see if the County was still on track to give comments this week? Thanks.

Sincerely,

Matthew Arndt



Traffic Engineering, Transportation Planning and Parking Solutions
Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
Office: (559) 570-8991
Direct: (559) 317-6243
Cell: (559) 360-1886

From: Luna, Hector <HLuna@fresnocountyca.gov>
Sent: Thursday, September 26, 2024 11:53 AM
To: Matt Arndt <marndt@jlbtraffic.com>
Cc: Hines, Brody <bhines@fresnocountyca.gov>
Subject: RE: Simonian TIA Draft Scope of Work

Hello Matt,

The scope was received, comments should be available by next week.
For future reference, please include Brody Hines (cc'd) in all future transportation requests/inquiries.

Regards,



Hector E. Luna | **Senior Planner**
Department of Public Works and Planning |
Water and Natural Resources Division
2220 Tulare St. 6th Floor Fresno, CA 93721
Main Office: (559) 600-4292 | Direct: (559) 600-9672
Email: hluna@FresnoCountyCa.gov
[Your input matters! Customer Service Survey](#)

From: Matt Arndt <marndt@jlbtraffic.com>
Sent: Thursday, September 26, 2024 11:50 AM
To: Luna, Hector <HLuna@fresnocountyca.gov>
Subject: RE: Simonian TIA Draft Scope of Work

Hello Hector,

Just following up to ensure you received this Draft Scope of Work. Please let me know if you have any questions.

Sincerely,

Matthew Arndt



Traffic Engineering, Transportation Planning and Parking Solutions
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Office: (559) 570-8991
Direct: (559) 317-6243
Cell: (559) 360-1886
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From: Matt Arndt
Sent: Friday, September 20, 2024 3:35 PM
To: Luna, Hector <HLuna@fresnocountyca.gov>
Subject: Simonian TIA Draft Scope of Work

Hello Hector,

Attached to this email is the Draft Scope of Work for the Simonian Subdivision TIA. This Project is located on the southwest corner of Armstrong Avenue and the San Joaquin Valley Railroad in the City of Fresno. A previous version of this project had an approved Draft Scope of Work from all responsible agencies back in July of 2021. This Draft Scope of Work includes all of the items requested in the prior Draft Scope of Work plus the intersection of Fowler Avenue at Hamilton Avenue.

We kindly ask that you take a moment to review and comment on the proposed Draft Scope of Work. If you have any questions or require additional information, please contact me by phone at (559)317-6243 or by responding to this email. We appreciate your time and attention to this matter and look forward to hearing from you soon.

Sincerely,

Matthew Arndt



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Appendix B: Traffic Counts



www.JLBtraffic.com
info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

JLB Traffic Engineering, Inc.

516 West Shaw Avenue, Suite 103

Fresno, CA, 93704

Traffic Engineering, Transportation, & Parking Solutions

www.JLBtraffic.com

File Name : 01 Fowler at Hamilton

Site Code : 00000000

Start Date : 8/29/2024

Page No : 1

Groups Printed- Unshifted

	FOWLER From North				HAMILTON From East				FOWLER From South				HAMILTON From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
07:00 AM	0	68	12	0	37	0	17	0	12	82	0	0	0	0	0	0	228
07:15 AM	0	83	15	0	30	0	14	0	27	125	0	0	0	0	0	0	294
07:30 AM	0	93	12	0	39	0	25	0	21	133	0	0	0	0	0	0	323
07:45 AM	0	102	11	0	46	0	51	0	14	110	0	0	0	0	0	0	334
Total	0	346	50	0	152	0	107	0	74	450	0	0	0	0	0	0	1179
08:00 AM	0	90	19	0	24	0	28	0	27	145	0	1	0	0	0	0	334
08:15 AM	0	73	21	0	35	0	24	0	35	121	0	1	0	0	0	0	310
08:30 AM	0	47	18	0	20	0	14	0	21	110	0	0	0	0	0	0	230
08:45 AM	0	33	14	0	24	0	11	0	5	50	0	0	0	0	0	0	137
Total	0	243	72	0	103	0	77	0	88	426	0	2	0	0	0	0	1011
*** BREAK ***																	
04:00 PM	0	103	46	0	30	0	18	0	23	95	0	0	0	0	0	0	315
04:15 PM	0	123	40	0	30	0	13	0	21	92	0	0	0	0	0	0	319
04:30 PM	0	100	37	0	28	0	16	0	16	103	0	0	0	0	0	0	300
04:45 PM	0	116	32	0	20	0	6	1	11	99	0	0	0	0	0	0	285
Total	0	442	155	0	108	0	53	1	71	389	0	0	0	0	0	0	1219
05:00 PM	0	99	33	0	25	0	10	1	16	92	0	0	0	0	0	0	276
05:15 PM	0	136	38	0	30	0	8	0	10	102	0	0	0	0	0	0	324
05:30 PM	0	119	38	0	27	0	15	0	24	128	0	0	0	0	0	0	351
05:45 PM	0	107	39	0	34	0	15	0	13	107	0	0	0	0	0	0	315
Total	0	461	148	0	116	0	48	1	63	429	0	0	0	0	0	0	1266
Grand Total	0	1492	425	0	479	0	285	2	296	1694	0	2	0	0	0	0	4675
Apprch %	0	77.8	22.2	0	62.5	0	37.2	0.3	14.9	85	0	0.1	0	0	0	0	
Total %	0	31.9	9.1	0	10.2	0	6.1	0	6.3	36.2	0	0	0	0	0	0	

JLB Traffic Engineering, Inc.

516 West Shaw Avenue, Suite 103

Fresno, CA, 93704

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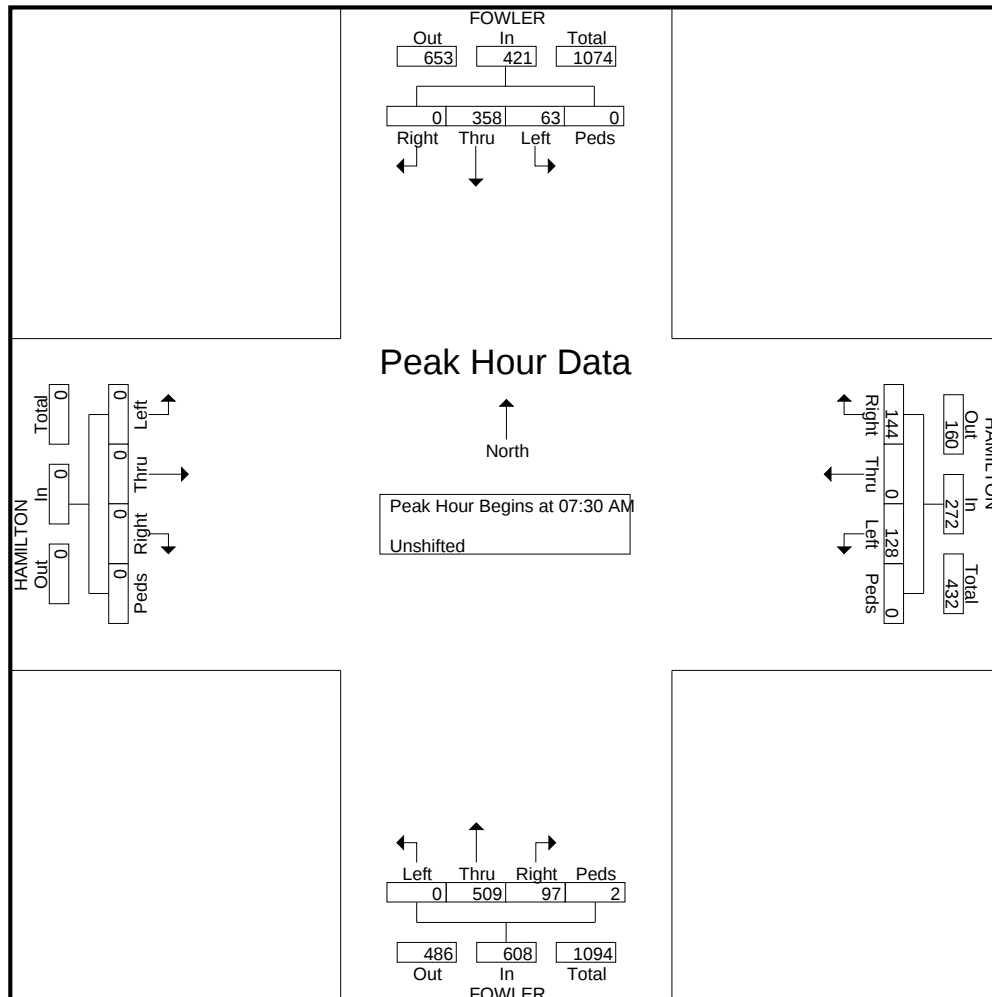
File Name : 01 Fowler at Hamilton

Site Code : 00000000

Start Date : 8/29/2024

Page No : 2

	FOWLER From North					HAMILTON From East					FOWLER From South					HAMILTON From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	93	12	0	105	39	0	25	0	64	21	133	0	0	154	0	0	0	0	0	323
07:45 AM	0	102	11	0	113	46	0	51	0	97	14	110	0	0	124	0	0	0	0	0	334
08:00 AM	0	90	19	0	109	24	0	28	0	52	27	145	0	1	173	0	0	0	0	0	334
08:15 AM	0	73	21	0	94	35	0	24	0	59	35	121	0	1	157	0	0	0	0	0	310
Total Volume	0	358	63	0	421	144	0	128	0	272	97	509	0	2	608	0	0	0	0	0	1301
% App. Total	0	85	15	0		52.9	0	47.1	0		16	83.7	0	0.3		0	0	0	0		
PHF	.000	.877	.750	.000	.931	.783	.000	.627	.000	.701	.693	.878	.000	.500	.879	.000	.000	.000	.000	.000	.974



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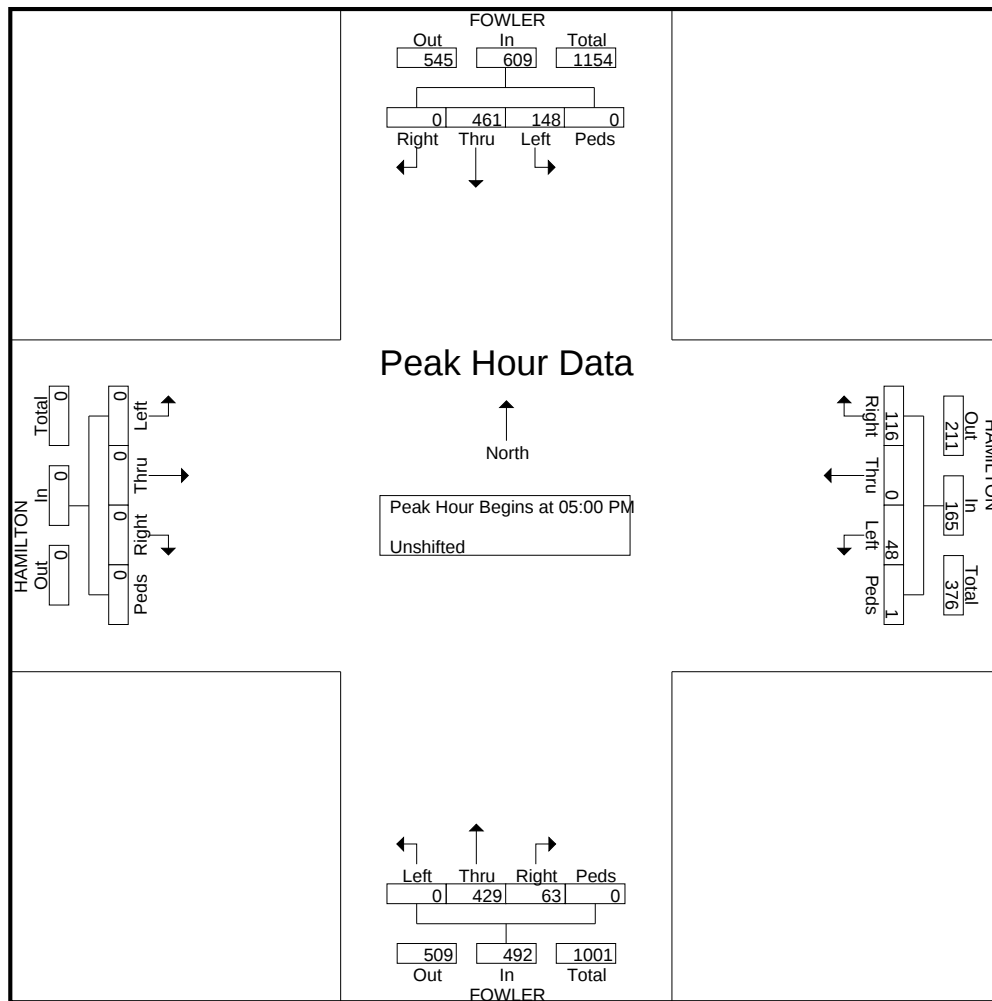
File Name : 01 Fowler at Hamilton

Site Code : 00000000

Start Date : 8/29/2024

Page No : 3

	FOWLER From North					HAMILTON From East					FOWLER From South					HAMILTON From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	99	33	0	132	25	0	10	1	36	16	92	0	0	108	0	0	0	0	0	276
05:15 PM	0	136	38	0	174	30	0	8	0	38	10	102	0	0	112	0	0	0	0	0	324
05:30 PM	0	119	38	0	157	27	0	15	0	42	24	128	0	0	152	0	0	0	0	0	351
05:45 PM	0	107	39	0	146	34	0	15	0	49	13	107	0	0	120	0	0	0	0	0	315
Total Volume	0	461	148	0	609	116	0	48	1	165	63	429	0	0	492	0	0	0	0	0	1266
% App. Total	0	75.7	24.3	0		70.3	0	29.1	0.6		12.8	87.2	0	0		0	0	0	0	0	
PHF	.000	.847	.949	.000	.875	.853	.000	.800	.250	.842	.656	.838	.000	.000	.809	.000	.000	.000	.000	.000	.902



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Page No : 1

[illegible]

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[illegible]

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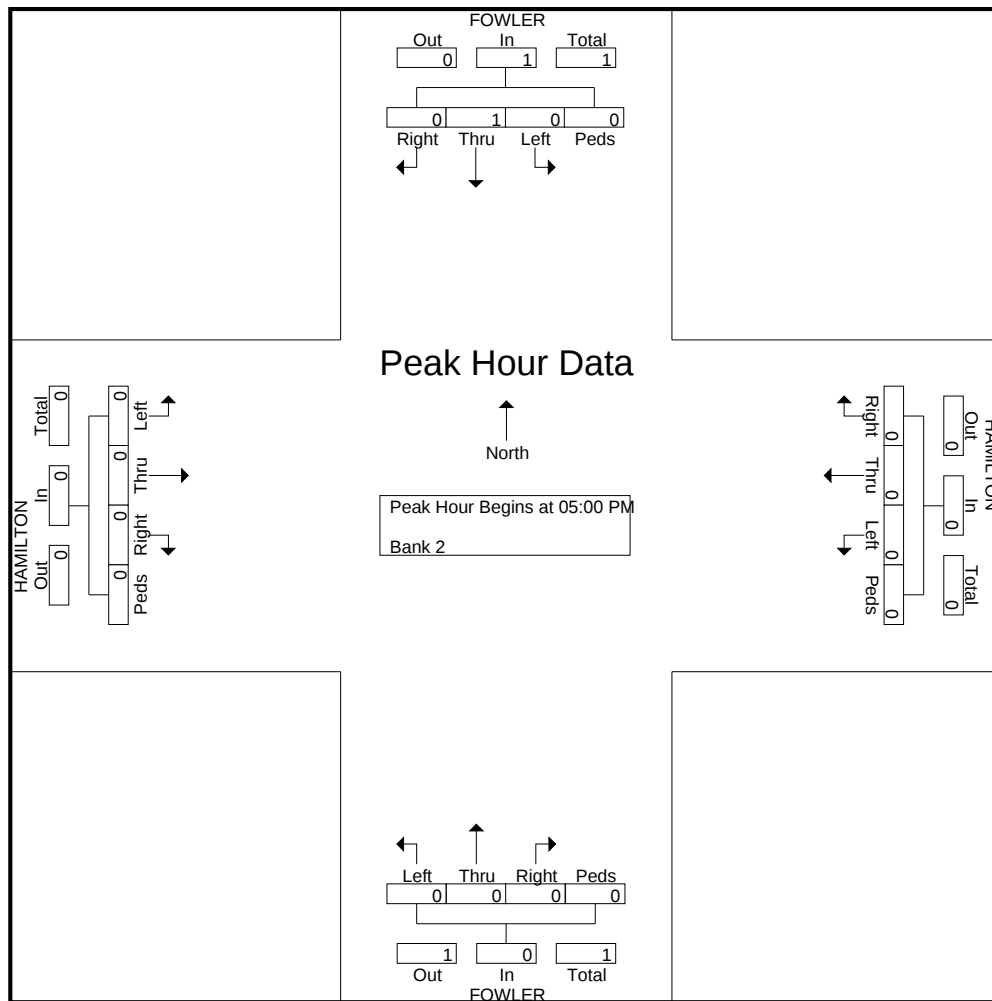
File Name : 01 Fowler at Hamilton

Site Code : 00000000

Start Date : 8/29/2024

Page No : 3

	FOWLER From North					HAMILTON From East					FOWLER From South					HAMILTON From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250





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:

JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Armstrong Ave @ Hamilton Ave

LATITUDE 36.7258

COUNTY Fresno

LONGITUDE -119.6731

COLLECTION DATE Tuesday, June 4, 2024

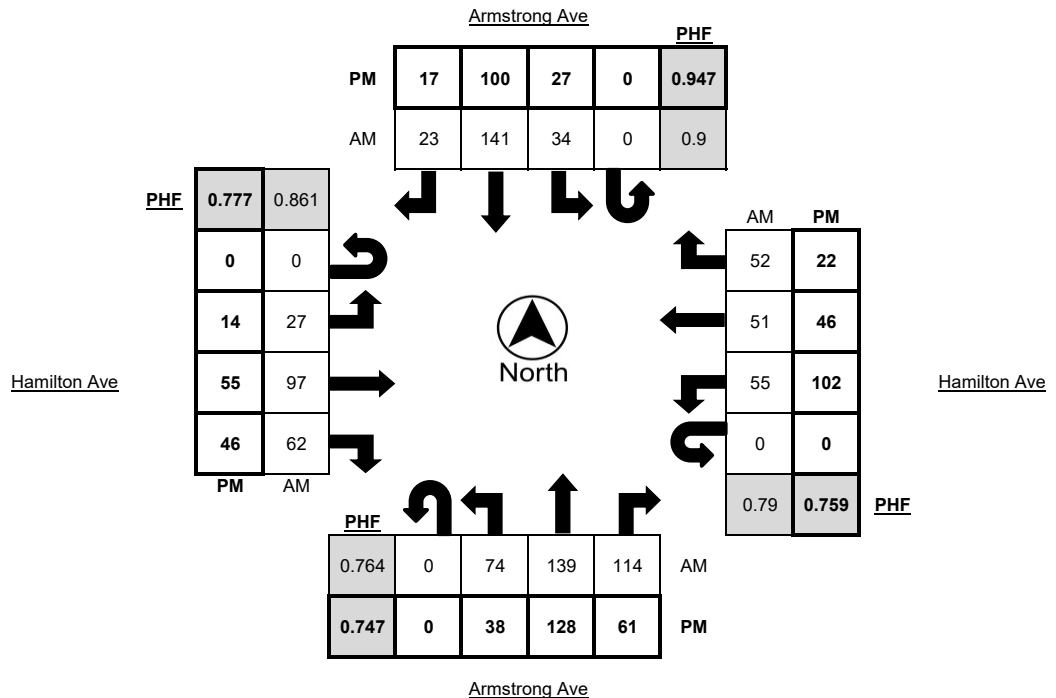
WEATHER Clear

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	1	8	20	20	1	0	2	23	3	1	0	4	23	6	1	0	4	4	8	0
7:15 AM - 7:30 AM	0	19	45	29	1	0	2	16	3	0	0	2	16	3	1	0	11	9	9	0
7:30 AM - 7:45 AM	0	19	46	42	4	0	6	33	5	0	0	6	33	15	0	0	7	20	23	1
7:45 AM - 8:00 AM	0	21	48	20	1	0	14	31	10	3	0	13	26	13	1	0	15	17	17	2
8:00 AM - 8:15 AM	0	18	21	31	0	0	10	40	5	1	0	7	18	20	1	0	17	8	8	0
8:15 AM - 8:30 AM	0	16	24	21	1	0	4	37	3	0	0	1	20	14	1	0	16	6	4	0
8:30 AM - 8:45 AM	0	9	28	13	0	0	1	21	3	1	0	3	18	8	0	0	11	8	1	0
8:45 AM - 9:00 AM	0	11	16	11	0	0	3	12	1	0	0	0	14	8	0	0	4	11	5	0
TOTAL	1	121	248	187	8	0	42	213	33	6	0	36	168	87	5	0	85	83	75	3

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	11	39	26	1	0	9	26	3	0	0	6	10	12	1	0	30	19	7	2
4:15 PM - 4:30 PM	0	4	25	10	0	0	6	27	5	0	0	2	18	17	0	0	24	8	7	0
4:30 PM - 4:45 PM	0	12	34	11	0	0	4	29	5	0	0	3	11	11	0	0	26	11	5	1
4:45 PM - 5:00 PM	0	11	30	14	1	0	8	18	4	0	0	3	16	6	1	0	22	8	3	1
5:00 PM - 5:15 PM	0	7	26	17	0	0	4	23	1	0	0	0	15	18	1	0	19	14	4	0
5:15 PM - 5:30 PM	0	12	19	7	0	0	10	18	3	0	0	3	12	15	0	0	40	9	3	0
5:30 PM - 5:45 PM	0	15	31	14	0	0	10	31	3	0	0	1	17	9	0	0	22	16	2	1
5:45 PM - 6:00 PM	0	10	23	13	1	0	3	36	3	0	0	2	15	17	0	0	17	7	4	0
TOTAL	0	82	227	112	3	0	54	208	27	0	0	20	114	105	3	0	200	92	35	5

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
7:30 AM - 8:30 AM	0	74	139	114	6	0	34	141	23	4	0	27	97	62	3	0	55	51	52	3
4:00 PM - 5:00 PM	0	38	128	61	2	0	27	100	17	0	0	14	55	46	2	0	102	46	22	4

	PHF	Trucks
AM	0.852	1.8%
PM	0.828	1.2%





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:

JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Armstrong Ave @ Hamilton Ave

LATITUDE 36.7258

COUNTY Fresno

LONGITUDE -119.6731

COLLECTION DATE Tuesday, June 4, 2024

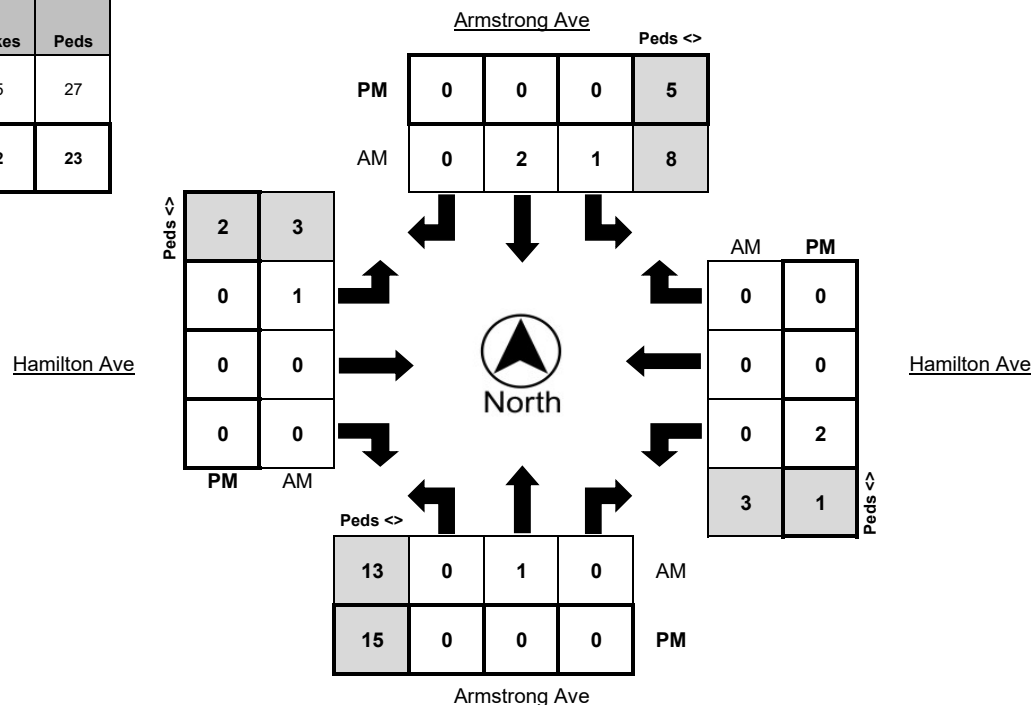
WEATHER Clear

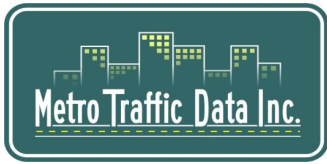
Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:00 AM - 7:15 AM	0	0	0	1	0	0	0	3	0	0	0	1	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1
7:30 AM - 7:45 AM	0	1	0	6	0	1	0	1	1	0	0	1	0	0	0	1
7:45 AM - 8:00 AM	0	0	0	0	0	1	0	9	0	0	0	1	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	1	0	0	3	0	0	0	1	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM - 8:45 AM	0	0	0	2	0	0	0	1	0	0	0	2	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0
TOTAL	0	1	0	12	1	2	0	18	1	0	0	9	0	0	0	4

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	5	0	0	0	14	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	1
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	1	0	0	0	1
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
5:15 PM - 5:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	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	1	0	0	0	2	0	0	0	1	0	0	0	2
TOTAL	0	0	0	7	0	0	0	17	0	0	0	2	2	0	5	4

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	
7:30 AM - 8:30 AM	0	1	0	8	1	2	0	13	1	0	0	3	0	0	0	3
4:00 PM - 5:00 PM	0	0	0	5	0	0	0	15	0	0	0	1	2	0	0	2

	Bikes	Peds
AM Peak Total	5	27
PM Peak Total	2	23





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Hanford, CA 93230
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Turning Movement Report

Prepared For:

JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Temperance Ave @ Hamilton Ave

LATITUDE 36.7258

COUNTY Fresno

LONGITUDE -119.6644

COLLECTION DATE Tuesday, June 4, 2024

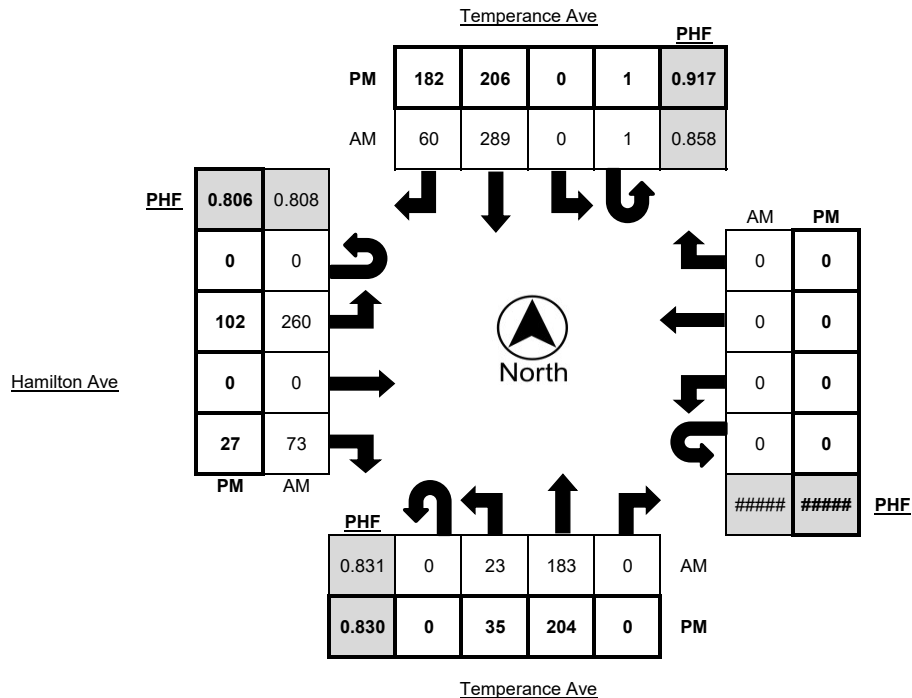
WEATHER Clear

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	5	32	0	2	0	0	53	12	3	0	68	0	12	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	5	45	0	1	1	0	85	16	1	0	86	0	11	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	7	55	0	4	0	0	65	13	4	0	80	0	23	1	0	0	0	0	0
7:45 AM - 8:00 AM	0	3	52	0	2	0	0	75	12	7	0	47	0	19	1	0	0	0	0	0
8:00 AM - 8:15 AM	0	8	31	0	1	0	0	64	19	2	0	47	0	20	4	0	0	0	0	0
8:15 AM - 8:30 AM	0	6	38	0	0	0	0	52	19	3	0	43	0	8	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	13	31	0	0	0	0	44	14	1	0	31	0	4	1	0	0	0	0	0
8:45 AM - 9:00 AM	0	9	23	0	1	1	0	34	12	0	0	30	0	5	0	0	0	0	0	0
TOTAL	0	56	307	0	11	2	0	472	117	21	0	432	0	102	7	0	0	0	0	0

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	12	60	0	2	0	0	53	45	7	0	31	0	9	2	0	0	0	0	0
4:15 PM - 4:30 PM	0	5	53	0	3	0	0	64	42	1	0	24	0	3	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	11	53	0	1	1	0	39	49	3	0	24	0	4	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	7	38	0	0	0	0	50	46	1	0	23	0	11	1	0	0	0	0	0
5:00 PM - 5:15 PM	0	6	50	0	3	3	0	49	50	1	0	24	0	6	1	0	0	0	0	0
5:15 PM - 5:30 PM	0	4	51	0	1	0	0	40	69	3	0	20	0	4	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	5	42	0	1	1	0	42	39	3	1	37	0	8	1	0	0	0	0	0
5:45 PM - 6:00 PM	0	3	40	0	0	0	0	46	36	0	0	29	0	4	0	0	0	0	0	0
TOTAL	0	53	387	0	11	5	0	383	376	19	1	212	0	49	5	0	0	0	0	0

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	23	183	0	8	1	0	289	60	14	0	260	0	73	6	0	0	0	0	0
4:00 PM - 5:00 PM	0	35	204	0	6	1	0	206	182	12	0	102	0	27	3	0	0	0	0	0

	PHF	Trucks
AM	0.893	3.1%
PM	0.901	2.8%





Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230
800-975-6938 Phone/Fax
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Turning Movement Report

Prepared For:

JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Temperance Ave @ Hamilton Ave

LATITUDE 36.7258

COUNTY Fresno

LONGITUDE -119.6644

COLLECTION DATE Tuesday, June 4, 2024

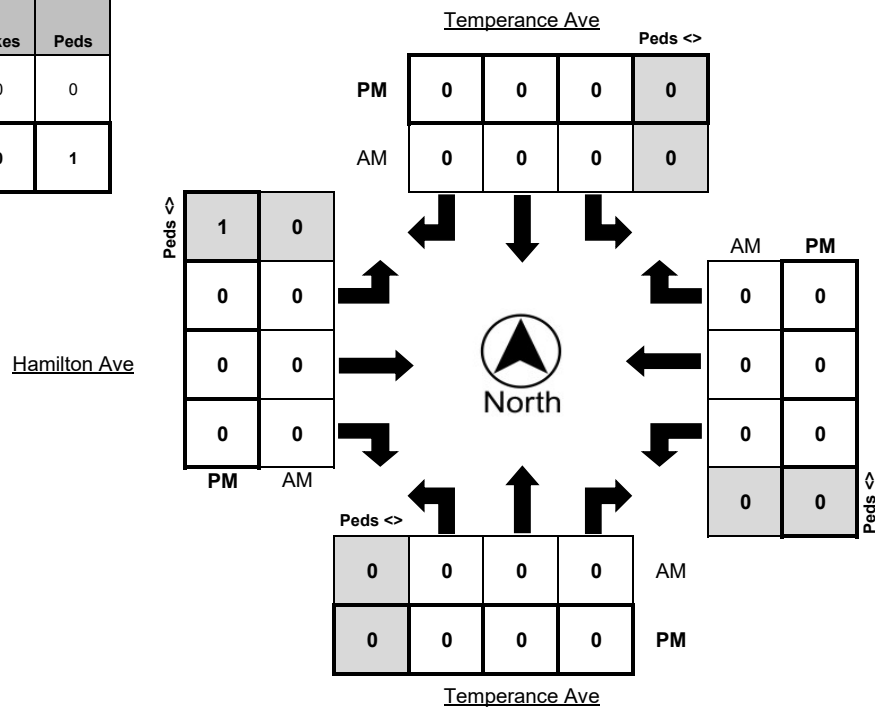
WEATHER Clear

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	1	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	1	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	1
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	1

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
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	0	1





Metro Traffic Data Inc.
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Hanford, CA 93230
800-975-6938 Phone/Fax
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Turning Movement Report

Prepared For:

JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Armstrong Ave @ California Ave

LATITUDE 36.7204

COUNTY Fresno

LONGITUDE -119.6730

COLLECTION DATE Tuesday, June 4, 2024

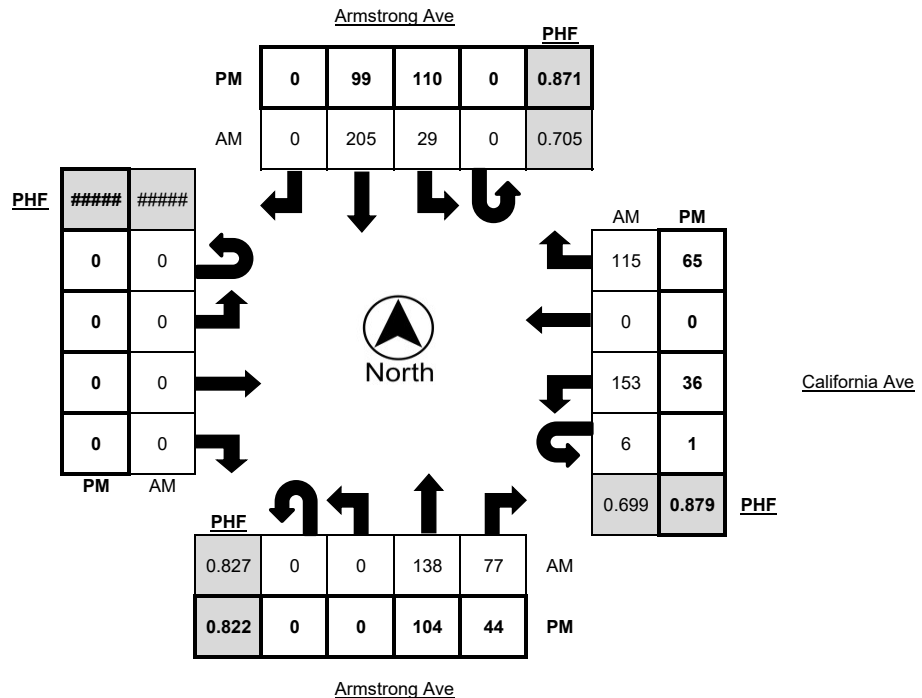
WEATHER Clear

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	0	19	1	1	0	10	25	0	0	0	0	0	0	0	0	13	0	25	0
7:15 AM - 7:30 AM	0	0	34	15	2	0	8	32	0	0	0	0	0	0	0	4	33	0	31	1
7:30 AM - 7:45 AM	0	0	40	25	3	0	7	49	0	0	0	0	0	0	0	0	66	0	32	1
7:45 AM - 8:00 AM	0	0	34	29	0	0	6	49	0	3	0	0	0	0	0	2	37	0	19	2
8:00 AM - 8:15 AM	0	0	30	8	1	0	8	75	0	0	0	0	0	0	0	0	17	0	33	0
8:15 AM - 8:30 AM	0	0	3	13	1	0	10	59	0	1	0	0	0	0	0	2	19	0	22	0
8:30 AM - 8:45 AM	0	0	25	7	0	0	5	31	0	1	0	0	0	0	0	1	4	0	17	0
8:45 AM - 9:00 AM	0	0	22	3	0	0	3	15	0	0	0	0	0	0	0	0	8	0	19	0
TOTAL	0	0	207	101	8	0	57	335	0	5	0	0	0	0	0	9	197	0	198	4

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	0	42	13	0	0	24	24	0	1	0	0	0	0	0	1	2	0	14	0
4:15 PM - 4:30 PM	0	0	29	11	0	0	24	26	0	1	0	0	0	0	0	0	5	0	10	0
4:30 PM - 4:45 PM	0	0	39	9	1	0	27	27	0	1	0	0	0	0	0	0	5	0	14	0
4:45 PM - 5:00 PM	0	0	25	9	1	0	14	25	0	0	0	0	0	0	0	0	6	0	21	0
5:00 PM - 5:15 PM	0	0	27	11	1	0	22	22	0	2	0	0	0	0	0	1	10	0	18	0
5:15 PM - 5:30 PM	0	0	18	10	0	0	39	21	0	0	0	0	0	0	0	0	11	0	13	0
5:30 PM - 5:45 PM	0	0	31	14	0	0	21	24	0	0	0	0	0	0	0	0	11	0	17	1
5:45 PM - 6:00 PM	0	0	28	9	1	0	28	32	0	0	0	0	0	0	0	0	4	0	17	0
TOTAL	0	0	239	86	4	0	199	201	0	5	0	0	0	0	0	2	54	0	124	1

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	0	138	77	6	0	29	205	0	3	0	0	0	0	0	6	153	0	115	4
5:00 PM - 6:00 PM	0	0	104	44	2	0	110	99	0	2	0	0	0	0	0	1	36	0	65	1

	PHF	Trucks
AM	0.825	1.8%
PM	0.972	1.1%





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Turning Movement Report

Prepared For:

JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Armstrong Ave @ California Ave

LATITUDE 36.7204

COUNTY Fresno

LONGITUDE -119.6730

COLLECTION DATE Tuesday, June 4, 2024

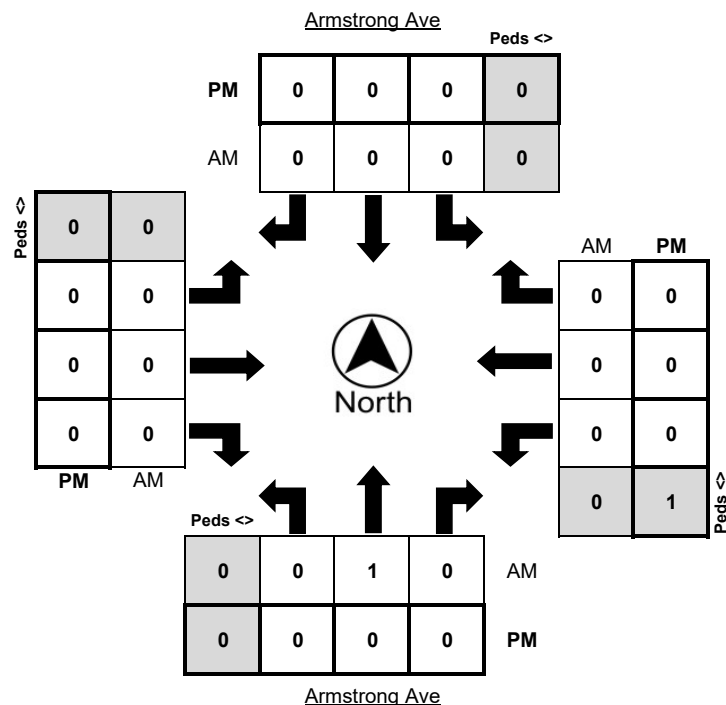
WEATHER Clear

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	3	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	1	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	1	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	5	0	0	0	0
TOTAL	0	1	0	1	0	0	0	0	0	0	0	8	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	3	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	1	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	4	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	1	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	1	0	0	0	0

	Bikes	Peds
AM Peak Total	1	0
PM Peak Total	0	1





Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230
800-975-6938 Phone/Fax
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Turning Movement Report

Prepared For:

JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Fowler Ave @ Church Ave

LATITUDE 36.7148

COUNTY Fresno

LONGITUDE -119.6821

COLLECTION DATE Tuesday, June 4, 2024

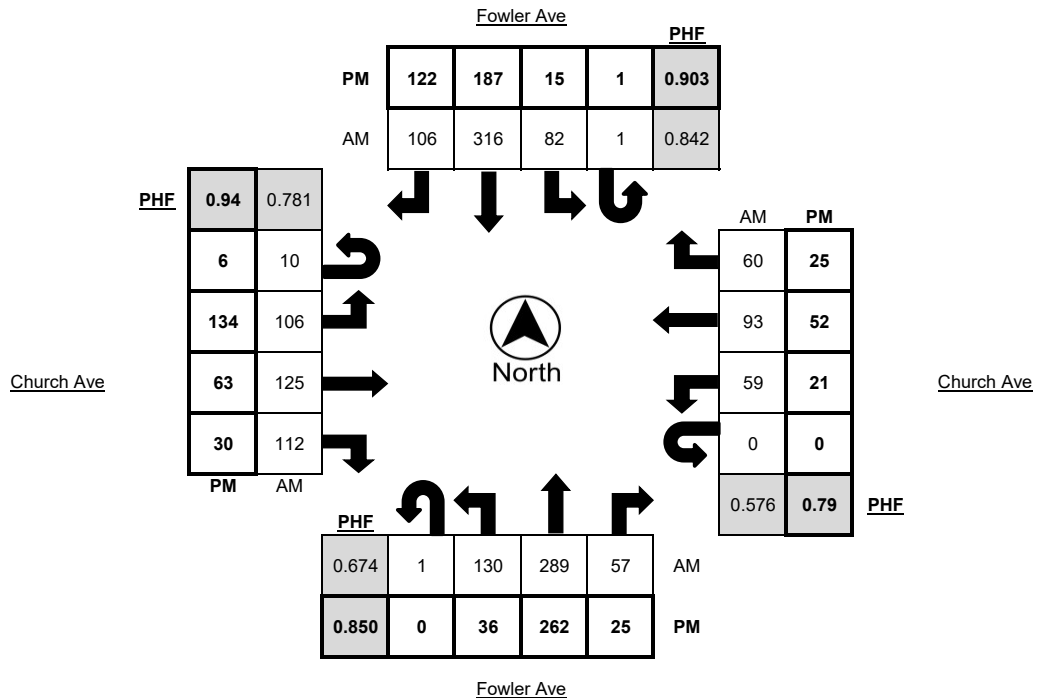
WEATHER Clear

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	8	17	2	2	0	6	56	13	1	0	40	17	5	0	0	4	7	0	0
7:15 AM - 7:30 AM	0	5	29	2	1	0	14	65	22	4	3	41	46	11	4	0	2	23	7	0
7:30 AM - 7:45 AM	0	8	41	6	1	1	31	78	20	1	5	35	50	23	2	0	19	29	17	1
7:45 AM - 8:00 AM	0	25	72	6	2	0	25	83	42	3	3	29	29	17	0	0	22	39	31	3
8:00 AM - 8:15 AM	0	35	83	24	1	0	14	82	24	4	2	24	14	38	1	0	8	14	9	0
8:15 AM - 8:30 AM	1	62	93	21	1	0	12	73	20	2	0	18	32	34	4	0	10	11	3	0
8:30 AM - 8:45 AM	0	21	76	12	1	0	1	37	10	0	2	26	3	7	1	0	1	10	3	1
8:45 AM - 9:00 AM	0	9	25	3	0	0	2	23	10	0	2	14	12	5	1	0	2	9	4	0
TOTAL	1	173	436	76	9	1	105	497	161	15	17	227	203	140	13	0	68	142	74	5

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	9	66	11	0	1	3	42	32	1	1	36	17	6	2	0	4	15	12	0
4:15 PM - 4:30 PM	0	5	53	2	0	0	8	42	34	2	5	28	20	9	0	0	5	15	4	0
4:30 PM - 4:45 PM	0	11	65	6	0	0	2	47	24	1	0	41	11	8	0	0	5	12	5	1
4:45 PM - 5:00 PM	0	11	78	6	0	0	2	56	32	1	0	29	15	7	0	0	7	10	4	0
5:00 PM - 5:15 PM	0	10	50	2	0	0	6	33	34	1	0	30	9	11	0	0	3	14	4	0
5:15 PM - 5:30 PM	0	9	65	1	0	1	7	48	45	1	0	32	16	4	0	0	0	12	3	1
5:30 PM - 5:45 PM	0	7	49	1	0	0	6	53	32	2	0	39	12	7	0	0	0	13	4	0
5:45 PM - 6:00 PM	0	6	56	6	0	1	1	44	30	0	1	27	7	6	0	0	4	18	2	0
TOTAL	0	68	482	35	0	3	35	365	263	9	7	262	107	58	2	0	28	109	38	2

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
7:30 AM - 8:30 AM	1	130	289	57	5	1	82	316	106	10	10	106	125	112	7	0	59	93	60	4
4:00 PM - 5:00 PM	0	36	262	25	0	1	15	187	122	5	6	134	63	30	2	0	21	52	25	1

	PHF	Trucks
AM	0.914	1.7%
PM	0.952	0.8%





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Turning Movement Report

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JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Fowler Ave @ Church Ave

LATITUDE 36.7148

COUNTY Fresno

LONGITUDE -119.6821

COLLECTION DATE Tuesday, June 4, 2024

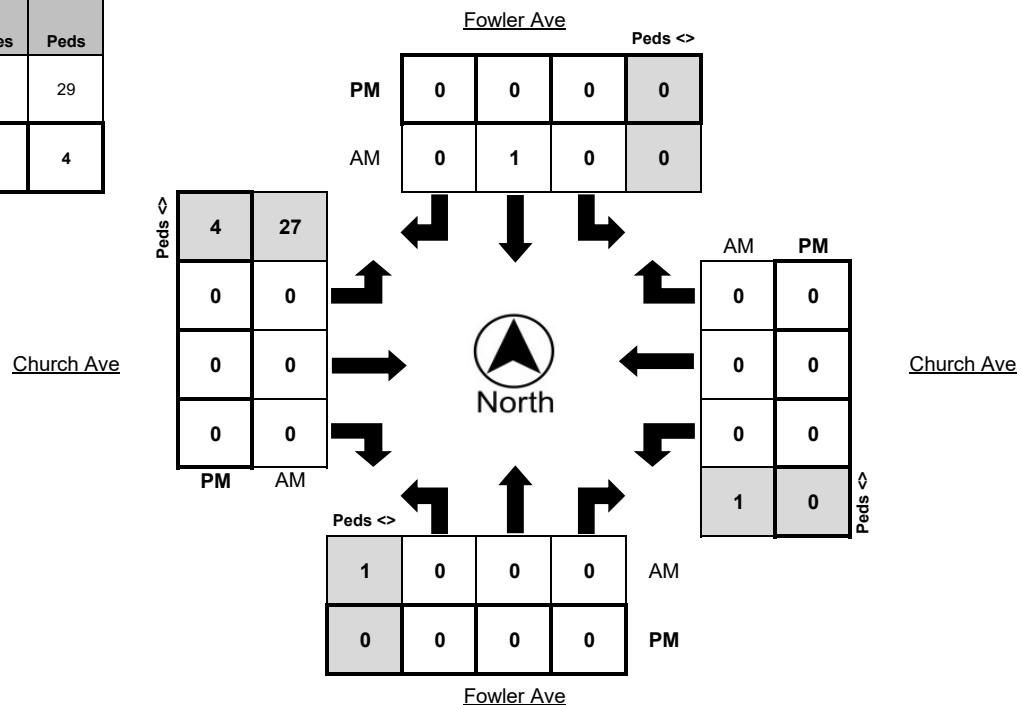
WEATHER Clear

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	1	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	1
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7:45 AM - 8:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	9
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL	0	0	0	0	0	1	0	2	0	0	0	1	0	0	0	32

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	1
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	3
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	1
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4
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	1	0	9

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	
7:30 AM - 8:30 AM	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	27
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

	Bikes	Peds
AM Peak Total	1	29
PM Peak Total	0	4





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LOCATION Armstrong Ave @ Church Ave

LATITUDE 36.7147

COUNTY Fresno

LONGITUDE -119.6731

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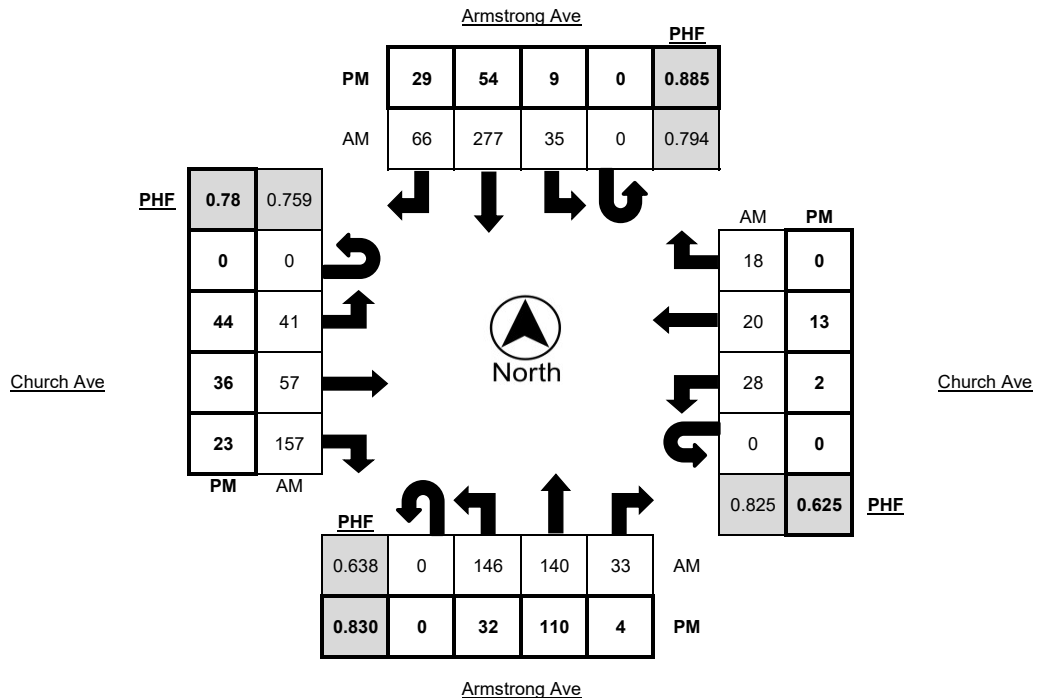
WEATHER Clear

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	0	6	0	1	0	5	28	4	0	0	10	8	7	0	0	9	6	0	1
7:15 AM - 7:30 AM	0	22	27	7	2	0	5	57	7	1	0	7	14	40	4	0	12	5	3	0
7:30 AM - 7:45 AM	0	49	54	12	4	0	12	90	17	0	0	8	16	60	2	0	5	2	6	0
7:45 AM - 8:00 AM	0	65	49	11	0	0	15	65	22	3	0	9	9	42	0	0	8	9	2	2
8:00 AM - 8:15 AM	0	10	10	3	0	0	3	65	20	0	0	17	18	15	0	0	3	4	7	1
8:15 AM - 8:30 AM	0	2	13	2	0	0	4	64	25	1	0	31	12	15	1	0	4	3	4	1
8:30 AM - 8:45 AM	0	0	14	1	0	0	1	24	7	1	0	12	2	4	0	0	1	5	2	0
8:45 AM - 9:00 AM	0	1	11	1	0	0	3	14	6	0	0	9	6	0	0	0	1	6	2	1
TOTAL	0	149	184	37	7	0	48	407	108	6	0	103	85	183	7	0	43	40	26	6

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	5	37	2	0	0	3	10	6	2	0	16	8	9	0	0	1	4	0	0
4:15 PM - 4:30 PM	0	12	17	1	0	0	1	16	8	1	0	11	13	7	0	0	0	6	0	0
4:30 PM - 4:45 PM	0	11	32	0	1	0	3	13	6	1	0	10	6	2	0	0	1	2	0	0
4:45 PM - 5:00 PM	0	4	24	1	1	0	2	15	9	0	0	7	9	5	0	0	0	1	0	0
5:00 PM - 5:15 PM	0	4	22	0	0	0	4	15	10	1	0	11	6	4	2	0	1	4	0	0
5:15 PM - 5:30 PM	0	8	20	0	0	0	1	18	5	0	0	7	11	3	0	0	0	3	0	0
5:30 PM - 5:45 PM	0	2	29	0	0	0	3	22	4	0	0	11	6	3	1	0	1	0	0	0
5:45 PM - 6:00 PM	0	4	25	1	1	0	1	19	11	0	0	8	6	1	0	0	1	1	0	0
TOTAL	0	50	206	5	3	0	18	128	59	5	0	81	65	34	3	0	5	21	0	0

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	146	140	33	6	0	35	277	66	4	0	41	57	157	6	0	28	20	18	3
4:00 PM - 5:00 PM	0	32	110	4	2	0	9	54	29	4	0	44	36	23	0	0	2	13	0	0

	PHF	Trucks
AM	0.769	1.9%
PM	0.881	1.7%





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Turning Movement Report

Prepared For:

JLB Traffic Engineering, Inc.
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

LOCATION Armstrong Ave @ Church Ave

LATITUDE 36.7147

COUNTY Fresno

LONGITUDE -119.6731

COLLECTION DATE Tuesday, June 4, 2024

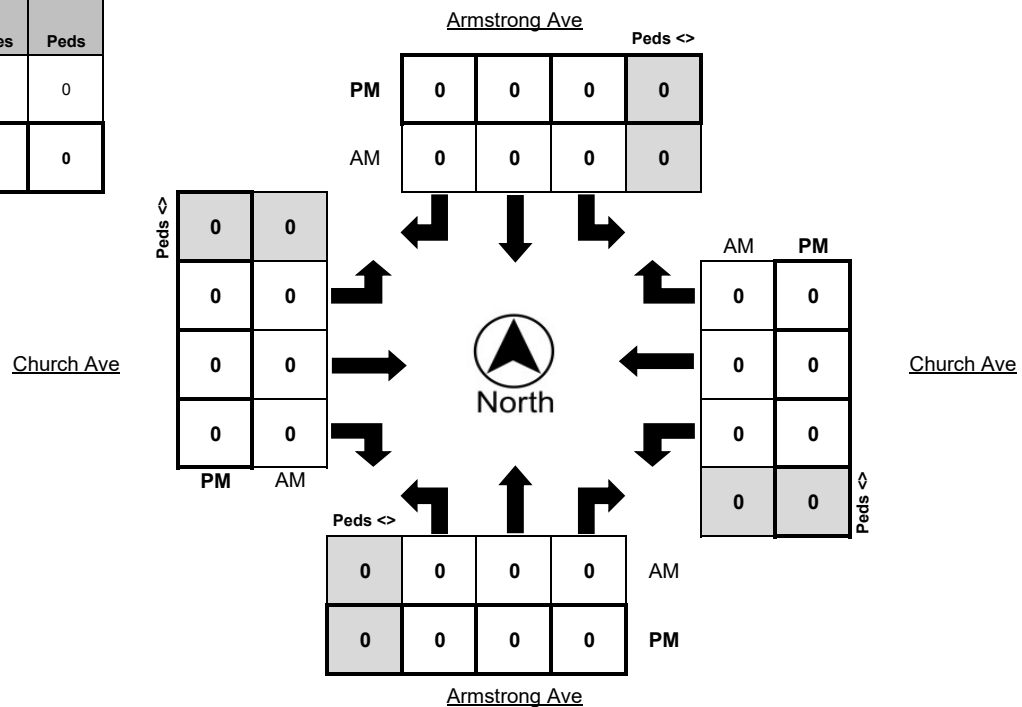
WEATHER Clear

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	1	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	1	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	1	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	1	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
4:00 PM - 5:00 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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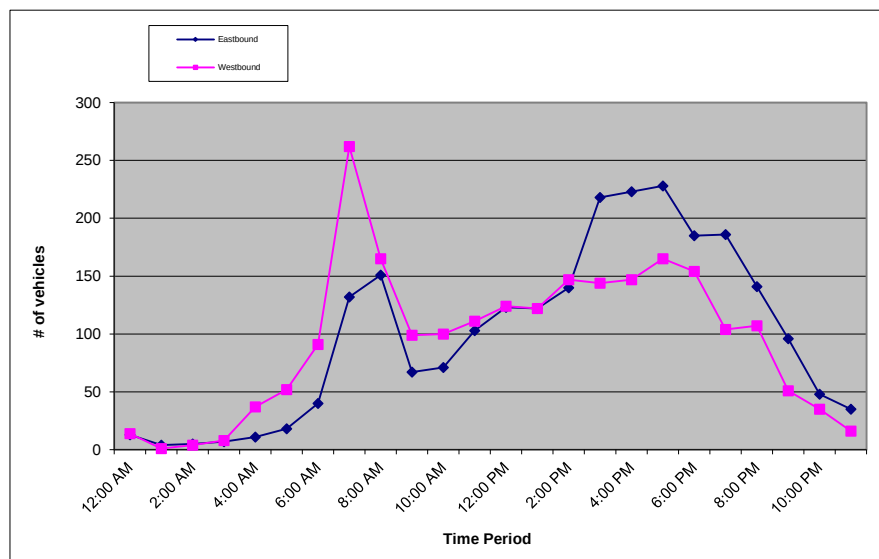
24 Hour Count Report

Prepared For: **JLB Traffic Engineering, Inc.**
 516 W. Shaw Ave, Suite 103
 Fresno, CA 93704

STREET E Hamilton Ave **LATITUDE** 36.7259008
SEGMENT East of Fowler Ave **LONGITUDE** -119.6819428
COLLECTION DATE Tuesday, September 17, 2024 **WEATHER** Clear
NUMBER OF LANES 3

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	9	1	1	2	13	11	0	1	2	14	27
1:00 AM	3	0	0	1	4	0	1	0	0	1	5
2:00 AM	3	1	0	1	5	1	1	2	0	4	9
3:00 AM	1	2	1	3	7	1	3	4	0	8	15
4:00 AM	2	1	2	6	11	1	6	10	20	37	48
5:00 AM	3	4	4	7	18	8	10	15	19	52	70
6:00 AM	3	8	11	18	40	15	14	30	32	91	131
7:00 AM	27	35	41	29	132	45	60	80	77	262	394
8:00 AM	55	44	35	17	151	64	35	39	27	165	316
9:00 AM	16	18	17	16	67	22	23	29	25	99	166
10:00 AM	24	15	17	15	71	20	27	21	32	100	171
11:00 AM	19	27	30	27	103	29	28	33	21	111	214
12:00 PM	40	30	28	25	123	35	32	27	30	124	247
1:00 PM	28	35	17	42	122	29	27	43	23	122	244
2:00 PM	28	32	43	37	140	23	26	60	38	147	287
3:00 PM	49	42	63	64	218	32	31	44	37	144	362
4:00 PM	63	54	53	53	223	43	31	43	30	147	370
5:00 PM	53	64	48	63	228	31	42	52	40	165	393
6:00 PM	46	47	42	50	185	40	38	34	42	154	339
7:00 PM	42	48	54	42	186	31	28	26	19	104	290
8:00 PM	38	44	29	30	141	30	28	19	30	107	248
9:00 PM	29	28	24	15	96	19	9	11	12	51	147
10:00 PM	10	11	13	14	48	12	8	7	8	35	83
11:00 PM	11	10	10	4	35	7	5	0	4	16	51
Total	51.2%				2367	48.8%				2260	
	4627										

AM% 33.8% AM Peak 441 7:15 am to 8:15 am AM P.H.F. 0.91
 PM% 66.2% PM Peak 395 5:15 pm to 6:15 pm PM P.H.F. 0.93





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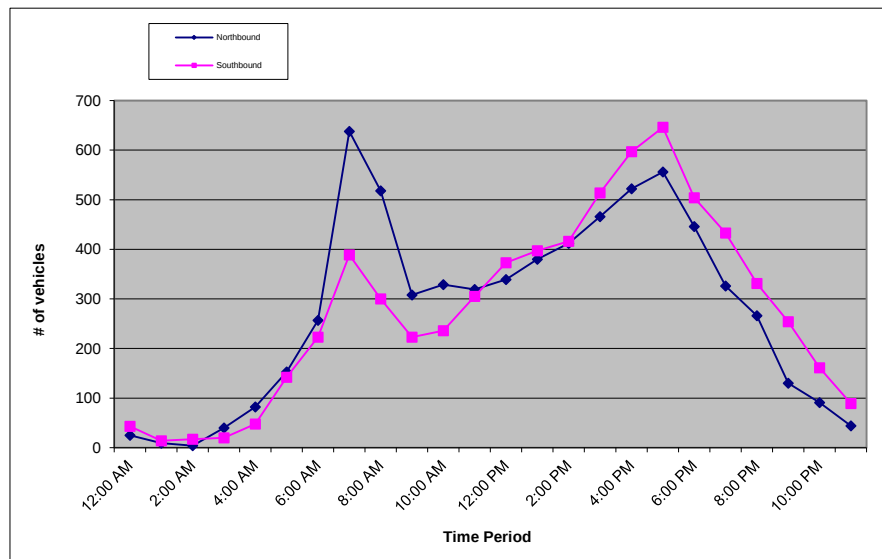
24 Hour Count Report

Prepared For: **JLB Traffic Engineering, Inc.**
 516 W. Shaw Ave, Suite 103
 Fresno, CA 93704

STREET Fowler Ave **LATITUDE** 36.7260276
SEGMENT North of Hamilton Ave **LONGITUDE** -119.6820903
COLLECTION DATE Tuesday, September 17, 2024 **WEATHER** Clear
NUMBER OF LANES 2

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	11	4	4	6	25	17	11	8	7	43	68
1:00 AM	3	2	2	2	9	5	3	2	4	14	23
2:00 AM	1	1	1	1	4	6	4	3	4	17	21
3:00 AM	1	6	19	14	40	0	5	7	8	20	60
4:00 AM	12	19	17	34	82	5	10	11	22	48	130
5:00 AM	30	37	45	41	153	27	32	41	42	142	295
6:00 AM	42	45	84	86	257	48	56	57	62	223	480
7:00 AM	150	142	192	154	638	76	94	102	117	389	1027
8:00 AM	154	163	128	73	518	103	82	65	50	300	818
9:00 AM	64	69	97	78	308	60	50	63	50	223	531
10:00 AM	71	75	86	97	329	60	62	54	60	236	565
11:00 AM	79	70	90	80	319	75	81	75	74	305	624
12:00 PM	97	74	91	77	339	98	86	86	103	373	712
1:00 PM	85	94	119	82	380	88	132	84	93	397	777
2:00 PM	77	104	117	114	412	96	109	109	102	416	828
3:00 PM	94	99	121	152	466	127	122	143	122	514	980
4:00 PM	130	130	147	115	522	160	153	135	149	597	1119
5:00 PM	128	129	153	146	556	162	173	161	150	646	1202
6:00 PM	116	119	101	110	446	134	129	126	115	504	950
7:00 PM	110	83	72	61	326	109	106	125	93	433	759
8:00 PM	67	79	61	59	266	88	83	88	72	331	597
9:00 PM	31	40	30	29	130	70	65	71	48	254	384
10:00 PM	33	21	18	19	91	44	41	35	41	161	252
11:00 PM	18	15	4	7	44	27	25	18	19	89	133
Total	49.9%				6660	50.1%				6675	
	13335										

AM% 34.8% AM Peak 1067 7:30 am to 8:30 am AM P.H.F. 0.91
 PM% 65.2% PM Peak 1202 5:00 pm to 6:00 pm PM P.H.F. 0.96





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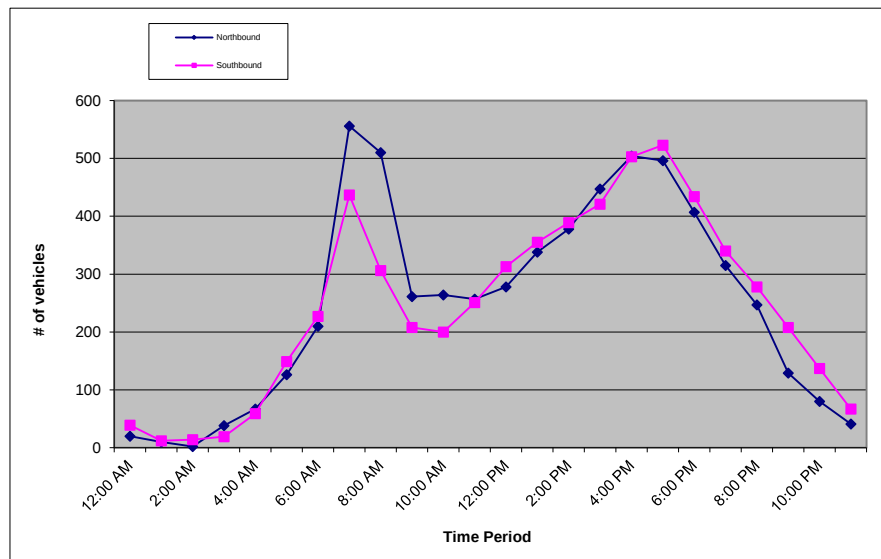
24 Hour Count Report

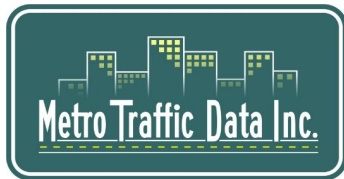
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Fowler Ave **LATITUDE** 36.725761
SEGMENT South of Hamilton Ave **LONGITUDE** -119.6820917
COLLECTION DATE Tuesday, September 17, 2024 **WEATHER** Clear
NUMBER OF LANES 2

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	7	4	3	6	20	15	10	7	7	39	59
1:00 AM	5	1	2	2	10	4	3	2	3	12	22
2:00 AM	1	0	0	1	2	4	3	4	3	14	16
3:00 AM	2	5	16	15	38	1	5	7	6	19	57
4:00 AM	12	16	15	24	67	4	12	17	26	59	126
5:00 AM	26	31	35	34	126	28	32	42	47	149	275
6:00 AM	30	40	64	76	210	48	57	56	66	227	437
7:00 AM	135	125	161	135	556	79	102	110	146	437	993
8:00 AM	162	172	115	61	510	120	82	56	48	306	816
9:00 AM	52	56	83	70	261	54	42	61	51	208	469
10:00 AM	62	54	72	76	264	47	53	44	56	200	464
11:00 AM	60	52	76	69	257	66	64	64	57	251	508
12:00 PM	75	64	78	61	278	71	78	72	92	313	591
1:00 PM	76	90	95	77	338	80	120	86	69	355	693
2:00 PM	68	97	104	109	378	82	96	113	98	389	767
3:00 PM	78	89	112	168	447	94	101	115	111	421	868
4:00 PM	131	123	141	109	504	141	123	119	120	503	1007
5:00 PM	117	121	125	133	496	129	143	137	114	523	1019
6:00 PM	113	108	92	94	407	125	109	109	91	434	841
7:00 PM	100	83	72	60	315	88	86	97	69	340	655
8:00 PM	59	86	56	46	247	72	74	73	59	278	525
9:00 PM	32	41	28	28	129	61	47	56	44	208	337
10:00 PM	27	19	16	18	80	40	36	27	34	137	217
11:00 PM	17	15	5	4	41	22	20	9	16	67	108
Total	50.4%				5981	49.6%				5889	
	11870										

AM% 35.7% AM Peak 1088 7:30 am to 8:30 am AM P.H.F. 0.96
PM% 64.3% PM Peak 1019 5:00 pm to 6:00 pm PM P.H.F. 0.96





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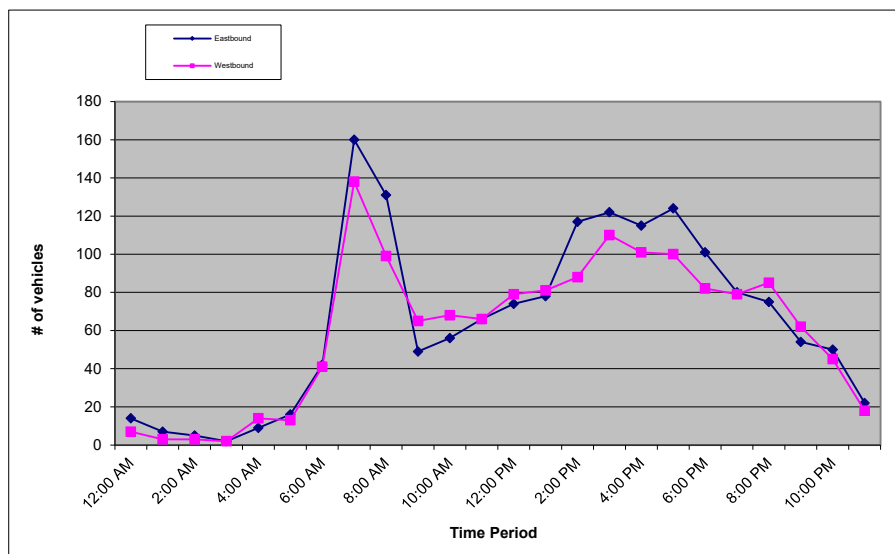
24 Hour Count Report

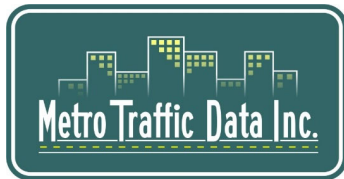
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Hamilton Ave **LATITUDE** 36.7258464
SEGMENT btwn Douglas/Armstrong **LONGITUDE** -119.6734342
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 3

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	5	4	2	3	14	4	2	1	0	7	21
1:00 AM	1	3	2	1	7	1	0	1	1	3	10
2:00 AM	1	2	1	1	5	1	2	0	0	3	8
3:00 AM	1	0	0	1	2	1	0	0	1	2	4
4:00 AM	1	3	2	3	9	2	1	5	6	14	23
5:00 AM	3	4	4	5	16	3	5	2	3	13	29
6:00 AM	6	4	17	15	42	6	3	14	18	41	83
7:00 AM	33	21	54	52	160	15	31	44	48	138	298
8:00 AM	45	35	29	22	131	31	25	20	23	99	230
9:00 AM	14	14	9	12	49	15	14	24	12	65	114
10:00 AM	15	13	17	11	56	17	14	11	26	68	124
11:00 AM	15	16	10	25	66	12	14	18	22	66	132
12:00 PM	18	13	23	20	74	14	22	19	24	79	153
1:00 PM	18	20	16	24	78	26	12	24	19	81	159
2:00 PM	17	23	38	39	117	16	14	30	28	88	205
3:00 PM	31	27	33	31	122	25	18	24	43	110	232
4:00 PM	28	37	25	25	115	33	17	28	23	101	216
5:00 PM	33	30	27	34	124	22	24	34	20	100	224
6:00 PM	30	24	24	23	101	21	22	23	16	82	183
7:00 PM	16	14	19	31	80	18	20	18	23	79	159
8:00 PM	23	19	15	18	75	9	23	31	22	85	160
9:00 PM	14	18	12	10	54	20	15	16	11	62	116
10:00 PM	13	13	10	14	50	18	10	8	9	45	95
11:00 PM	6	8	7	1	22	3	5	4	6	18	40
Total	52.0%				1569	48.0%				1449	
	3018										

AM% 35.7% AM Peak 334 7:30 am to 8:30 am AM P.H.F. 0.84
PM% 64.3% PM Peak 246 3:30 pm to 4:30 pm PM P.H.F. 0.83





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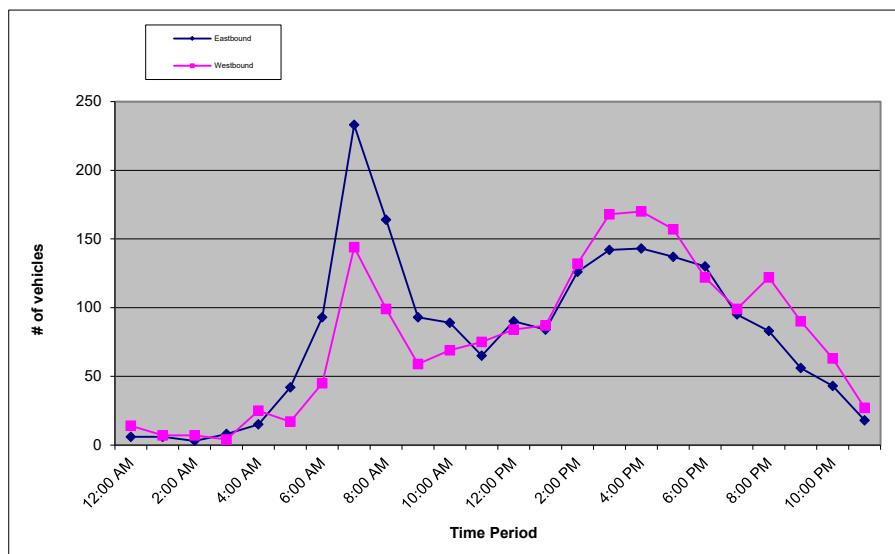
24 Hour Count Report

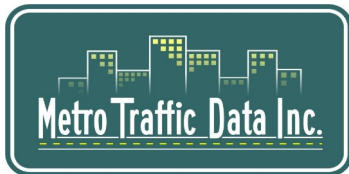
Prepared For: **JLB Traffic Engineering, Inc.**
 516 W. Shaw Ave, Suite 103
 Fresno, CA 93704

STREET Hamilton Ave **LATITUDE** 36.72584039
SEGMENT btwn Armstrong/Pearwood **LONGITUDE** -119.6726181
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 3

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	1	2	1	2	6	5	3	3	3	14	20
1:00 AM	1	2	1	2	6	0	2	3	2	7	13
2:00 AM	0	2	0	1	3	2	1	2	2	7	10
3:00 AM	1	2	2	3	8	1	0	2	1	4	12
4:00 AM	1	5	3	6	15	4	6	7	8	25	40
5:00 AM	6	11	11	14	42	3	7	2	5	17	59
6:00 AM	16	17	27	33	93	7	6	8	24	45	138
7:00 AM	45	47	81	60	233	16	29	50	49	144	377
8:00 AM	59	45	32	28	164	33	26	20	20	99	263
9:00 AM	32	20	15	26	93	12	15	18	14	59	152
10:00 AM	32	19	17	21	89	13	13	20	23	69	158
11:00 AM	15	14	21	15	65	26	22	11	16	75	140
12:00 PM	23	16	23	28	90	15	25	27	17	84	174
1:00 PM	22	22	22	18	84	23	20	16	28	87	171
2:00 PM	15	26	37	48	126	22	28	34	48	132	258
3:00 PM	27	26	46	43	142	34	36	47	51	168	310
4:00 PM	45	34	26	38	143	56	39	42	33	170	313
5:00 PM	36	29	41	31	137	37	52	40	28	157	294
6:00 PM	44	28	27	31	130	27	35	29	31	122	252
7:00 PM	26	20	27	22	95	18	29	24	28	99	194
8:00 PM	25	23	17	18	83	25	28	39	30	122	205
9:00 PM	11	17	12	16	56	31	19	25	15	90	146
10:00 PM	13	11	11	8	43	15	13	13	22	63	106
11:00 PM	4	8	2	4	18	4	4	12	7	27	45
Total	51.0%				1964	49.0%				1886	
	3850										

AM% **35.9%** **AM Peak 408** **7:15 am to 8:15 am** **AM P.H.F. 0.78**
PM% **64.1%** **PM Peak 361** **3:30 pm to 4:30 pm** **PM P.H.F. 0.89**





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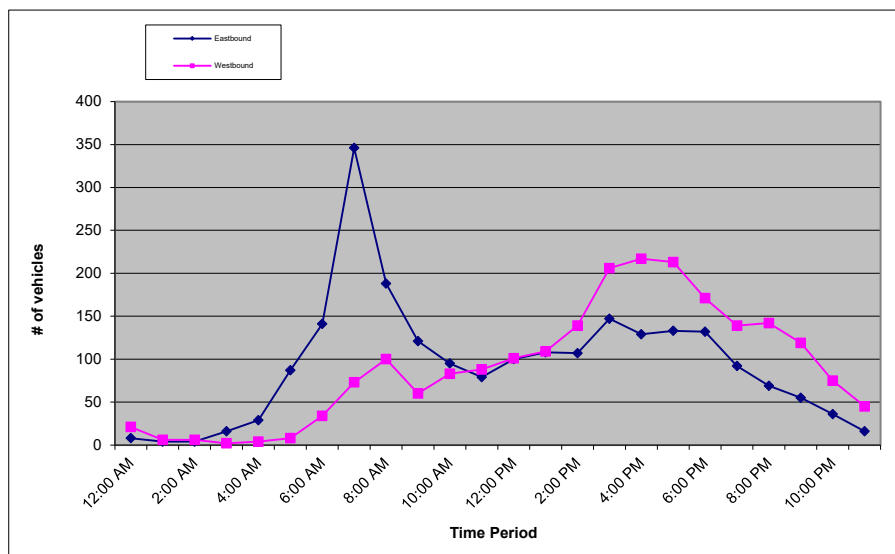
24 Hour Count Report

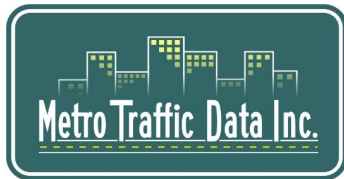
Prepared For: **JLB Traffic Engineering, Inc.**
 516 W. Shaw Ave, Suite 103
 Fresno, CA 93704

STREET Hamilton Ave **LATITUDE** 36.72587236
SEGMENT btwn Arroyo/Temperance **LONGITUDE** -119.6648005
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 2

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	3	0	4	1	8	7	3	6	5	21	29
1:00 AM	0	1	1	2	4	1	0	3	2	6	10
2:00 AM	1	1	1	1	4	0	1	3	2	6	10
3:00 AM	1	6	2	7	16	0	1	1	0	2	18
4:00 AM	4	9	8	8	29	0	0	4	0	4	33
5:00 AM	10	22	26	29	87	3	0	1	4	8	95
6:00 AM	20	27	41	53	141	11	1	8	14	34	175
7:00 AM	80	97	103	66	346	17	21	20	15	73	419
8:00 AM	67	51	35	35	188	27	25	27	21	100	288
9:00 AM	35	29	32	25	121	12	15	20	13	60	181
10:00 AM	30	27	21	17	95	19	14	24	26	83	178
11:00 AM	17	18	23	21	79	32	17	13	26	88	167
12:00 PM	17	25	18	40	100	28	21	30	22	101	201
1:00 PM	27	26	31	24	108	29	21	31	28	109	217
2:00 PM	18	23	28	38	107	24	35	28	52	139	246
3:00 PM	34	37	43	33	147	43	44	56	63	206	353
4:00 PM	40	27	28	34	129	57	47	60	53	217	346
5:00 PM	30	24	46	33	133	56	73	45	39	213	346
6:00 PM	39	29	31	33	132	48	46	41	36	171	303
7:00 PM	24	25	24	19	92	32	41	29	37	139	231
8:00 PM	19	19	19	12	69	34	34	39	35	142	211
9:00 PM	11	15	17	12	55	38	34	29	18	119	174
10:00 PM	9	11	9	7	36	16	22	13	24	75	111
11:00 PM	5	5	4	2	16	8	8	21	8	45	61
Total	50.9%				2242	49.1%				2161	
	4403										

AM% **36.4%** **AM Peak 419** **7:00 am to 8:00 am** **AM P.H.F.** **0.85**
PM% **63.6%** **PM Peak 373** **3:15 pm to 4:15 pm** **PM P.H.F.** **0.94**





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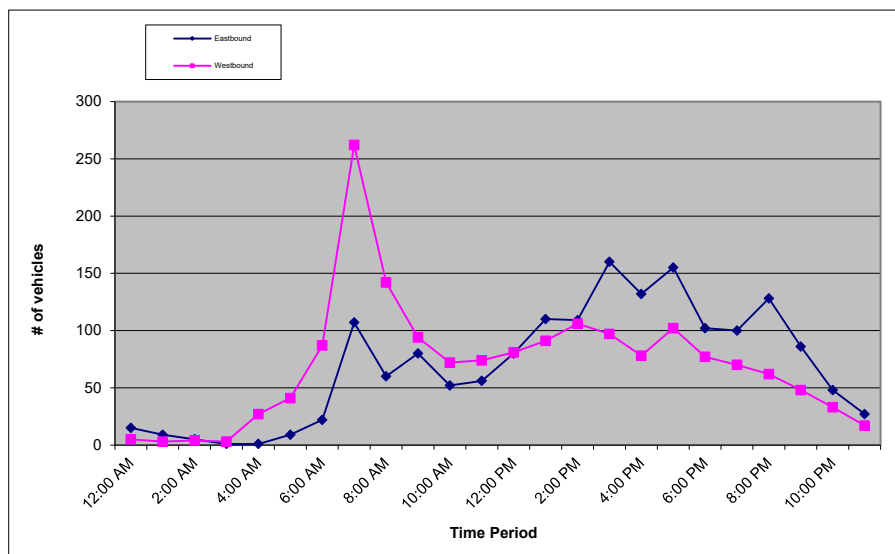
24 Hour Count Report

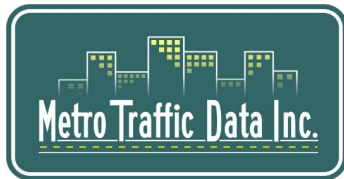
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET California Ave **LATITUDE** 36.72045898
SEGMENT btwn Armstrong/Filbert **LONGITUDE** -119.6725434
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 4

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	3	6	2	4	15	1	2	1	1	5	20
1:00 AM	0	3	5	1	9	0	1	1	1	3	12
2:00 AM	1	0	1	3	5	0	0	0	4	4	9
3:00 AM	0	0	1	0	1	0	1	1	1	3	4
4:00 AM	0	0	0	1	1	3	6	6	12	27	28
5:00 AM	2	1	1	5	9	8	7	15	11	41	50
6:00 AM	1	3	7	11	22	18	11	30	28	87	109
7:00 AM	11	27	32	37	107	38	68	98	58	262	369
8:00 AM	16	25	13	6	60	50	43	22	27	142	202
9:00 AM	12	14	36	18	80	26	25	21	22	94	174
10:00 AM	17	12	12	11	52	25	16	10	21	72	124
11:00 AM	18	21	5	12	56	11	13	19	31	74	130
12:00 PM	20	17	20	23	80	13	17	19	32	81	161
1:00 PM	38	21	15	36	110	23	20	27	21	91	201
2:00 PM	10	24	42	33	109	22	31	21	32	106	215
3:00 PM	34	32	41	53	160	22	23	30	22	97	257
4:00 PM	38	35	36	23	132	17	15	19	27	78	210
5:00 PM	34	49	35	37	155	29	24	28	21	102	257
6:00 PM	20	29	27	26	102	23	21	11	22	77	179
7:00 PM	23	29	24	24	100	27	15	13	15	70	170
8:00 PM	35	32	30	31	128	15	13	26	8	62	190
9:00 PM	23	26	21	16	86	8	16	11	13	48	134
10:00 PM	9	13	14	12	48	14	5	7	7	33	81
11:00 PM	10	7	7	3	27	3	6	0	8	17	44
Total	49.7%				1654	50.3%				1676	
	3330										

AM% 37.0% AM Peak 386 7:15 am to 8:15 am AM P.H.F. 0.74
PM% 63.0% PM Peak 257 3:00 pm to 4:00 pm PM P.H.F. 0.86





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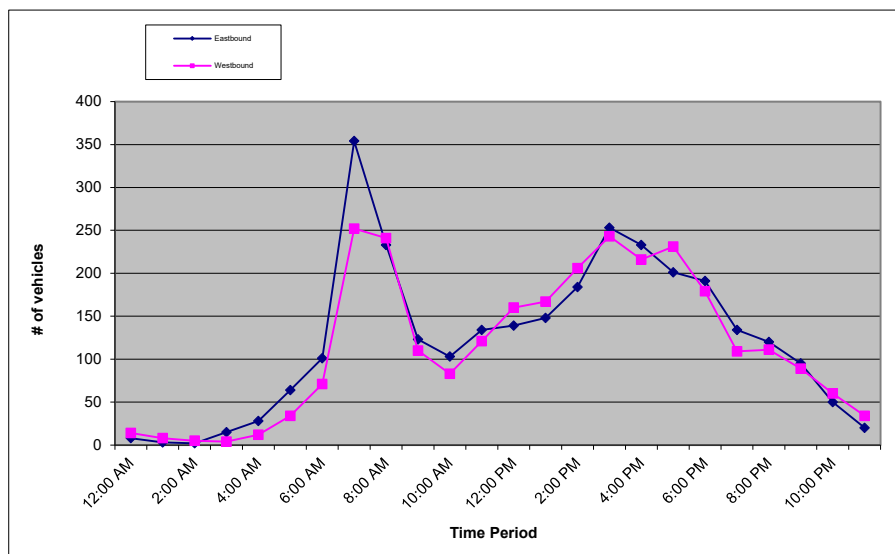
24 Hour Count Report

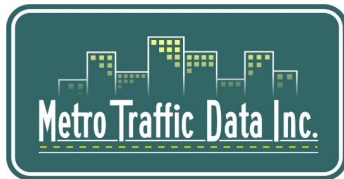
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Church Ave
SEGMENT btwn Via Certosa/Fowler
COLLECTION DATE Tuesday, June 4, 2024
NUMBER OF LANES 3
LATITUDE 36.71482509
LONGITUDE -119.682587
WEATHER Clear

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	1	3	2	2	8	6	4	1	3	14	22
1:00 AM	2	0	0	1	3	3	2	0	3	8	11
2:00 AM	1	0	0	1	2	2	2	0	1	5	7
3:00 AM	2	3	3	7	15	2	0	1	1	4	19
4:00 AM	5	3	11	9	28	2	3	2	5	12	40
5:00 AM	18	8	19	19	64	4	4	13	13	34	98
6:00 AM	16	23	30	32	101	9	15	22	25	71	172
7:00 AM	62	101	113	78	354	28	53	62	109	252	606
8:00 AM	78	84	38	33	233	75	93	43	30	241	474
9:00 AM	27	21	36	39	123	17	31	40	22	110	233
10:00 AM	26	30	27	20	103	25	11	18	29	83	186
11:00 AM	27	27	38	42	134	18	28	38	37	121	255
12:00 PM	27	39	34	39	139	39	50	37	34	160	299
1:00 PM	38	45	24	41	148	51	36	42	38	167	315
2:00 PM	40	53	45	46	184	32	37	72	65	206	390
3:00 PM	40	71	74	68	253	41	44	67	91	243	496
4:00 PM	60	62	60	51	233	57	59	47	53	216	449
5:00 PM	50	52	58	41	201	58	66	52	55	231	432
6:00 PM	56	61	40	34	191	49	42	38	50	179	370
7:00 PM	36	25	32	41	134	24	25	30	30	109	243
8:00 PM	35	27	30	28	120	30	30	18	33	111	231
9:00 PM	22	29	23	21	95	30	15	24	20	89	184
10:00 PM	14	17	10	9	50	18	16	10	16	60	110
11:00 PM	10	6	2	2	20	17	7	4	6	34	54
Total	51.5%				2936	48.5%				2760	
	5696										

AM% 37.3% AM Peak 692 7:30 am to 8:30 am AM P.H.F. 0.93
PM% 62.7% PM Peak 538 3:30 pm to 4:30 pm PM P.H.F. 0.85





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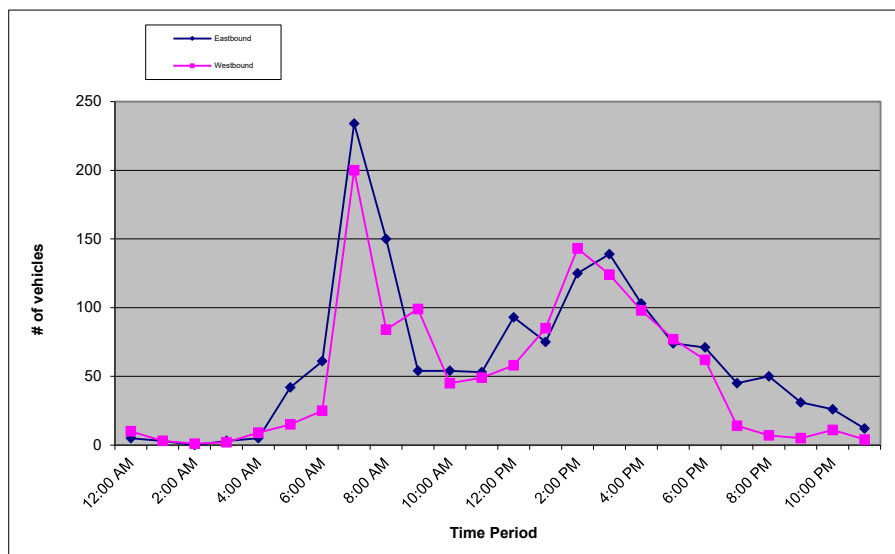
24 Hour Count Report

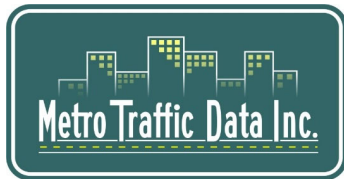
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Church Ave
SEGMENT east of Fowler
COLLECTION DATE Tuesday, June 4, 2024
NUMBER OF LANES 2
LATITUDE 36.71483399
LONGITUDE -119.6814951
WEATHER Clear

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	0	3	1	1	5	4	3	1	2	10	15
1:00 AM	0	2	0	1	3	1	1	1	0	3	6
2:00 AM	0	0	0	0	0	1	0	0	0	1	1
3:00 AM	1	1	0	1	3	1	0	1	0	2	5
4:00 AM	0	1	2	2	5	1	3	2	3	9	14
5:00 AM	4	9	10	19	42	2	1	8	4	15	57
6:00 AM	11	14	12	24	61	3	2	13	7	25	86
7:00 AM	25	62	87	60	234	11	32	65	92	200	434
8:00 AM	52	65	16	17	150	31	24	14	15	84	234
9:00 AM	10	10	15	19	54	9	22	46	22	99	153
10:00 AM	11	12	18	13	54	11	9	10	15	45	99
11:00 AM	8	9	23	13	53	6	14	17	12	49	102
12:00 PM	11	19	36	27	93	16	11	15	16	58	151
1:00 PM	21	16	17	21	75	38	19	14	14	85	160
2:00 PM	20	39	37	29	125	26	16	66	35	143	268
3:00 PM	24	36	34	45	139	19	29	37	39	124	263
4:00 PM	31	30	19	23	103	31	24	22	21	98	201
5:00 PM	17	24	19	14	74	21	15	17	24	77	151
6:00 PM	15	23	23	10	71	15	18	9	20	62	133
7:00 PM	8	10	12	15	45	4	3	5	2	14	59
8:00 PM	15	13	9	13	50	4	3	0	0	7	57
9:00 PM	4	7	12	8	31	2	0	2	1	5	36
10:00 PM	9	8	5	4	26	4	4	0	3	11	37
11:00 PM	8	2	1	1	12	1	3	0	0	4	16
Total	55.1%				1508	44.9%				1230	
	2738										

AM% 44.0% AM Peak 481 7:15 am to 8:15 am AM P.H.F. 0.79
PM% 56.0% PM Peak 275 2:30 pm to 3:30 pm PM P.H.F. 0.67





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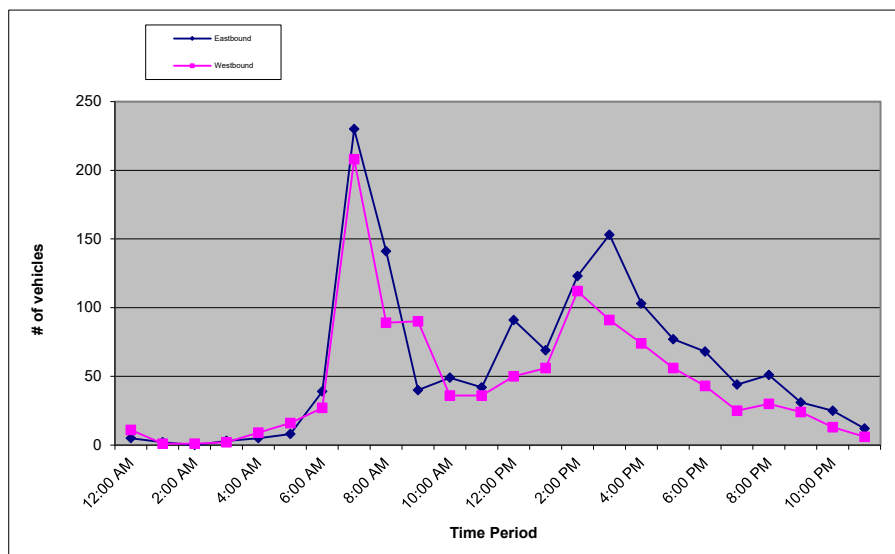
24 Hour Count Report

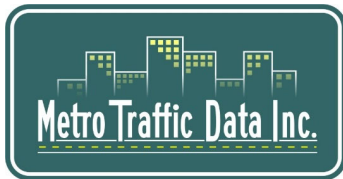
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Church Ave
SEGMENT west of Armstrong
COLLECTION DATE Tuesday, June 4, 2024
NUMBER OF LANES 2
LATITUDE 36.71484446
LONGITUDE -119.6734764
WEATHER Clear

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	0	3	1	1	5	4	4	1	2	11	16
1:00 AM	0	1	0	1	2	0	1	0	0	1	3
2:00 AM	0	0	0	0	0	1	0	0	0	1	1
3:00 AM	1	1	0	1	3	1	1	0	0	2	5
4:00 AM	0	1	2	2	5	1	3	2	3	9	14
5:00 AM	3	0	4	1	8	2	1	9	4	16	24
6:00 AM	3	6	11	19	39	2	3	13	9	27	66
7:00 AM	25	61	84	60	230	10	34	68	96	208	438
8:00 AM	50	58	18	15	141	34	30	12	13	89	230
9:00 AM	5	10	12	13	40	7	27	39	17	90	130
10:00 AM	11	11	14	13	49	8	8	5	15	36	85
11:00 AM	6	7	20	9	42	3	9	12	12	36	78
12:00 PM	10	15	38	28	91	10	18	15	7	50	141
1:00 PM	21	16	16	16	69	8	36	5	7	56	125
2:00 PM	20	33	40	30	123	11	9	13	79	112	235
3:00 PM	19	27	53	54	153	21	29	17	24	91	244
4:00 PM	33	31	18	21	103	15	26	19	14	74	177
5:00 PM	21	21	20	15	77	18	16	6	16	56	133
6:00 PM	14	23	21	10	68	13	15	7	8	43	111
7:00 PM	9	8	14	13	44	6	5	7	7	25	69
8:00 PM	15	15	8	13	51	11	5	10	4	30	81
9:00 PM	5	7	11	8	31	7	10	4	3	24	55
10:00 PM	7	9	6	3	25	4	1	0	8	13	38
11:00 PM	7	3	1	1	12	1	3	1	1	6	18
Total	56.1%				1411	43.9%				1106	
	2517										

AM% 43.3% AM Peak 487 7:15 am to 8:15 am AM P.H.F. 0.78
PM% 56.7% PM Peak 275 2:45 pm to 3:45 pm PM P.H.F. 0.63





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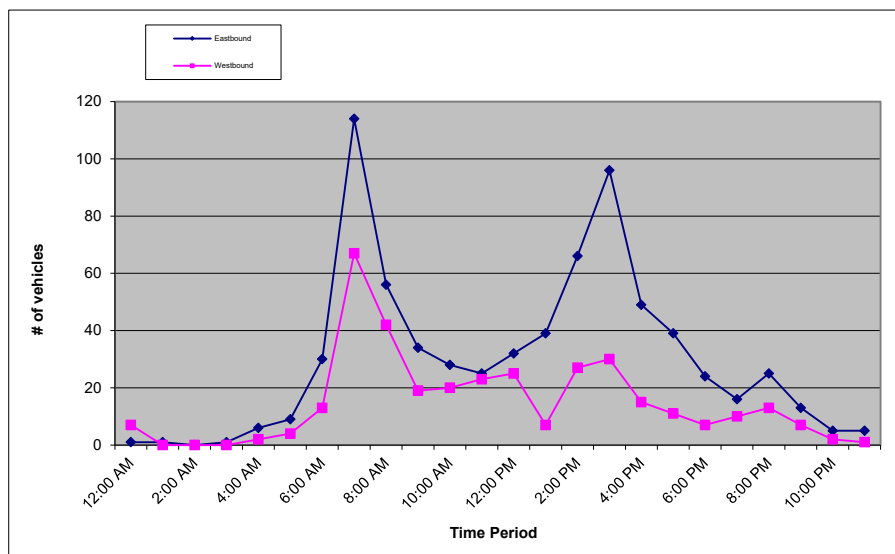
24 Hour Count Report

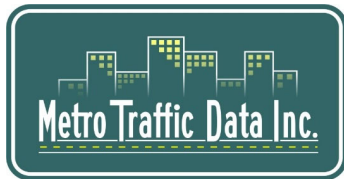
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Church Ave
SEGMENT btwn Armstrong/Temperance
COLLECTION DATE Tuesday, June 4, 2024
NUMBER OF LANES 2
LATITUDE 36.71485108
LONGITUDE -119.6727449
WEATHER Clear

	Eastbound					Westbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	0	0	1	0	1	2	2	1	2	7	8
1:00 AM	0	0	0	1	1	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	1	0	0	0	1	0	0	0	0	0	1
4:00 AM	0	1	2	3	6	0	0	0	2	2	8
5:00 AM	2	0	5	2	9	0	1	2	1	4	13
6:00 AM	5	5	9	11	30	2	1	5	5	13	43
7:00 AM	13	26	40	35	114	15	20	13	19	67	181
8:00 AM	24	18	4	10	56	14	11	8	9	42	98
9:00 AM	7	9	9	9	34	6	5	3	5	19	53
10:00 AM	8	5	6	9	28	4	4	7	5	20	48
11:00 AM	7	4	9	5	25	4	8	7	4	23	48
12:00 PM	7	7	9	9	32	5	7	6	7	25	57
1:00 PM	15	12	6	6	39	2	4	0	1	7	46
2:00 PM	9	12	29	16	66	5	11	8	3	27	93
3:00 PM	20	20	37	19	96	4	4	13	9	30	126
4:00 PM	13	15	9	12	49	5	6	3	1	15	64
5:00 PM	10	12	9	8	39	5	3	1	2	11	50
6:00 PM	10	9	3	2	24	2	4	1	0	7	31
7:00 PM	3	4	2	7	16	3	2	2	3	10	26
8:00 PM	7	8	9	1	25	4	3	4	2	13	38
9:00 PM	4	2	4	3	13	3	4	0	0	7	20
10:00 PM	2	1	2	0	5	1	0	0	1	2	7
11:00 PM	3	0	2	0	5	0	0	0	1	1	6
Total	67.0%				714	33.0%				352	
	1066										

AM% 47.1% AM Peak 191 7:15 am to 8:15 am AM P.H.F. 0.88
PM% 52.9% PM Peak 126 3:00 pm to 4:00 pm PM P.H.F. 0.63





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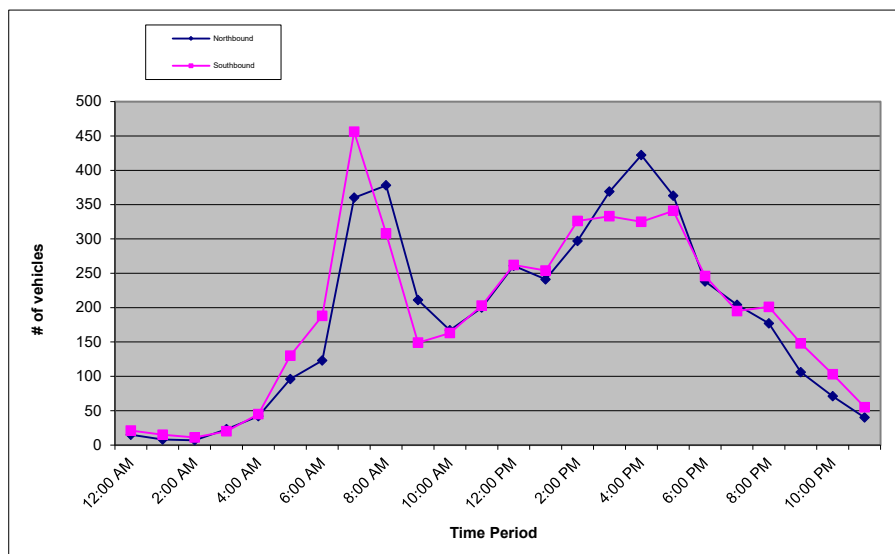
24 Hour Count Report

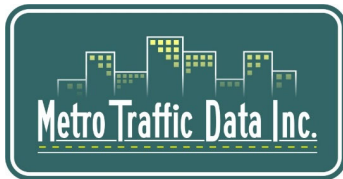
Prepared For: **JLB Traffic Engineering, Inc.**
 516 W. Shaw Ave, Suite 103
 Fresno, CA 93704

STREET Fowler Ave **LATITUDE** 36.71522655
SEGMENT north of Church **LONGITUDE** -119.682138
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 3

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	5	1	6	3	15	15	1	3	2	21	36
1:00 AM	3	2	2	1	8	3	6	1	5	15	23
2:00 AM	0	2	1	4	7	5	6	0	0	11	18
3:00 AM	1	3	10	9	23	6	2	4	8	20	43
4:00 AM	10	6	12	14	42	6	9	14	16	45	87
5:00 AM	29	14	25	28	96	23	26	35	46	130	226
6:00 AM	22	29	37	35	123	31	49	49	59	188	311
7:00 AM	57	77	94	132	360	75	101	130	150	456	816
8:00 AM	116	114	105	43	378	120	105	48	35	308	686
9:00 AM	44	58	58	51	211	33	37	43	36	149	360
10:00 AM	41	50	39	37	167	35	35	49	44	163	330
11:00 AM	52	43	52	53	200	37	49	63	54	203	403
12:00 PM	57	76	68	60	261	69	65	56	72	262	523
1:00 PM	71	57	71	42	241	59	68	68	59	254	495
2:00 PM	61	68	70	98	297	68	74	80	104	326	623
3:00 PM	76	70	88	135	369	74	83	96	80	333	702
4:00 PM	115	85	111	111	422	78	84	73	90	325	747
5:00 PM	84	101	92	86	363	73	101	91	76	341	704
6:00 PM	80	70	46	42	238	67	69	57	53	246	484
7:00 PM	53	48	57	46	204	48	49	52	46	195	399
8:00 PM	48	45	40	44	177	50	54	44	53	201	378
9:00 PM	32	35	13	26	106	49	36	34	29	148	254
10:00 PM	17	19	17	18	71	32	25	22	24	103	174
11:00 PM	19	12	6	3	40	28	11	7	9	55	95
Total	49.6%				4419	50.4%				4498	
	8917										

AM% **37.4%** **AM Peak 961** **7:30 am to 8:30 am** **AM P.H.F.** **0.85**
PM% **62.6%** **PM Peak 761** **3:45 pm to 4:45 pm** **PM P.H.F.** **0.88**





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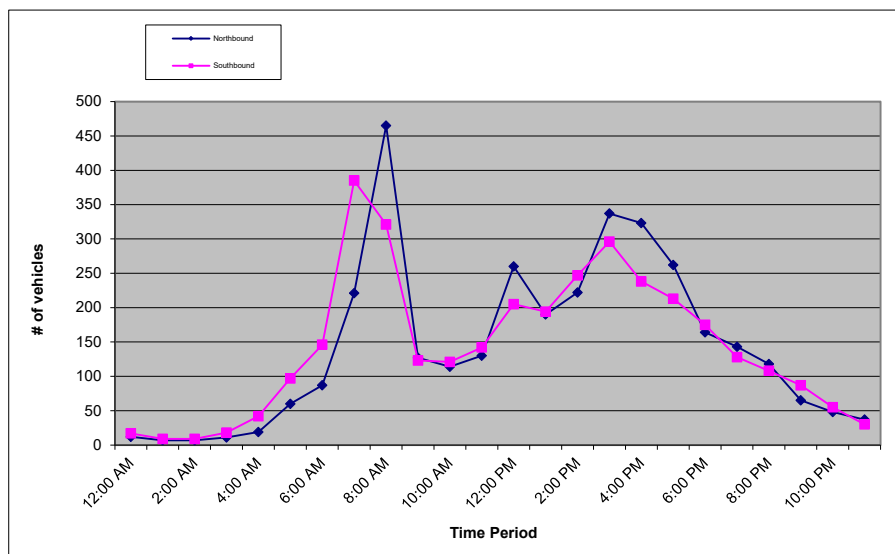
24 Hour Count Report

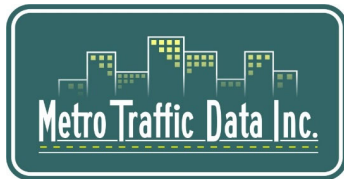
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Fowler Ave **LATITUDE** 36.71437648
SEGMENT south of Church **LONGITUDE** -119.6821341
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 3

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	4	1	5	2	12	13	0	3	1	17	29
1:00 AM	3	3	1	0	7	3	4	1	1	9	16
2:00 AM	0	2	1	4	7	5	4	0	0	9	16
3:00 AM	0	1	7	3	11	5	2	4	7	18	29
4:00 AM	5	4	2	8	19	5	9	13	15	42	61
5:00 AM	13	10	17	20	60	19	18	31	29	97	157
6:00 AM	14	17	23	33	87	22	33	44	47	146	233
7:00 AM	27	36	55	103	221	65	78	120	122	385	606
8:00 AM	142	177	109	37	465	128	118	45	30	321	786
9:00 AM	29	43	24	31	127	27	24	36	36	123	250
10:00 AM	27	32	24	31	114	22	33	35	31	121	235
11:00 AM	34	27	31	38	130	26	37	36	43	142	272
12:00 PM	42	76	89	53	260	47	46	53	59	205	465
1:00 PM	54	39	66	31	190	46	62	42	44	194	384
2:00 PM	36	52	57	77	222	57	51	69	70	247	469
3:00 PM	61	52	86	138	337	53	85	104	54	296	633
4:00 PM	86	60	82	95	323	52	56	60	70	238	561
5:00 PM	62	75	57	68	262	47	52	60	54	213	475
6:00 PM	60	48	40	16	164	54	61	39	21	175	339
7:00 PM	31	37	46	29	143	34	31	36	27	128	271
8:00 PM	30	31	23	34	118	26	27	30	25	108	226
9:00 PM	20	20	10	15	65	27	28	20	12	87	152
10:00 PM	14	7	14	13	48	20	10	14	11	55	103
11:00 PM	17	11	5	4	37	12	10	3	5	30	67
Total	50.2%				3429	49.8%				3406	
	6835										

AM% 39.4% **AM Peak** 965 **7:30 am to 8:30 am** **AM P.H.F.** 0.82
PM% 60.6% **PM Peak** 657 **3:15 pm to 4:15 pm** **PM P.H.F.** 0.86





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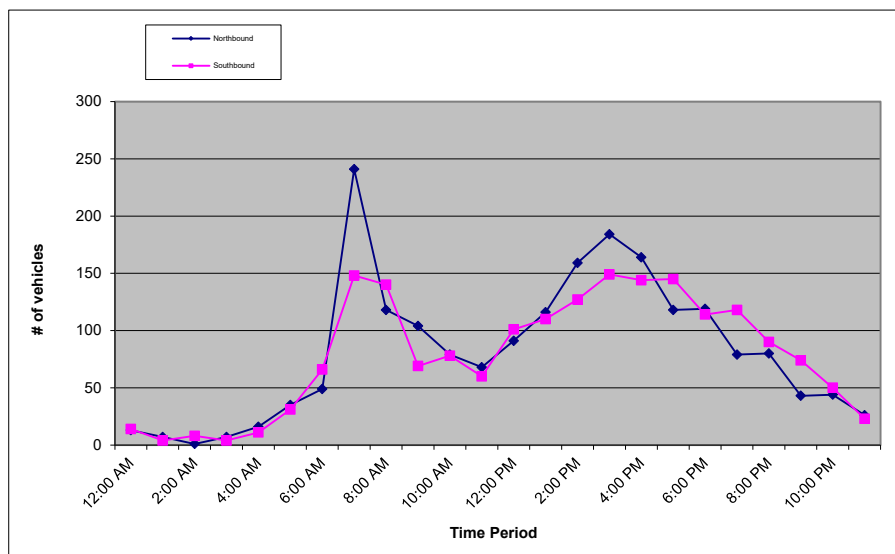
24 Hour Count Report

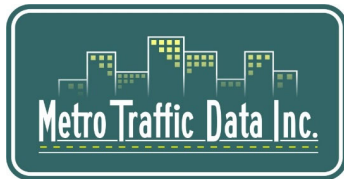
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Armstrong Ave **LATITUDE** 36.72626366
SEGMENT btwn Orleans/Hamilton **LONGITUDE** -119.6730269
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 4

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	5	2	3	3	13	2	6	3	3	14	27
1:00 AM	1	5	1	0	7	1	2	1	0	4	11
2:00 AM	0	1	0	0	1	2	3	1	2	8	9
3:00 AM	2	1	1	3	7	1	1	2	0	4	11
4:00 AM	2	6	3	5	16	3	2	5	1	11	27
5:00 AM	9	9	6	11	35	1	5	11	14	31	66
6:00 AM	6	6	17	20	49	11	17	17	21	66	115
7:00 AM	32	56	75	78	241	28	21	44	55	148	389
8:00 AM	36	29	32	21	118	55	44	25	16	140	258
9:00 AM	32	21	21	30	104	17	19	12	21	69	173
10:00 AM	20	18	12	29	79	27	11	25	15	78	157
11:00 AM	14	14	15	25	68	19	12	13	16	60	128
12:00 PM	18	19	25	29	91	16	21	29	35	101	192
1:00 PM	34	22	24	36	116	33	30	19	28	110	226
2:00 PM	23	36	66	34	159	23	26	33	45	127	286
3:00 PM	28	30	55	71	184	43	41	37	28	149	333
4:00 PM	52	34	42	36	164	38	38	38	30	144	308
5:00 PM	30	25	34	29	118	28	31	44	42	145	263
6:00 PM	32	36	27	24	119	36	25	29	24	114	233
7:00 PM	21	22	16	20	79	29	33	32	24	118	197
8:00 PM	27	13	21	19	80	26	23	23	18	90	170
9:00 PM	10	10	12	11	43	19	19	21	15	74	117
10:00 PM	13	10	14	7	44	18	11	7	14	50	94
11:00 PM	7	8	4	7	26	7	8	2	6	23	49
Total	51.1%				1961	48.9%				1878	
	3839										

AM% 35.7% AM Peak 420 7:15 am to 8:15 am AM P.H.F. 0.79
PM% 64.3% PM Peak 353 3:30 pm to 4:30 pm PM P.H.F. 0.89





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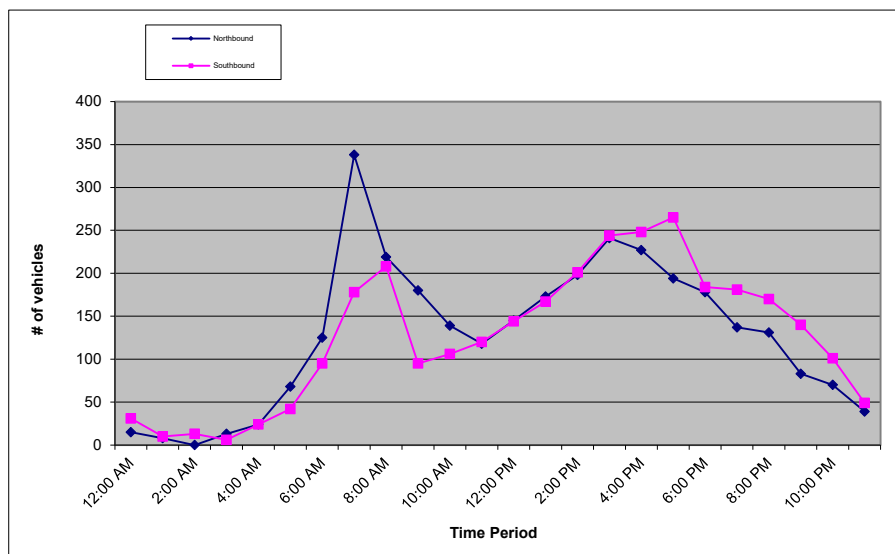
24 Hour Count Report

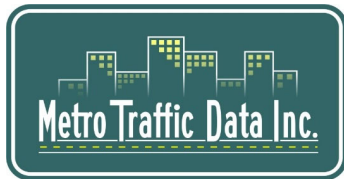
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Armstrong Ave **LATITUDE** 36.72543865
SEGMENT btwn Hamilton/Brayly **LONGITUDE** -119.6730847
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 4

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	7	4	1	3	15	9	11	4	7	31	46
1:00 AM	1	3	3	1	8	0	3	6	1	10	18
2:00 AM	0	0	0	0	0	4	1	4	4	13	13
3:00 AM	2	2	3	6	13	1	0	4	1	6	19
4:00 AM	2	6	7	9	24	5	5	10	4	24	48
5:00 AM	15	17	15	21	68	4	8	13	17	42	110
6:00 AM	19	20	44	42	125	15	21	28	31	95	220
7:00 AM	49	93	107	89	338	34	30	55	59	178	516
8:00 AM	70	61	50	38	219	77	67	40	24	208	427
9:00 AM	52	34	43	51	180	16	27	22	30	95	275
10:00 AM	41	34	18	46	139	27	20	40	19	106	245
11:00 AM	16	23	37	42	118	35	31	17	37	120	238
12:00 PM	34	27	33	51	145	28	29	45	42	144	289
1:00 PM	53	35	47	38	173	45	49	28	45	167	340
2:00 PM	30	46	73	49	198	38	47	45	71	201	399
3:00 PM	29	41	73	98	241	57	71	65	51	244	485
4:00 PM	76	39	57	55	227	68	68	66	46	248	475
5:00 PM	50	38	60	46	194	60	73	62	70	265	459
6:00 PM	53	48	36	41	178	49	46	41	48	184	362
7:00 PM	40	34	31	32	137	38	48	45	50	181	318
8:00 PM	30	35	34	32	131	43	46	42	39	170	301
9:00 PM	17	25	18	23	83	40	39	36	25	140	223
10:00 PM	24	15	21	10	70	26	21	18	36	101	171
11:00 PM	10	15	5	9	39	13	14	16	6	49	88
Total	50.3%				3063	49.7%				3022	
	6085										

AM% 35.7% **AM Peak** 585 7:30 am to 8:30 am **AM P.H.F.** 0.90
PM% 64.3% **PM Peak** 543 3:15 pm to 4:15 pm **PM P.H.F.** 0.91





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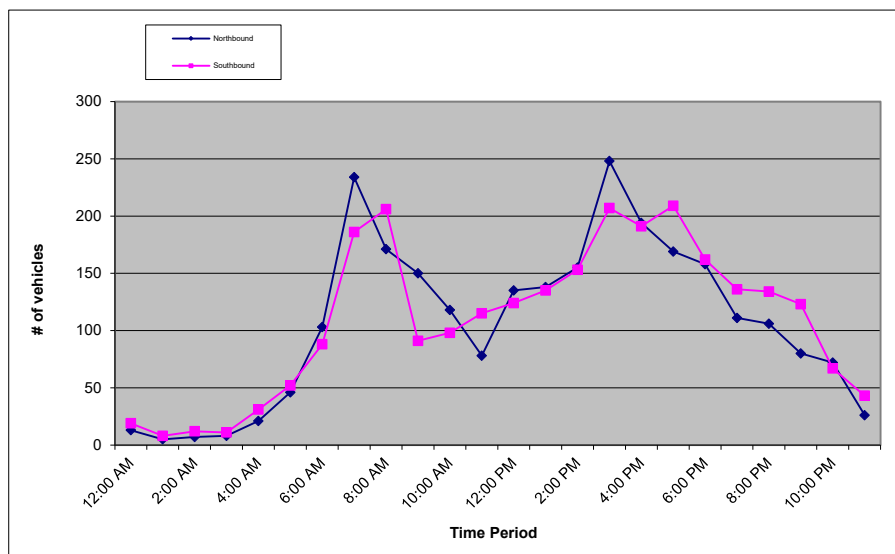
24 Hour Count Report

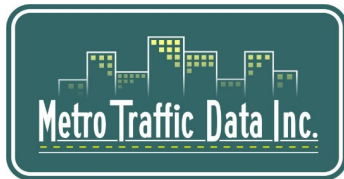
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Armstrong Ave **LATITUDE** 36.7208857
SEGMENT north of California **LONGITUDE** -119.6730689
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 4

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	6	2	1	4	13	6	8	1	4	19	32
1:00 AM	0	1	2	2	5	0	2	4	2	8	13
2:00 AM	0	0	1	6	7	4	1	2	5	12	19
3:00 AM	0	2	3	3	8	3	2	5	1	11	19
4:00 AM	1	4	6	10	21	6	7	13	5	31	52
5:00 AM	12	12	10	12	46	6	8	17	21	52	98
6:00 AM	17	15	32	39	103	10	19	33	26	88	191
7:00 AM	44	65	72	53	234	35	40	56	55	186	420
8:00 AM	63	25	42	41	171	83	69	36	18	206	377
9:00 AM	40	32	41	37	150	15	26	21	29	91	241
10:00 AM	31	34	18	35	118	26	23	31	18	98	216
11:00 AM	17	20	15	26	78	28	34	16	37	115	193
12:00 PM	32	26	37	40	135	23	30	43	28	124	259
1:00 PM	39	28	39	32	138	34	42	19	40	135	273
2:00 PM	23	36	58	38	155	30	42	32	49	153	308
3:00 PM	37	44	72	95	248	49	58	51	49	207	455
4:00 PM	56	39	53	46	194	48	50	54	39	191	385
5:00 PM	45	31	48	45	169	44	60	45	60	209	378
6:00 PM	43	44	40	31	158	40	45	38	39	162	320
7:00 PM	34	24	29	24	111	33	37	32	34	136	247
8:00 PM	24	29	30	23	106	40	32	34	28	134	240
9:00 PM	16	25	15	24	80	36	30	34	23	123	203
10:00 PM	23	19	20	10	72	16	17	13	21	67	139
11:00 PM	8	12	0	6	26	11	12	14	6	43	69
Total	49.5%				2546	50.5%				2601	
	5147										

AM% 36.4% AM Peak 487 7:15 am to 8:15 am AM P.H.F. 0.83
PM% 63.6% PM Peak 473 3:15 pm to 4:15 pm PM P.H.F. 0.82





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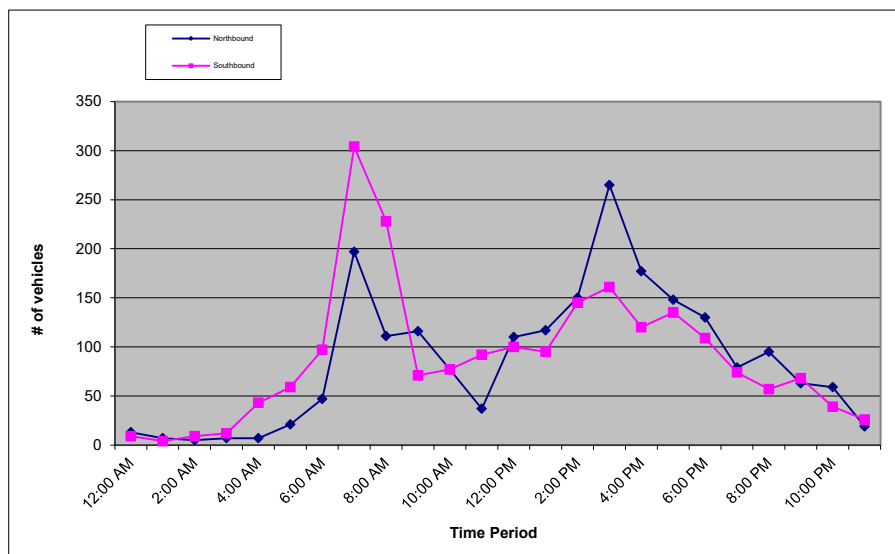
24 Hour Count Report

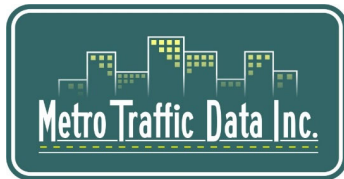
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Armstrong Ave **LATITUDE** 36.71998284
SEGMENT btwn California/Pitt **LONGITUDE** -119.6730604
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 3

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	5	4	1	3	13	3	6	0	0	9	22
1:00 AM	0	3	3	1	7	0	2	1	1	4	11
2:00 AM	0	0	1	4	5	3	1	1	4	9	14
3:00 AM	0	2	2	3	7	3	3	4	2	12	19
4:00 AM	0	1	2	4	7	8	10	15	10	43	50
5:00 AM	7	7	1	6	21	7	9	22	21	59	80
6:00 AM	5	8	12	22	47	15	20	36	26	97	144
7:00 AM	20	49	65	63	197	38	65	115	86	304	501
8:00 AM	38	16	32	25	111	92	78	35	23	228	339
9:00 AM	23	16	48	29	116	12	21	13	25	71	187
10:00 AM	18	25	13	21	77	21	18	24	14	77	154
11:00 AM	14	11	5	7	37	18	17	20	37	92	129
12:00 PM	28	19	39	24	110	12	23	44	21	100	210
1:00 PM	45	18	27	27	117	25	31	19	20	95	212
2:00 PM	15	26	77	32	150	34	39	30	42	145	295
3:00 PM	37	48	76	104	265	37	53	44	27	161	426
4:00 PM	55	40	48	34	177	26	31	32	31	120	297
5:00 PM	38	28	45	37	148	32	32	35	36	135	283
6:00 PM	32	37	40	21	130	32	30	22	25	109	239
7:00 PM	15	19	26	19	79	18	18	18	20	74	153
8:00 PM	22	28	19	26	95	18	12	19	8	57	152
9:00 PM	13	19	13	18	63	18	14	22	14	68	131
10:00 PM	13	17	18	11	59	11	7	4	17	39	98
11:00 PM	9	10	0	0	19	5	9	7	5	26	45
Total	49.1%				2057	50.9%				2134	
	4191										

AM% 39.4% AM Peak 573 7:15 am to 8:15 am AM P.H.F. 0.80
PM% 60.6% PM Peak 433 3:15 pm to 4:15 pm PM P.H.F. 0.83





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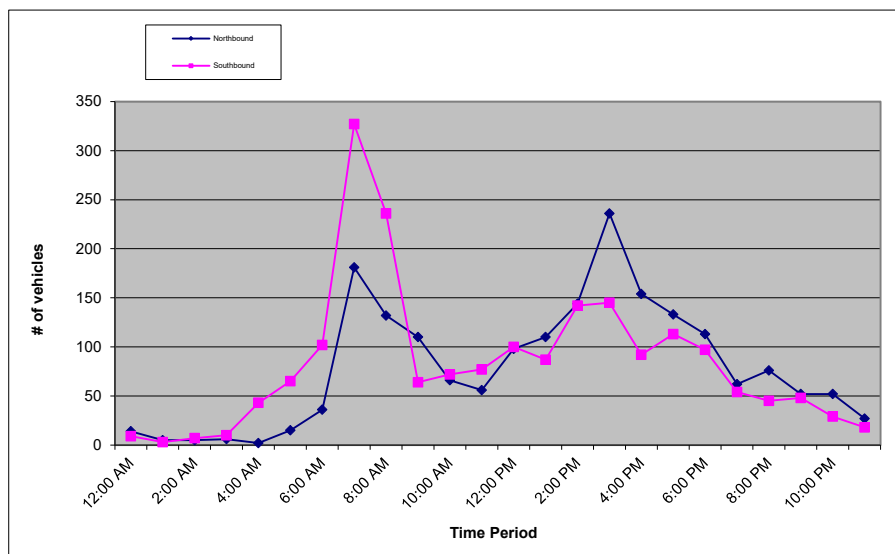
24 Hour Count Report

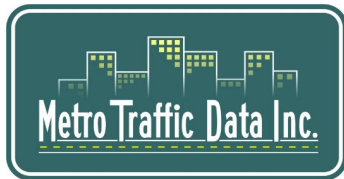
Prepared For: **JLB Traffic Engineering, Inc.**
 516 W. Shaw Ave, Suite 103
 Fresno, CA 93704

STREET Armstrong Ave **LATITUDE** 36.71508797
SEGMENT btwn Truman/Church **LONGITUDE** -119.6730874
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 2

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	5	5	1	3	14	3	6	0	0	9	23
1:00 AM	1	2	2	0	5	0	2	1	0	3	8
2:00 AM	0	0	1	4	5	1	2	1	3	7	12
3:00 AM	1	1	2	2	6	3	2	4	1	10	16
4:00 AM	0	0	1	1	2	8	11	13	11	43	45
5:00 AM	6	3	1	5	15	6	11	26	22	65	80
6:00 AM	1	6	13	16	36	15	22	39	26	102	138
7:00 AM	16	37	68	60	181	37	69	119	102	327	508
8:00 AM	34	48	28	22	132	88	93	32	23	236	368
9:00 AM	19	18	49	24	110	11	21	9	23	64	174
10:00 AM	17	16	16	17	66	23	12	20	17	72	138
11:00 AM	10	9	17	20	56	15	13	20	29	77	133
12:00 PM	19	22	36	21	98	11	26	42	21	100	198
1:00 PM	46	15	26	23	110	23	26	16	22	87	197
2:00 PM	11	27	73	33	144	30	40	30	42	142	286
3:00 PM	27	45	68	96	236	30	49	45	21	145	381
4:00 PM	53	28	42	31	154	19	25	22	26	92	246
5:00 PM	33	27	40	33	133	29	24	29	31	113	246
6:00 PM	28	34	34	17	113	28	30	24	15	97	210
7:00 PM	11	15	23	13	62	13	14	16	11	54	116
8:00 PM	19	20	12	25	76	14	9	16	6	45	121
9:00 PM	12	13	12	15	52	11	13	13	11	48	100
10:00 PM	7	16	20	9	52	6	5	5	13	29	81
11:00 PM	8	7	5	7	27	3	7	3	5	18	45
Total	48.7%				1885	51.3%				1985	
	3870										

AM% **42.5%** **AM Peak 612** **7:30 am to 8:30 am** **AM P.H.F.** **0.82**
PM% **57.5%** **PM Peak 396** **3:15 pm to 4:15 pm** **PM P.H.F.** **0.85**





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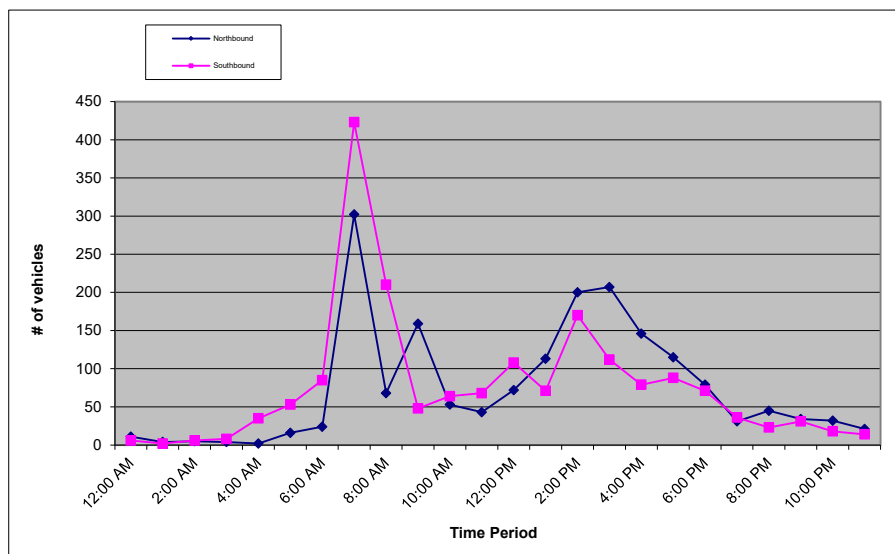
24 Hour Count Report

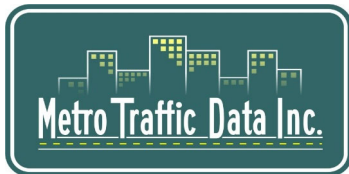
Prepared For: **JLB Traffic Engineering, Inc.**
516 W. Shaw Ave, Suite 103
Fresno, CA 93704

STREET Armstrong Ave **LATITUDE** 36.71453208
SEGMENT south of Church **LONGITUDE** -119.6730733
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 2

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	6	2	1	2	11	2	4	0	0	6	17
1:00 AM	1	1	2	0	4	0	1	1	0	2	6
2:00 AM	0	0	1	4	5	0	2	1	3	6	11
3:00 AM	1	0	2	1	4	2	1	4	1	8	12
4:00 AM	0	0	1	1	2	7	8	11	9	35	37
5:00 AM	5	3	1	7	16	4	11	18	20	53	69
6:00 AM	1	4	9	10	24	13	19	29	24	85	109
7:00 AM	6	56	115	125	302	44	109	155	115	423	725
8:00 AM	23	17	15	13	68	83	83	29	15	210	278
9:00 AM	21	32	81	25	159	10	14	8	16	48	207
10:00 AM	11	12	8	22	53	16	10	22	16	64	117
11:00 AM	8	6	8	21	43	13	12	17	26	68	111
12:00 PM	17	22	18	15	72	7	23	44	34	108	180
1:00 PM	42	33	18	20	113	19	16	13	23	71	184
2:00 PM	10	22	80	88	200	34	58	43	35	170	370
3:00 PM	38	46	51	72	207	23	32	40	17	112	319
4:00 PM	44	30	43	29	146	20	23	16	20	79	225
5:00 PM	26	28	31	30	115	20	21	26	21	88	203
6:00 PM	31	20	18	10	79	24	19	20	8	71	150
7:00 PM	5	10	10	6	31	10	10	10	6	36	67
8:00 PM	11	11	9	14	45	7	5	6	5	23	68
9:00 PM	10	8	5	11	34	6	7	9	9	31	65
10:00 PM	3	8	15	6	32	4	4	4	6	18	50
11:00 PM	4	6	5	6	21	2	6	1	5	14	35
Total	49.4%				1786	50.6%				1829	
	3615										

AM% 47.0% AM Peak 781 7:15 am to 8:15 am AM P.H.F. 0.72
PM% 53.0% PM Peak 387 2:15 pm to 3:15 pm PM P.H.F. 0.79





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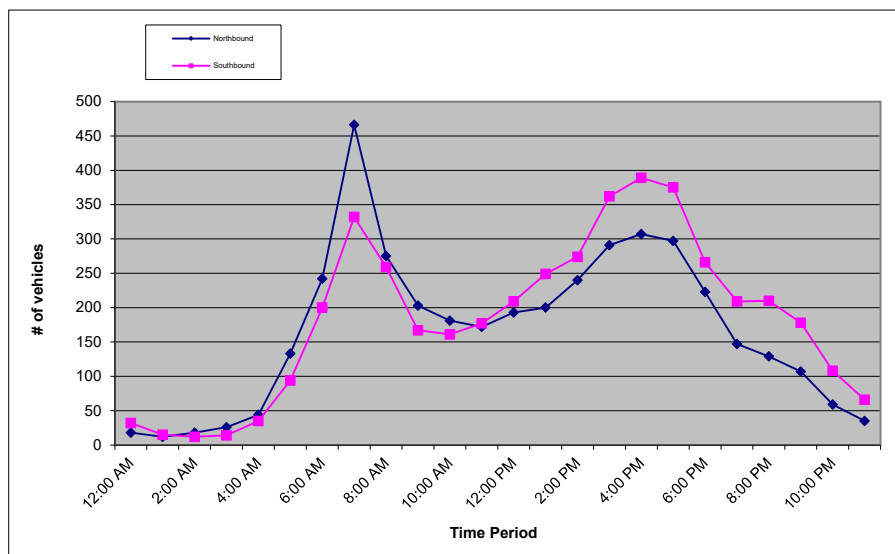
24 Hour Count Report

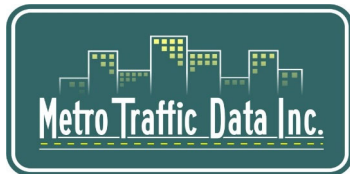
Prepared For: **JLB Traffic Engineering, Inc.**
 516 W. Shaw Ave, Suite 103
 Fresno, CA 93704

STREET Temperance Ave **LATITUDE** 36.72631594
SEGMENT north of Hamilton **LONGITUDE** -119.6643023
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 4

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	6	1	7	4	18	12	6	9	5	32	50
1:00 AM	2	3	2	5	12	3	2	5	5	15	27
2:00 AM	2	12	3	1	18	1	1	6	4	12	30
3:00 AM	2	8	6	10	26	1	3	7	3	14	40
4:00 AM	5	10	10	19	44	3	4	13	15	35	79
5:00 AM	16	29	33	55	133	15	20	23	36	94	227
6:00 AM	50	51	67	74	242	33	33	68	66	200	442
7:00 AM	100	132	135	99	466	65	102	78	87	332	798
8:00 AM	78	81	62	54	275	83	71	58	47	259	534
9:00 AM	56	41	61	45	203	35	56	46	30	167	370
10:00 AM	60	45	39	37	181	39	39	42	41	161	342
11:00 AM	40	35	53	44	172	53	44	35	45	177	349
12:00 PM	46	47	38	62	193	50	52	53	54	209	402
1:00 PM	52	48	52	48	200	53	84	59	53	249	449
2:00 PM	52	57	61	70	240	53	73	62	86	274	514
3:00 PM	66	70	71	84	291	79	89	99	95	362	653
4:00 PM	91	77	78	61	307	98	106	89	96	389	696
5:00 PM	77	71	80	69	297	102	109	82	82	375	672
6:00 PM	69	51	54	49	223	68	75	64	59	266	489
7:00 PM	48	34	33	32	147	54	58	50	47	209	356
8:00 PM	42	32	27	28	129	53	49	58	50	210	339
9:00 PM	24	26	28	29	107	51	49	49	29	178	285
10:00 PM	17	14	17	11	59	24	28	27	29	108	167
11:00 PM	7	15	9	4	35	19	13	24	10	66	101
Total	47.8%				4018	52.2%				4393	
	8411										

AM% **39.1%** **AM Peak 798** **7:00 am to 8:00 am** **AM P.H.F.** **0.85**
PM% **60.9%** **PM Peak 721** **3:30 pm to 4:30 pm** **PM P.H.F.** **0.95**





Metro Traffic Data Inc.
 310 N. Irwin Street - Suite 20
 Hanford, CA 93230
 800-975-6938 Phone/Fax
 www.metrotrafficdata.com

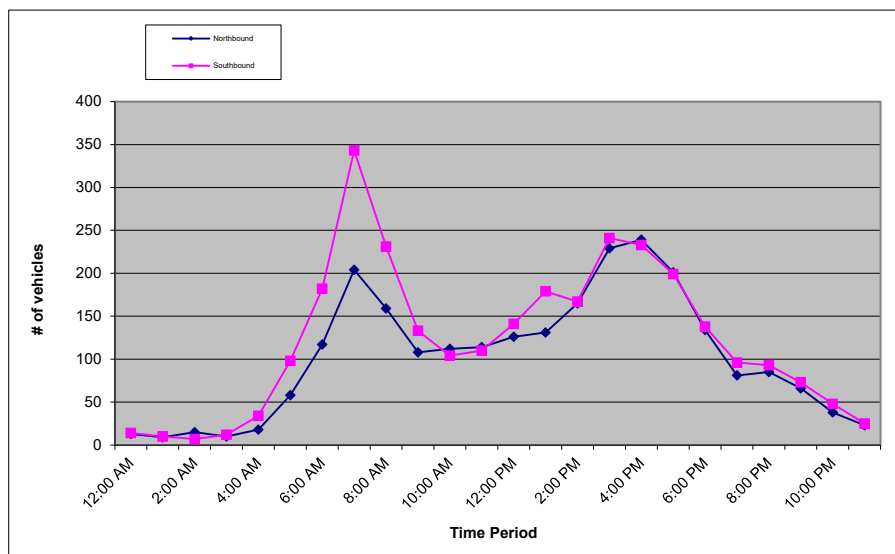
24 Hour Count Report

Prepared For: **JLB Traffic Engineering, Inc.**
 516 W. Shaw Ave, Suite 103
 Fresno, CA 93704

STREET Temperance Ave **LATITUDE** 36.72525888
SEGMENT south of Hamilton **LONGITUDE** -119.6642151
COLLECTION DATE Tuesday, June 4, 2024 **WEATHER** Clear
NUMBER OF LANES 2

	Northbound					Southbound					Hourly
Hour	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Totals
12:00 AM	5	1	3	4	13	7	3	3	1	14	27
1:00 AM	2	2	1	4	9	2	2	2	4	10	19
2:00 AM	2	11	2	0	15	2	0	3	2	7	22
3:00 AM	1	2	4	3	10	1	2	6	3	12	22
4:00 AM	1	1	3	13	18	3	4	10	17	34	52
5:00 AM	8	7	14	29	58	14	20	29	35	98	156
6:00 AM	31	27	29	30	117	23	35	63	61	182	299
7:00 AM	37	50	62	55	204	65	96	88	94	343	547
8:00 AM	39	44	44	32	159	84	60	48	39	231	390
9:00 AM	27	20	36	25	108	29	49	33	22	133	241
10:00 AM	36	22	26	28	112	26	29	26	23	104	216
11:00 AM	33	18	34	29	114	31	28	26	25	110	224
12:00 PM	40	27	29	30	126	33	36	32	40	141	267
1:00 PM	41	30	33	27	131	40	71	40	28	179	310
2:00 PM	37	41	40	47	165	32	45	41	49	167	332
3:00 PM	48	54	54	73	229	52	66	69	54	241	470
4:00 PM	72	58	64	45	239	62	67	43	61	233	472
5:00 PM	56	55	47	43	201	55	44	50	50	199	400
6:00 PM	45	31	34	24	134	35	38	34	31	138	272
7:00 PM	28	18	14	21	81	26	26	26	18	96	177
8:00 PM	29	18	18	20	85	25	20	29	19	93	178
9:00 PM	19	12	17	18	66	19	16	26	12	73	139
10:00 PM	13	7	10	8	38	13	10	16	9	48	86
11:00 PM	3	10	7	3	23	12	5	5	3	25	48
Total	45.8%				2455	54.2%				2911	
	5366										

AM% **41.3%** **AM Peak 568** **7:15 am to 8:15 am** **AM P.H.F. 0.95**
PM% **58.7%** **PM Peak 509** **3:30 pm to 4:30 pm** **PM P.H.F. 0.95**



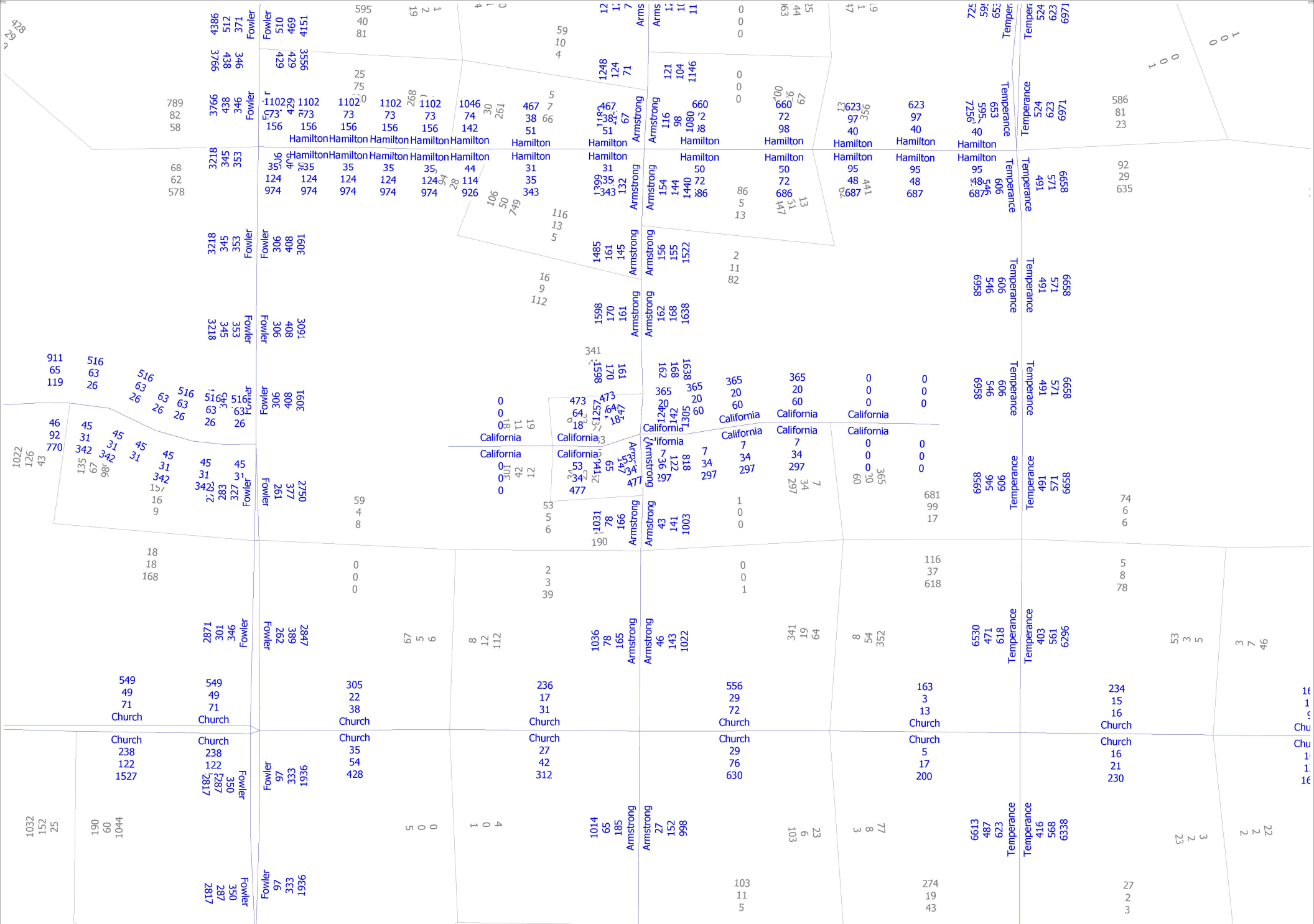
Appendix C: Traffic Modeling



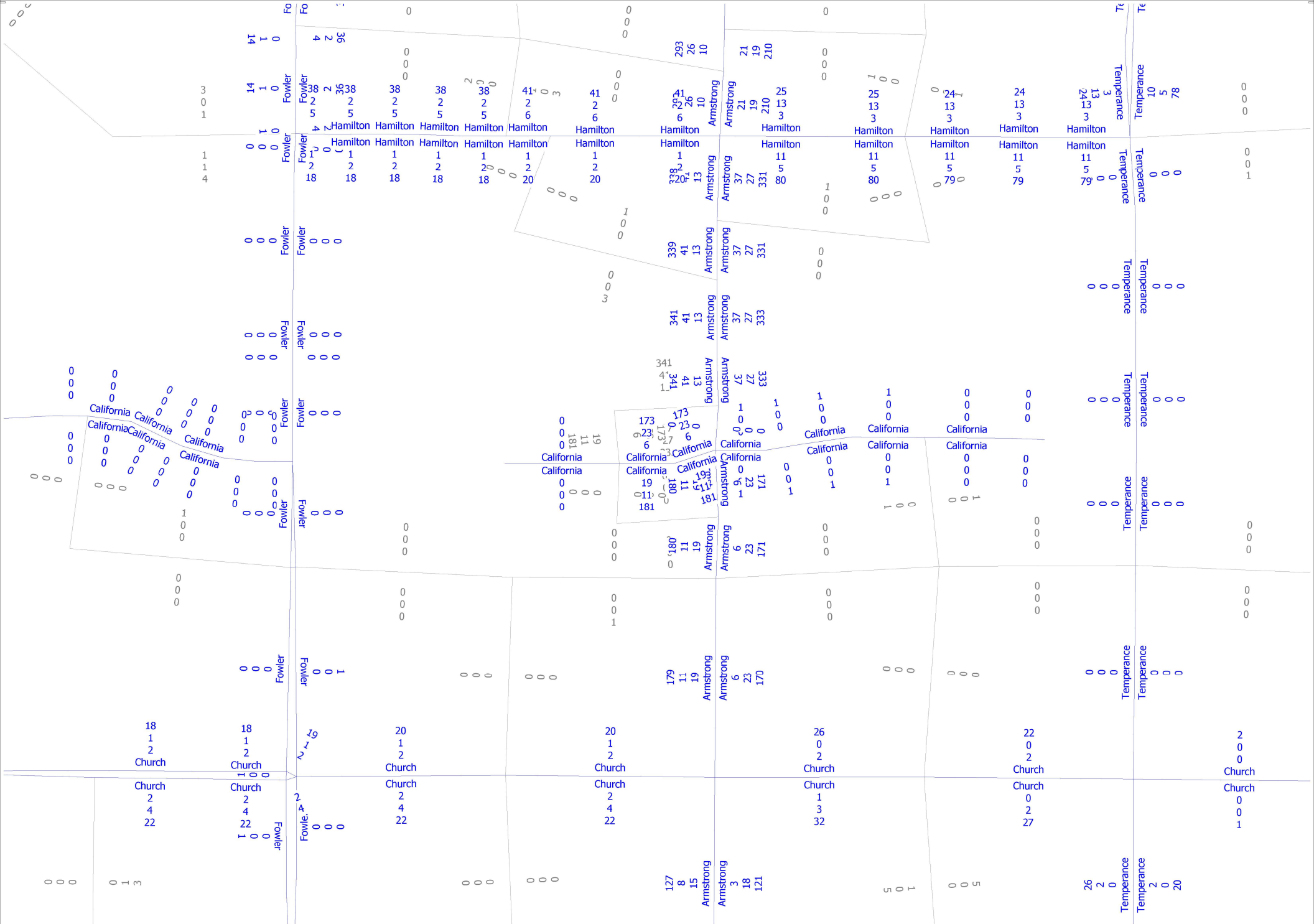
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A p p | C

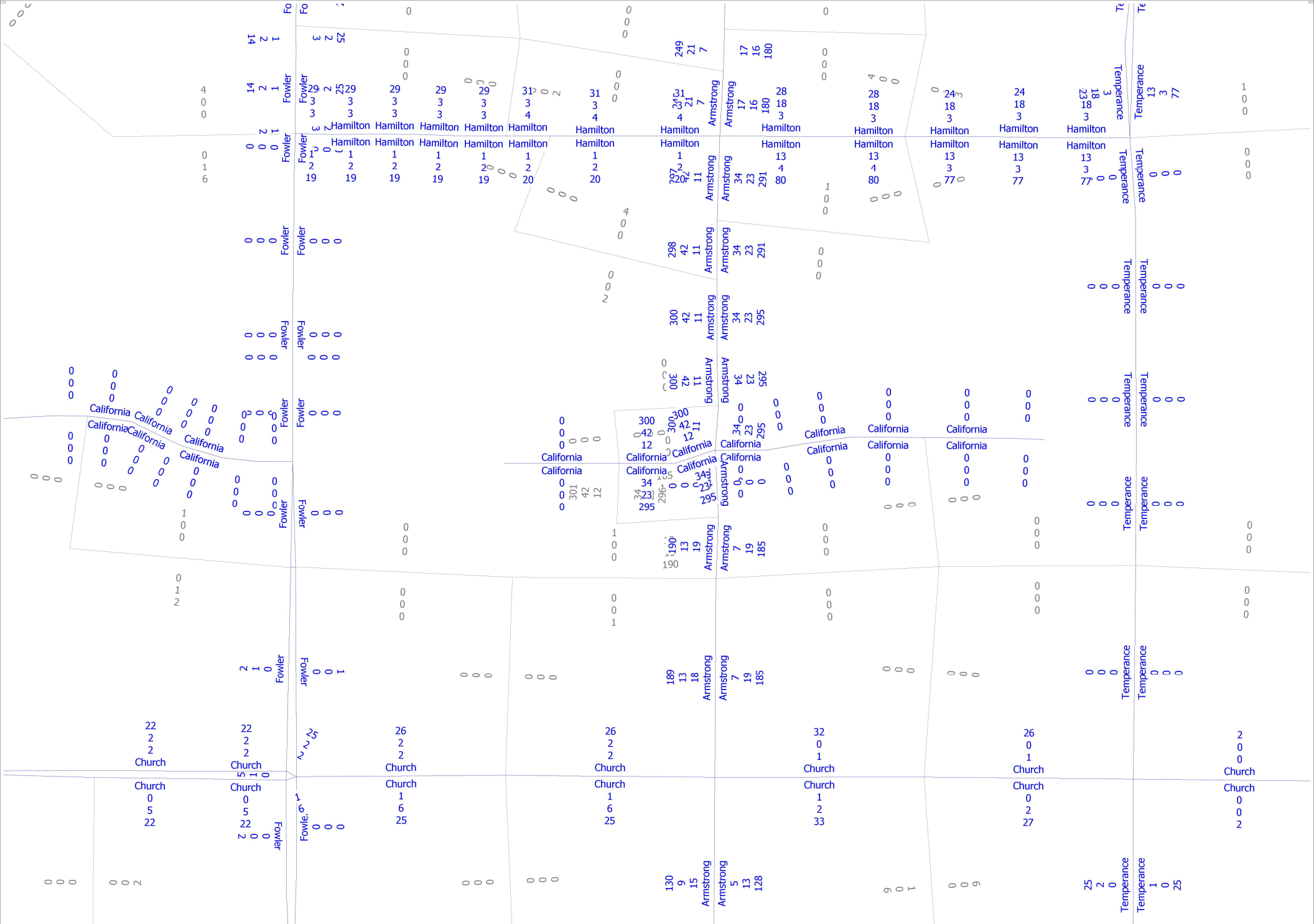


Simonian TIA
Base Year 2019 plus Project
AM, PM and Daily Volumes



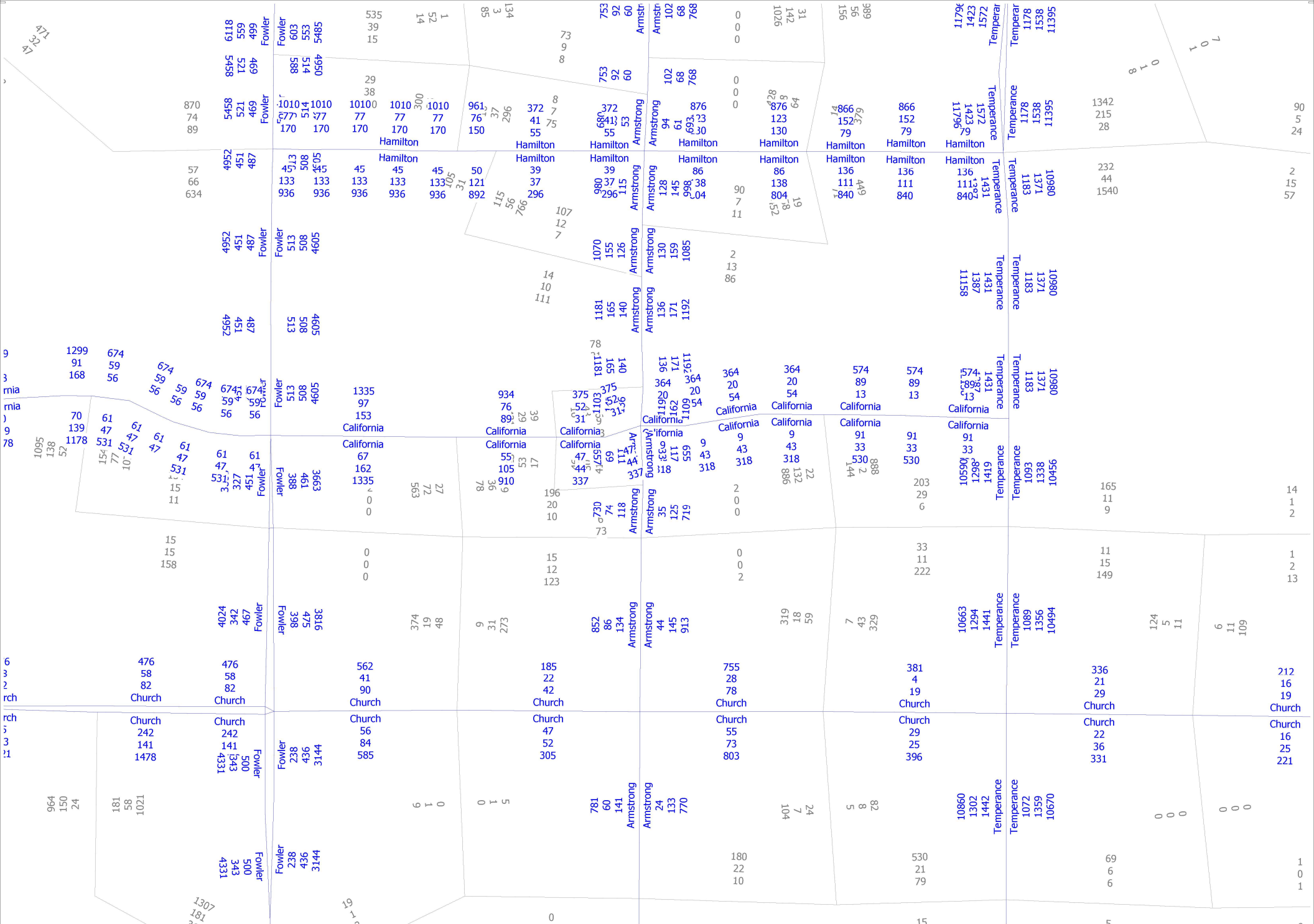
Simonian TIA
Base Year 2019 plus Project - Select Zone 1
AM, PM and Daily Volumes



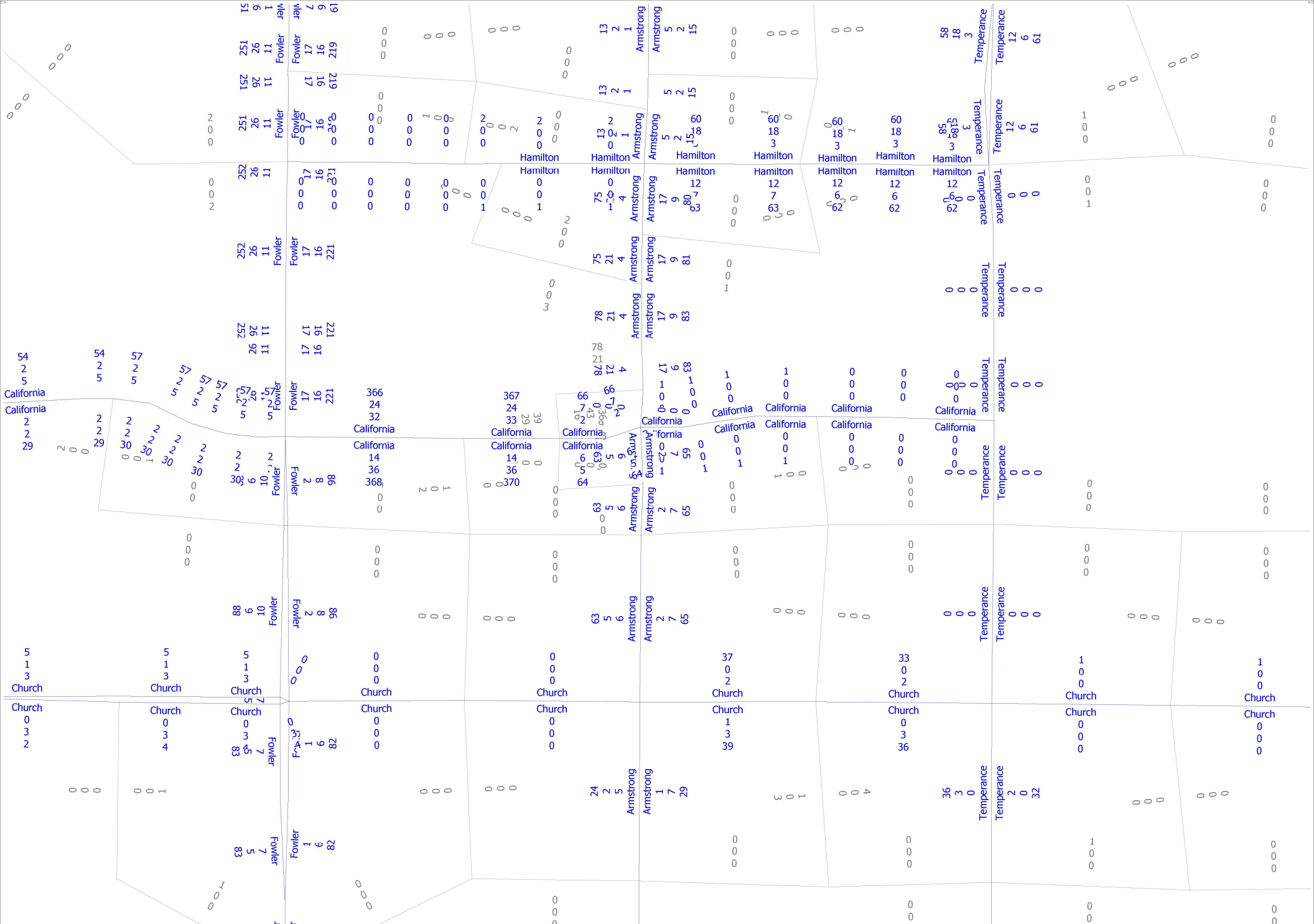


Simonian TIA
Base Year 2019 plus Project - Select Zone 2
AM, PM and Daily Volumes



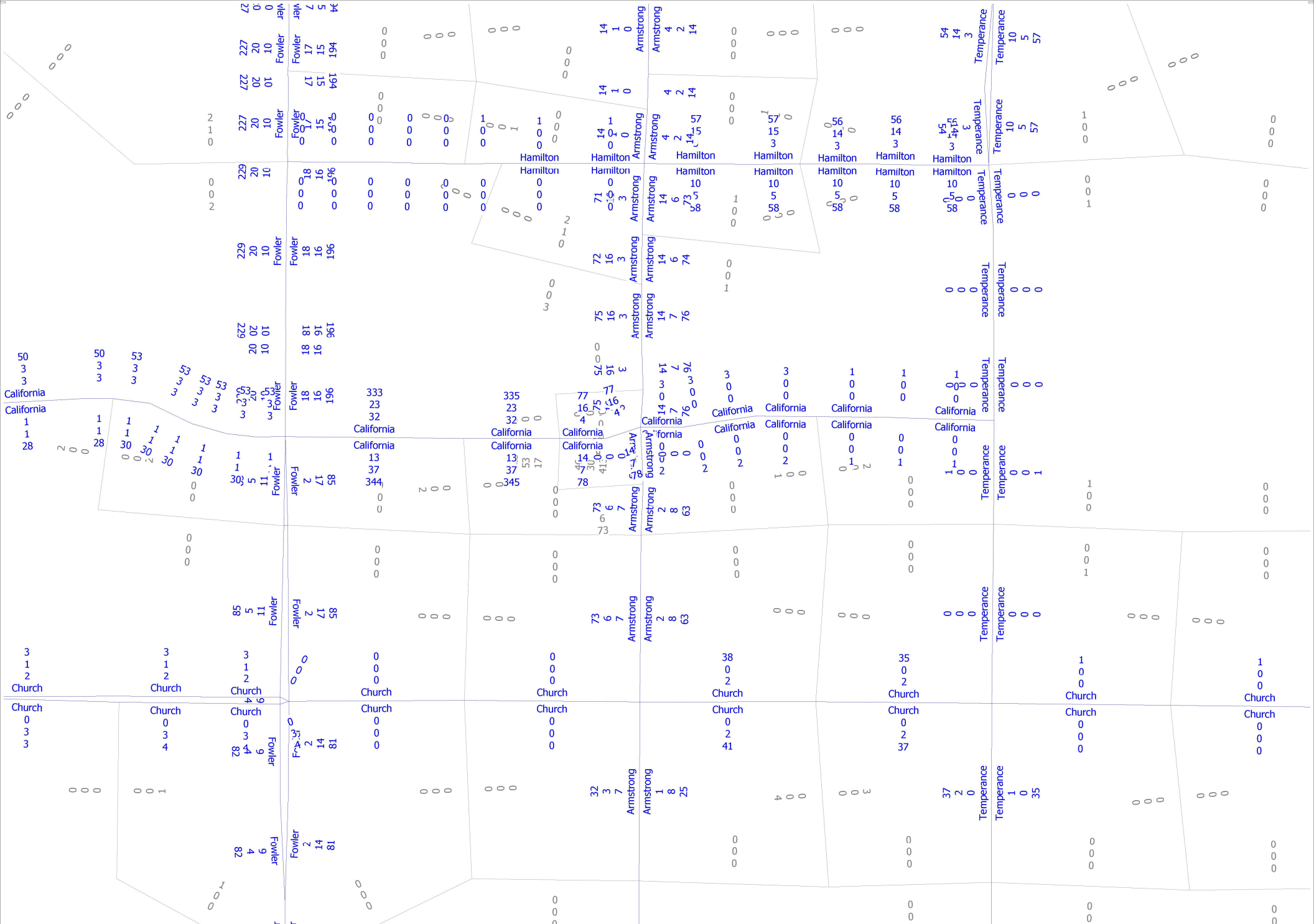


Simonian TIA
Cumulative Year 2046 plus Project
AM, PM and Daily Volumes



Simonian TIA
Cumulative Year 2046 plus Project - Select Zone 1
AM, PM and Daily Volumes





Simonian TIA
Cumulative Year 2046 plus Project - Select Zone 2
AM, PM and Daily Volumes

Appendix D: Methodology



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Levels of Service Methodology

The description and procedures for calculating capacity and level of service (LOS) are found in the Transportation Research Board, Highway Capacity Manual (HCM). The HCM 7th Edition represents the research on capacity and quality of service for transportation facilities.

Quality of service requires quantitative measures to characterize operational conditions within a traffic stream. Level of service is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience.

Six levels of service are defined for each type of facility that has analysis procedures available. Letters designate each level of service (LOS), from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each LOS represents a range of operating conditions and the driver's perception of these conditions. Safety is not included in the measures that establish an LOS.

Intersection Levels of Service

One of the more important elements limiting and often interrupting the flow of traffic on a highway is the intersection. Flow on an interrupted facility is usually dominated by points of fixed operation such as traffic signals, stop signs and yield signs.

Signalized Intersections

LOS can be characterized for the entire intersection, each intersection approach and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. A description of LOS for signalized intersections is found in Table A-1.

Table 1: Signalized Intersection LOS Description (Motorized Vehicle Mode)

Level of Service	Description	Average Control Delay (Seconds per Vehicle)
A	Operations with a control delay of 10 seconds/vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is really low and either progression is exceptionally favorable or the cycle length is very short. If it's due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Operations with control delay between 10.1 to 20.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	>10.0 to 20.0
C	Operations with average control delays between 20.1 to 35.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio no greater than 1.0, the progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 to 35
D	Operations with control delay between 35.1 to 55.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35 to 55
E	Operations with control delay between 55.1 to 80.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable and the cycle length is long. Individual cycle failures are frequent.	>55 to 80
F	Operations with unacceptable control delay exceeding 80.0 seconds/vehicle and a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor and the cycle length is long. Most cycles fail to clear the queue.	>80

Note: Source: Highway Capacity Manual 7th Edition

All-Way Stop Controlled Intersections

All-way stop controlled intersections are common in the United States. They are characterized by having all approaches controlled by stop sign without any street having priority. Streets intersecting at all-way stop controlled intersections can be public or private. The intersection analysis boundaries for an all-way stop controlled intersection are assumed to be those of an isolated intersection, no upstream or downstream effects are accounted for in analysis.

Two-Way Stop Controlled Intersections

Two-way stop controlled (TWSC) intersections are also common in the United States. A typical configuration is a four-leg intersection in which one street, the major street, is uncontrolled and the other street, the minor street, is controlled by stop signs. The other typical intersection is a three-leg intersection in which a single minor street approach is controlled by a stop sign.

For the analysis of the motorized vehicle mode, the methodology addresses special circumstances that may exist at two-way stop controlled intersections including two-stage gap acceptance, approaches with shared lanes, the presence of upstream traffic signals and flared approaches for minor-street right-turning vehicles. Table A-2 provides a description of LOS at unsignalized intersections.

Table 2: Unsignalized Intersection LOS Description (Motorized Vehicle Mode)

Control Delay (Seconds per Vehicle)	LOS by Volume-to-Capacity Ratio	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
>10 to 15	B	F
>15 to 25	C	F
>25 to 35	D	F
>35 to 50	E	F
>50	F	F

Note: Source: HCM 7th Edition, Exhibit 21-8.

Roundabout Controlled Intersections

Roundabouts are intersections with a generally circular shape, characterized by yield on entry and circulation around a central island. Roundabouts have been used successfully throughout the world and are being used increasingly in the United States, especially since 1990. Intersection analysis models generally fall into two categories: regression models and analytical models. Regression models use field data to develop statistically derived relationships between geometric features and performance measures such as capacity and delay. Analytical models are based on traffic flow theory combined with field measures of driver behavior, resulting in an analytical formulation of the relationship of driver behavior, resulting in an analytical formulation of the relationship between those field measures and performance measures such as capacity and delay. Table A-3 provides a description of LOS at roundabout intersections.

Table 3: Roundabout Intersection Level of Service Description (Automobile Mode)

Control Delay (Seconds per Vehicle)	LOS by Volume-to-Capacity Ratio	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
>10 to 15	B	F
>15 to 25	C	F
>25 to 35	D	F
>35 to 50	E	F
>50	F	F

Note: Source: HCM 7th Edition, Exhibit 22-8.

Segment Levels of Service

Segments are portions of roads without any interruption of flow. These typically include basic freeway segments, multilane highway segments, freeway weaving segments, freeway merge and diverge segments, two-lane highway segments and urban street segments.

Urban Street Segments (Motorized Vehicle Mode)

The term “urban street segments” refers to two elements that are found: points and segments. A point is the boundary between links and is represented by an intersection or ramp terminal. A link is a length of roadway between two points. A link and its boundary are referred to as a segment. A signalized intersection is always used to define a boundary. Only intersections, or ramp terminals, in which the segment through volumes is uncontrolled can exist along the segment. A midsegment traffic control signal provided for the exclusive use of pedestrians should not be used to define a segment boundary. Chapter 18 of the Highway Capacity Manual categorizes each LOS as follows:

LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal. Travel speeds exceed 80 percent of the base free flow speed (FFS) and the volume-to-capacity ratio is no greater than 1.0.

LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67 and 80 percent of the base FFS and the volume-to-capacity ratio is no greater than 1.0.

LOS C describes stable operations. The ability to maneuver and change lanes in midblock location may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50 and 67 percent of the base FFS and the volume-to-capacity ratio is no greater than 1.0.

LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volumes or inappropriate signal timing at the boundary intersections. The travel speed is between 40 and 50 percent of the base FFS and the volume-to-capacity ratio is no greater than 1.0.

LOS E is characterized as an unstable operation and has significant delay. Such operations may be due to some combination of adverse progression, high volume and inappropriate signal timing at the boundary intersections. The travel speed is between 30 and 40 percent of the base FFS and the volume-to-capacity ratio is no greater than 1.0.

LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30 percent or less of the base FFS or the volume-to-capacity ratio is greater than 1.0.

Urban Street Segments LOS

Two performance measures are used to characterize vehicular LOS for a given direction of travel along an urban street segment. One measure is travel speed for through vehicles. This speed reflects the factors that influence running time along the link and the delay uncured by through vehicles at the boundary intersections. The second measures is the volume-to-capacity ratio for the through movements at the downstream boundary intersection. These performance measures indicate the degree of mobility provided by the segment. Table A-4 provides a description of LOS for Urban Street Segments.

Table 4: Urban Street Segment Levels of Service (Motorized Vehicle Mode)

LOS	Travel Speed Threshold by Base Free-Flow Speed (miles/hour)							Volume-to-Capacity Ratio
	55	50	45	40	35	30	25	
A	>44	>40	>36	>32	>28	>24	>20	≤ 1.0
B	>37	>34	>30	>27	>23	>20	>17	
C	>28	>25	>23	>20	>18	>15	>13	
D	>22	>20	>18	>16	>14	>12	>10	
E	>17	>15	>14	>12	>11	>9	>8	
F	≤17	≤15	≤14	≤12	≤11	≤9	≤8	
F	Any							> 1.0

Note: a = Volume-to-capacity ratio of through movement at downstream boundary intersection.

Source: Highway Capacity Manual 7th Edition, Exhibit 18-1.

Basic Freeway and Multilane Highway Segments

Segments of multilane highways and basic freeways outside the influence of merging maneuvers, diverging maneuvers, weaving maneuvers, or signalized intersections define LOS by density. Density describes a motorist's proximity to other vehicles and is related to a motorist's freedom to maneuver within the traffic stream. Chapter 12 of the Highway Capacity Manual categorizes each LOS as follows:

LOS A describes free-flow operations. FFS prevails on the freeway or multilane highway, and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.

LOS B represents reasonably free-flow operations, and FFS on the freeway or multilane highway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents are still easily absorbed.

LOS C provides for flow with speeds near the FFS of the freeway or multilane highway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.

LOS D is the level at which speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited, and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

LOS E describes operation at or near capacity. Operations on the freeway or multilane highway at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering from a ramp or an access point or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic stream. Toward the upper boundary of LOS E, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing. The physical and psychological comfort afforded to drivers is poor.

LOS F describes unstable flow. Such conditions exist within queues forming behind bottlenecks. Breakdowns occur for a number of reasons:

- Traffic incidents can temporarily reduce the capacity of a short segment so that the number of vehicles arriving at a point is greater than the number of vehicles that can move through it.
- Points of recurring congestion, such as merge or weaving segments and lane drops, experience very high demand in which the number of vehicles arriving is greater than the number of vehicles that can be discharged.
- In analyses using forecast volumes, the projected flow rate can exceed the estimated capacity of a given location.

Basic Freeway

Basic Freeway segments generally have four to eight lanes (in both directions) and posted speed limits between 50 and 75 mi/hr. The median type depends on right-of-way constraints and other factors. The performance measures include capacity, free flow speed, demand and volume-to-capacity ratio, space mean speed, average density and LOS. The following performance measures are evaluated for each segment: capacity, FFS, demand-to-capacity or volume-to-capacity ratios, space mean average, average density, travel time, vehicle miles traveled, vehicle hours of travel and vehicle hours of delay. Table A-5 provides a description of LOS for Basic Freeway Segments.

Multilane Highway

Multilane Highway segments generally have four to six lanes (in both directions) and posted speed limits between 40 and 55 mi/hr. These highways may be divided, undivided or divided by a two-way left-turn lane. The performance measures include capacity, free flow speed, demand and volume-to-capacity ratio, space mean speed, average density and LOS. The following performance measures are evaluated for each segment: capacity, FFS, demand-to-capacity or volume-to-capacity ratios, space mean average, average density, travel time, vehicle miles traveled, vehicle hours of travel and vehicle hours of delay. Table A-5 provides a description of LOS for Multilane Highway Segments.

Table 5: Basic Freeway and Multilane Highway Segment Level of Service Description

<i>Level of Service</i>	<i>Density (Passenger Cars per Mile per Lane)</i>	
	<i>Urban</i>	<i>Rural</i>
A	≤11	≤6
B	>11 to 18	>6 to 14
C	>18 to 26	>14 to 22
D	>26 to 35	>22 to 29
E	>35 to 45	>29 to 39
F	>45 or Demand Exceeds Capacity	>39 or Demand Exceeds Capacity

Note: Source: HCM 7th Edition, Exhibit 10-6.

Two-Lane Highway Segments

Two-Lane Highways generally have one lane per direction. The single lane in each direction may be supplemented with passing lanes, truck climbing lanes, turnouts or pullouts. If allowed, passing maneuvers are limited by the availability of gaps in the opposing traffic stream and by the availability of sufficient sight distance for a driver to discern the approach of an opposing vehicle safely. A principal measure of LOS is average speed, percent followers and follower density. Chapter 15 of the Highway Capacity Manual categorizes each LOS as follows:

At **LOS A**, motorists experience operating speeds near the posted speed limit and little difficulty in passing. Platooning is minimal and follower density is very low.

At **LOS B through LOS D**, represent gradations between the conditions for LOS A and LOS E.

At **LOS E**, speeds may still be reasonable, but platooning is significant and follower density is high. Passing, if allowed is essentially impossible.

LOS F exists whenever demand flow in one or both directions exceeds the segment's capacity. When demand exceeds capacity, it is expected that there will be a reduction in the capacity at the bottleneck.

Two-Lane Highway

The performance measures include average speed, FFS and follower density. The LOS output is calculated for an establish segment boundary that includes consistent terrain, lane widths, shoulder widths, facility classification and demand flow rate. Table A-6 provides a description of LOS for Two-Lane Highway Segments.

Table 6: Two-Lane Highway Segment Level of Service Description

<i>LOS</i>	<i>Follower Density (Followers per Mile per Lane)</i>	
	<i>Higher-Speed Highways Posted Speed Limit ≥ 50 miles per hour</i>	<i>Lower-Speed Highways Posted Speed Limit < 50 miles per hour</i>
A	≤2.0	≤2.5
B	>2.0 to 4.0	>2.5 to 5.0
C	>4.0 to 8.0	>5.0 to 10.0
D	>8.0 to 12.0	>10.0 to 15.0
E	>12.0	>15.0

Note: Source: HCM 7th Edition, Exhibit 15-6.



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A p p | D-7

Appendix E: Collision Data



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A p p | E

Primary Rd CHURCH AVENUE		Distance (ft) 200.		Direction W		Secondary Rd 9TH STREET		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 020193		Collision Date 20200529		Time 0045 Day FRI							
Primary Collision Factor IMPROP TURN		Violation 22107		Collision Type REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20200701											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	47	M	H	HNBD		UNS TURN	E	A	0100	BMW	2006	- 3	F	-	L	G								
2	PRKD	998	-				PARKED	-	A	0100	HYUN	2006	- 3	N	-	-	-								

Primary Rd CHURCH AVENUE		Distance (ft) 0.00		Direction		Secondary Rd ARMSTRONG		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 020095		Collision Date 20200826		Time 1900 Day WED							
Primary Collision Factor IMPROP TURN		Violation 22107		Collision Type SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20200904											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	67	F	A	HNBD		LFT TURN	E	A	0100	HOND	2017	- 3	N	-	M	G								
2	DRVR	26	M	O	HNBD		STOPPED	S	A	0100	TOYO	2012	- 3	N	-	M	G								

Primary Rd CHURCH AVENUE		Distance (ft) 0.00		Direction		Secondary Rd BRAWLEY		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 015		Type 3		CalTrans		Badge 020078		Collision Date 20201017		Time 2118 Day SAT							
Primary Collision Factor STOP SGN SIG		Violation 22450A		Collision Type BROADSIDE		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20201026											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - NO		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	F	H	HNBD		PROC ST	W	A	0100	TOYO	2014	- 3	N	-	M	G								
2	DRVR	53	M	H	HNBD		PROC ST	N	A	0800	DODGE	2013	- 3	N	-	L	G	PASS	POSSIBL	55	F	3	0	M	G

Primary Rd CHURCH AVENUE		Distance (ft) 1220		Direction E		Secondary Rd BRAWLEY		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 015		Type 3		CalTrans		Badge 020193		Collision Date 20201202		Time 1340 Day WED							
Primary Collision Factor R-O-W AUTO		Violation 21804A		Collision Type BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20201204											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	23	F	H	HNBD		LFT TURN	W	A	0100	TOYT	2018	- 3	N	-	M	G								
2	DRVR	39	M	H	HNBD		PROC ST	E	A	0100	NISS	2005	- 3	N	-	M	G								

Primary Rd CHURCH AVENUE		Distance (ft) 475.		Direction E		Secondary Rd HUGHES AVENUE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 015		Type 3		CalTrans		Badge 020095		Collision Date 20201115		Time 1039 Day SUN							
Primary Collision Factor IMPROP TURN		Violation 22107		Collision Type HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20201123											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	74	M	H	HNBD		UNS TURN	E	D	2200	FORD	1990	- 3	N	-	M	G								

Primary Rd BUTLER/ CEDAR		Distance (ft) 7.00		Direction N		Secondary Rd BUTLER		NCIC 1005		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy								
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat	00E	Type	0	CalTrans	Badge	P1731	Collision Date	20211205	Time	1939	Day	SUN						
Primary Collision Factor		R-O-W PED		Violation		21950A		Collision Type		AUTO/PED		Severity		INJURY		#Killed 0 #Injured 1		Tow Away? N		Process Date 20220218						
Weather1 CLOUDY		Weather2		Rdwy Surface		WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		Motor Vehicle Involved With		PED		Lighting		DARK - ST		Ped Action		X-WLK AT		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	M	H			LFT TURN	E	I	1199	-	2016	-	3	N	-	M	K								
2	PED	66	F	H			PROC ST	N	N	6000	-		-	-	N	-	-	-	PED	SERIOUS	66	F	9	-	-	P

Primary Rd BYRD AVE		Distance (ft) 60.0		Direction W		Secondary Rd CLARA AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat	00F	Type	0	CalTrans	Badge	P1689	Collision Date	20211119	Time	1524	Day	FRI					
Primary Collision Factor		IMPROP TURN		Violation		22107		Collision Type		HEAD-ON		Severity		PDO		#Killed 0 #Injured 0		Tow Away? N		Process Date 20211122					
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	RGT TURN	W	A	0100	HYUND	2008	-	-	N	-	-	-							
2	PRKD	998	-				PARKED	-	A	0100	VOLKS	2006	-	-	N	-	-	-							

Primary Rd CALAVERAS ST		Distance (ft) 0.00		Direction		Secondary Rd CAMBRIDGE AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist	CENTR	Beat	00G	Type	0	CalTrans	Badge	P1402	Collision Date	20210413	Time	1556	Day	TUE					
Primary Collision Factor		DRVR ALC DRG		Violation		23152B		Collision Type		BROADSIDE		Severity		PDO		#Killed 0 #Injured 0		Tow Away? Y		Process Date 20210419					
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		MSDMNR		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	68	M	B	HBD-UI		BACKING	-	A	0100	CHRY	2006	-	3	A	N	M	-							
2	DRVR	26	F	B	HNBD		PARKED	S	A	0100	KIA	2021	-	3	N	-	M	G							

Primary Rd CALAVERAS ST		Distance (ft) 338.		Direction N		Secondary Rd MCKENZIE AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist	SW	Beat	00B	Type	0	CalTrans	Badge	P1888	Collision Date	20211003	Time	2030	Day	SUN					
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		SIDESWIPE		Severity		PDO		#Killed 0 #Injured 0		Tow Away? N		Process Date 20211011					
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	M	H	IMP UNK	IMP UNK	PARKING	S	A	0100	FORD	2012	-	3	N	-	-	-							
2	PRKD	998	-				PARKED	S	-	9900	TOYOT	2007	-	3	N	-	-	-							
3	PRKD	998	-				PARKED	S	-	9900	FORD	1989	-	3	N	-	-	-							

Primary Rd CALIFORNIA AVE		Distance (ft) 45.0		Direction E		Secondary Rd ARMSTRONG AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat	00G	Type	0	CalTrans	Badge	P1655	Collision Date	20210904	Time	1239	Day	SAT					
Primary Collision Factor		R-O-W AUTO		Violation		21801A		Collision Type		HIT OBJECT		Severity		PDO		#Killed 0 #Injured 0		Tow Away? N		Process Date 20211004					
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	F	O	HNBD		U-TURN	E	A	0100	-	2017	-	3	N	-	M	G							

Include State Highways cases

Report Run On: 12/09/2022

Primary Rd		CHURCH AVE		Distance (ft)		25.0		Direction		E		Secondary Rd		FOWLER AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Fresno		County		Fresno		Population		7		Rpt Dist		SOUTH		Beat		00G		Type		0		CalTrans		Badge		P2042		Collision Date		20210814		Time		1333		Day		SAT																							
Primary Collision Factor				IMPROP TURN				Violation				22100B				Collision Type				HIT OBJECT				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				N				Process Date				20210819			
Weather1				CLEAR				Weather2				Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0																											
Hit and Run				Motor Vehicle Involved With				FIXED OBJ				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																											
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected													
1		DRVR		40		M		H		HNBD		LFT TURN		S		J		4800		CHEVR		2019		-		3		N		-		M		C																													

Primary Rd		CHURCH AVE		Distance (ft)		0.00		Direction		E		Secondary Rd		FRUIT AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Fresno		County		Fresno		Population		7		Rpt Dist		SOUTH		Beat		00E		Type		0		CalTrans		Badge		P1541		Collision Date		20211024		Time		0912		Day		SUN																							
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type				HIT OBJECT				Severity				INJURY				#Killed				0				#Injured				1				Tow Away?				Y				Process Date				20211028			
Weather1				CLEAR				Weather2				Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0																											
Hit and Run				Motor Vehicle Involved With				FIXED OBJ				Lighting				DUSK/DAWN				Ped Action				Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																											
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected													
1F		DRVR		24		M		H		HBD-UNK		PROC ST		N		A		0100		BMW		2002		-		-		N		-		L		-		DRVR		POSSIBL		24		M		1		0		L		-													

Primary Rd		CHURCH AVE		Distance (ft)		125.		Direction		E		Secondary Rd		MANILA AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE		Beat		00G		Type		0		CalTrans		Badge		P1387		Collision Date		20210617		Time		0956		Day		THU																							
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type				SIDESWIPE				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				Y				Process Date				20210624			
Weather1				CLEAR				Weather2				Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0																											
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				NT PRS/FCTR				Loc Type				Ramp/Int																											
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected													
1F		DRVR		55		F		H		HNBD		PROC ST		E		D		2200		CHEVR		2007		-		3		N		-		M		G																													
2		DRVR		39		M		A		HNBD		PARKED		E		D		2200		FORD		2017		-		3		N		-		M		H																													

Primary Rd		CHURCH AVE		Distance (ft)		30.0		Direction		E		Secondary Rd		MAPLE AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Fresno		County		Fresno		Population		7		Rpt Dist		SOUTH		Beat		00F		Type		0		CalTrans		Badge		P1452		Collision Date		20210606		Time		1400		Day		SUN																							
Primary Collision Factor				OTHER IMPROP DRV				Violation								Collision Type				HIT OBJECT				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				N				Process Date				20211028			
Weather1				CLEAR				Weather2				Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0																											
Hit and Run				Motor Vehicle Involved With				FIXED OBJ				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				NT PRS/FCTR				Loc Type				Ramp/Int																											
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected													
1		DRVR		39		F		H		HNBD		PROC ST		E		I		1900		NEWFL		2006		-		3		N		-		M		G																													

Primary Rd		CHURCH AVE		Distance (ft)		24.0		Direction		W		Secondary Rd		MAPLE AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Fresno		County		Fresno		Population		7		Rpt Dist		SOUTH		Beat				Type		0		CalTrans		Badge		P1213		Collision Date		20210722		Time		2140		Day		THU																							
Primary Collision Factor				DRVR ALC DRG				Violation				23152A				Collision Type				HIT OBJECT				Severity				INJURY				#Killed				0				#Injured				1				Tow Away?				Y				Process Date				20210806			
Weather1				CLEAR				Weather2				Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0																											
Hit and Run				Motor Vehicle Involved With				FIXED OBJ				Lighting				DARK - ST				Ped Action				Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																											
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected													
1F		DRVR		26		M		H		HBD-UI		LFT TURN		W		D		2200		CHEVR		2002		-		-		A		-		M		G		PASS		POSSIBL		41		M		3		0		M		-													

Primary Rd		E HAMILTON AVE		Distance (ft)	360.	Direction	E	Secondary Rd		CHANCE AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		Fresno		County	Fresno	Population	7	Rpt Dist		CE	Beat	00G	Type	0	CalTrans	Badge	P1879	Collision Date	20211015	Time	0810	Day	FRI		
Primary Collision Factor		OTHER IMPROP DRV		Violation		Collision Type		AUTO/PE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date		20211108					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0							
Hit and Run		MSDMNR		Motor Vehicle Involved With		PED		Lighting		DAYLIGHT		Ped Action		NOT IN RD		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int			
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	85	F	W	IMP UNK	IMP UNK	PROC ST	N	A	0100	LEXUS	2018	- 3	F	-	M	-								
2	PED	49	M	B	HNBD		STOPPED	S	N	6000	-	-	3	N	-	-	-	PED	POSSIBL	49	M	9	-	-	-

Primary Rd		E HAMILTON AVE		Distance (ft)	12.0	Direction	E	Secondary Rd		S FOWLER AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		Fresno		County	Fresno	Population	7	Rpt Dist		SOUTH	Beat	00G	Type	0	CalTrans	Badge	P1781	Collision Date	20210716	Time	1730	Day	FRI		
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20210830					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0							
Hit and Run		MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	20	M	H	HBD-UI		LFT TURN	S	A	0100	NISSA	2014	- -	A	-	M	G								

Primary Rd		E HERNDON AVE		Distance (ft)	180.	Direction	E	Secondary Rd		N BLACKSTONE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		Fresno		County	Fresno	Population	7	Rpt Dist		NE	Beat	00C	Type	0	CalTrans	Badge	P1979	Collision Date	20210528	Time	0238	Day	FRI		
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date		20211011					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0							
Hit and Run		MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		HBD-UNK		PROC ST	E	A	0100	HONDA	2008	- -	N	-	L	-								

Primary Rd		E HERNDON AVE		Distance (ft)	0.00	Direction		Secondary Rd		N CHESTNUT AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		Fresno		County	Fresno	Population	7	Rpt Dist		NORTH	Beat	00B	Type	0	CalTrans	Badge	P958	Collision Date	20211011	Time	1033	Day	MON		
Primary Collision Factor		STOP SGN SIG		Violation	21453A	Collision Type		BROADSIDE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date		20211020					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0							
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	48	F	W	HNBD		PROC ST	E	A	0100	TOYOT	2015	- 3	N	-	L	G	DRVR	POSSIBL	48	F	1	0	L	G
2	DRVR	51	F	H	HNBD		LFT TURN	N	A	0100	ACURA	2019	- 3	N	-	L	G								

Primary Rd		E HERNDON AVE		Distance (ft)	300.	Direction	E	Secondary Rd		N FIRST ST		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		Fresno		County	Fresno	Population	7	Rpt Dist		NORTH	Beat	00C	Type	0	CalTrans	Badge	P1514	Collision Date	20210302	Time	1352	Day	TUE		
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date		20210413					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0							
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	42	M	W	HBD-NUI		PROC ST	E	A	0100	HYUND	2004	- 3	F	-	M	G								
2	DRVR	62	F	W	HBD-NUI		SLOWING	E	A	0100	KIA	2016	- 3	G	-	M	G	DRVR	POSSIBL	63	F	1	0	M	G
3	DRVR	19	M	H	HBD-NUI		SLOWING	E	A	0100	CHEVR	2005	- 3	G	-	M	G								
4	DRVR	43	F	H				E	A	0100	MERCE	2015	- -	-	-	M	G								

Primary Rd		H ST		Distance (ft)		40.0		Direction		S		Secondary Rd		VENTURA ST		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy											
City		Fresno		County		Fresno		Population		7		Rpt Dist		SW		Beat		Type		0		CalTrans		Badge		P1949		Collision Date		20210814		Time 2313 Day SAT									
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type				HIT OBJECT				Severity				PDO				#Killed 0 #Injured 0 Tow Away? Y				Process Date 20210830					
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond 0															
Hit and Run		MSDMNR		Motor Vehicle Involved With										FIXED OBJ				Lighting				DARK - ST				Ped Action				Cntrl Dev				FNCTNG		Loc Type		Ramp/Int			
Party Info																		Victim Info																							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																
1F	DRVR	998	M	A	HBD-UNK		RAN OFF RD	N	A	0100	HONDA	2013	-	3	A	-	M	-																							

Primary Rd		HAMILTON AVE		Distance (ft)		0.00		Direction				Secondary Rd		ARMSTRONG AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy									
City		Fresno		County		Fresno		Population		7		Rpt Dist		S/E		Beat		Type		0		CalTrans		Badge		P1748		Collision Date		20211026		Time 1712 Day TUE							
Primary Collision Factor				STOP SGN SIG				Violation				22450				Collision Type				BROADSIDE				Severity				INJURY				#Killed 0 #Injured 1 Tow Away? N				Process Date 20211129			
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond 0													
Hit and Run		Motor Vehicle Involved With										OTHER MV				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				FNCTNG		Loc Type		Ramp/Int			
Party Info																		Victim Info																					
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected														
1F	DRVR	25	F	O	HNBD		PROC ST	W	A	0100	HONDA	2005	-	3	N	-	M	G	DRVR	POSSIBL	25	F	1	0	M	G													
2	DRVR	35	F	O	HNBD		LFT TURN	N	A	0100	TOYOT	2016	-	3	N	-	M	G																					

Primary Rd		HAMILTON AVE		Distance (ft)		945.		Direction		W		Secondary Rd		MAPLE AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy									
City		Fresno		County		Fresno		Population		7		Rpt Dist		SOUTH		Beat 00E		Type		0		CalTrans		Badge		P1322		Collision Date		20210504		Time 1639 Day TUE							
Primary Collision Factor				IMPROP TURN				Violation				22107				Collision Type				BROADSIDE				Severity				PDO				#Killed 0 #Injured 0 Tow Away? N				Process Date 20210526			
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond 0													
Hit and Run		Motor Vehicle Involved With										OTHER MV				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int			
Party Info																		Victim Info																					
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected														
1F	DRVR	18	F	H	HBD-UNK		LFT TURN	W	A	0100	NISSA	2019	-	3	N	-	M	G																					
2	DRVR	48	F	W	HNBD		PROC ST	E	A	0100	HYUND	2019	-	3	N	-	M	G																					

Primary Rd		HAMILTON AVE		Distance (ft)		50.0		Direction		E		Secondary Rd		ORANGE AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy									
City		Fresno		County		Fresno		Population		7		Rpt Dist		SOUTH		Beat 00E		Type		0		CalTrans		Badge		P1737		Collision Date		20211019		Time 0600 Day TUE							
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type								Severity				PDO				#Killed 0 #Injured 0 Tow Away? N				Process Date 20211103			
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond 0													
Hit and Run		Motor Vehicle Involved With										PKD MV				Lighting				DARK - ST				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int			
Party Info																		Victim Info																					
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected														
1F	DRVR	68	F	H			PROC ST	W	A	0100	CHEVR	1996	-	3	N	-	M	C																					
2	PRKD	998	-				PARKED	-	A	0100	HONDA	2012	-	-	N	-	-	-																					

Primary Rd		HAMPTON WAY		Distance (ft)		45.0		Direction		E		Secondary Rd		EFFIE ST		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy											
City		Fresno		County		Fresno		Population		7		Rpt Dist				Beat		Type		0		CalTrans		Badge		P1601		Collision Date		20210506		Time 0700 Day THU									
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type				HIT OBJECT				Severity				PDO				#Killed 0 #Injured 0 Tow Away? N				Process Date 20210517					
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond 0															
Hit and Run		MSDMNR		Motor Vehicle Involved With										FIXED OBJ				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int			
Party Info																		Victim Info																							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																
1F	DRVR	998	-		HNBD		LFT TURN	E	A	0700	GMC	2017	-	3	N	-	-	-																							

Include State Highways cases

Report Run On: 12/01/2023

Primary Rd		ANNADALE AVE		Distance (ft)	308.	Direction	W	Secondary Rd		TUPMAN ST		NCIC	1005	State Hwy?	Y	Route	Postmile Prefix		Postmile	Side of Hwy					
City	Fresno	County	Fresno	Population	7	Rpt Dist	SW	Beat	00F	Type	0	CalTrans	Badge	P1709	Collision Date	20220925	Time	0610	Day	SUN					
Primary Collision Factor		WRONG SIDE		Violation	21651B	Collision Type		HEAD-ON		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date		20220927					
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	M	H	IMP UNK	IMP UNK	PROC ST	E	A	0100	CHEVR	2011	-	-	N	-	-	-							
2	PRKD	998	-				PARKED	W	A	0100	HONDA	2007	-	-	N	-	-	-							
3	PRKD	998	-				PARKED	W	A	0100	FORD	2001	-	-	N	-	-	-							

Primary Rd		ANTIOCH AVE		Distance (ft)	300.	Direction	S	Secondary Rd		SPRUCE AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy						
City	Fresno	County	Fresno	Population	7	Rpt Dist	NW	Beat	05A	Type	0	CalTrans	Badge	P2117	Collision Date	20220919	Time	1344	Day	MON						
Primary Collision Factor		NOT STATED		Violation		Collision Type		HEAD-ON		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date		20220921						
Weather1	RAINING	Weather2		Rdwy Surface		WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info																Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	53	F	O	HNBD		PROC ST	N	A	0100	AUDI	2018	-	3	N	-	L	G	PASS	POSSIBL	72	F	3	0	L	G
2	PRKD	998	-				PARKED	S	A	0100	MERCE	2000	-	-	N	-	-	-								

Primary Rd		ARMSTRONG AVE		Distance (ft)	0.00	Direction		Secondary Rd		CALIFORNIA AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy						
City	Fresno	County	Fresno	Population	7	Rpt Dist	SE	Beat	00G	Type	0	CalTrans	Badge	P1765	Collision Date	20220117	Time	1725	Day	MON						
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		BROADSIDE		Severity	INJURY	#Killed	0	#Injured	3	Tow Away?	Y	Process Date		20220125						
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info																Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	29	F	W	HNBD		LFT TURN	E	A	0100	FORD	2018	-	3	N	-	L	G								
2	DRVR	74	M	O	HNBD		PROC ST	N	A	0100	KIA	2010	-	3	N	-	L	G	DRVR	POSSIBL	74	M	1	0	L	G
																		PASS	POSSIBL	52	M	3	0	L	G	
																		PASS	SERIOUS	22	M	6	0	L	G	

Primary Rd		ARMSTRONG AVE		Distance (ft)	180.	Direction	N	Secondary Rd		FANCHER CREEK		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat		Type	0	CalTrans	Badge	P1574	Collision Date	20220114	Time	1110	Day	FRI					
Primary Collision Factor		LANE CHANGE		Violation	21658A	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20220119					
Weather1	FOG	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	26	M	H	HNBD		PROC ST	S	D	2200	TOYOT	2021	-	3	N	-	M	G							

Primary Rd		ARMSTRONG AVE		Distance (ft)	0.00	Direction		Secondary Rd		FLORADORA AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy						
City	Fresno	County	Fresno	Population	7	Rpt Dist	3	Beat	00B	Type	0	CalTrans	Badge	P1264	Collision Date	20220429	Time	1248	Day	FRI						
Primary Collision Factor		STOP SGN SIG		Violation	22450A	Collision Type		BROADSIDE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date		20220503						
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info																Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	53	F	A			PROC ST	E	D	2200	TOYOT	2000	-	3	N	-	M	G	DRVR	POSSIBL	53	F	1	0	M	G
2	DRVR	35	M	O			PROC ST	S	D	2200	FORD	2019	-	3	N	-	M	G								

Primary Rd		FOURTH ST		Distance (ft)		300.		Direction		N		Secondary Rd		WHITE AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Fresno		County		Fresno		Population		7		Rpt Dist		Beat		Type		0		CalTrans		Badge		C226		Collision Date		20220402		Time 2359 Day SAT			
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type		SIDESWIPE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		N		Process Date 20220411	
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0											
Hit and Run		MSDMNR		Motor Vehicle Involved With				PKD MV		Lighting		DARK - ST		Ped Action				Cntrl Dev		NT PRS/FCTR		Loc Type				Ramp/Int							
Party Info																		Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	DRVR	998	-		IMP UNK	IMP UNK	OTHER	-	A	0100	AUDI	2008	-	3	N	-	-	-															
2	PRKD	998	-				PARKED	-	A	0700	NISSA	2004	-	-	N	-	-	-															
3	OTHR	45	F	H			OTHER	-	-	9900	-	-	-	3	N	-	-	-															

Primary Rd		FOWLER AVE		Distance (ft)		20.0		Direction		S		Secondary Rd		BELMONT AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE		Beat		00B		Type		0		CalTrans		Badge		P1625		Collision Date 20220319		Time 1816 Day SAT	
Primary Collision Factor				DRVR ALC DRG				Violation		23152B		Collision Type		REAR END		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20220420	
Weather1		RAINING		Weather2				Rdwy Surface		WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0											
Hit and Run		Motor Vehicle Involved With				OTHER MV		Lighting		DUSK/DAWN		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int									
Party Info																		Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	DRVR	21	M	A	HBD-UI		PROC ST	N	A	0100	ACURA	2003	-	3	N	-	M	G															
2	DRVR	49	M	H	HNBD		STOPPED	N	A	0100	HYUND	2020	-	3	N	-	M	G															

Primary Rd		FOWLER AVE		Distance (ft)		0.00		Direction				Secondary Rd		CHURCH AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE		Beat		G / 30		Type		0		CalTrans		Badge		P1298		Collision Date 20220613		Time 1521 Day MON	
Primary Collision Factor				STOP SGN SIG				Violation		22450A		Collision Type		BROADSIDE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20220616	
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0											
Hit and Run		Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int									
Party Info																		Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	DRVR	24	M	W	HNBD		PROC ST	S	D	2200	CHEVR	2000	-	1	A	-	M	G															
2	DRVR	47	M	B	HNBD		PROC ST	W	A	0100	GMC	1994	-	3	N	-	P	G															

Primary Rd		FOWLER AVE		Distance (ft)		2265		Direction		S		Secondary Rd		CLINTON AVE		NCIC		1005		State Hwy?		Y		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE		Beat		00B		Type		0		CalTrans		Badge		P1754		Collision Date 20220609		Time 2145 Day THU	
Primary Collision Factor				IMPROP TURN				Violation		22107		Collision Type		HEAD-ON		Severity		INJURY		#Killed		0		#Injured		5		Tow Away?		Y		Process Date 20220615	
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0											
Hit and Run		Motor Vehicle Involved With				OTHER MV		Lighting		DARK - NO		Ped Action				Cntrl Dev		NT PRS/FCTR		Loc Type				Ramp/Int									
Party Info																		Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	DRVR	33	M	O	HBD-UI		PROC ST	S	A	0100	HONDA	2017	-	3	N	-	L	G	DRVR	MINOR	33	M	1	0	L	G							
2	DRVR	50	M	H	HNBD		PROC ST	N	A	0100	TOYOT	2007	-	3	N	-	L	G	DRVR	MINOR	50	M	1	0	L	G							
																			PASS	MINOR	53	F	3	0	L	G							
																			PASS	MINOR	21	F	4	0	N	D							
																			PASS	MINOR	25	M	6	0	N	C							

Primary Rd		FOWLER AVE		Distance (ft)		28.0		Direction		S		Secondary Rd		CLINTON AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Fresno		County		Fresno		Population		7		Rpt Dist		3		Beat		00B		Type		0		CalTrans		Badge		P1264		Collision Date 20221019		Time 1423 Day WED	
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type		REAR END		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20221021	
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0											
Hit and Run		MSDMNR		Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int							
Party Info																		Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	DRVR	998	-		HBD-UNK		PROC ST	N	A	0100	JAGUA	2020	-	3	N	-	-	-															

Primary Rd H ST		Distance (ft) 348.		Direction S		Secondary Rd		E FRANKLIN AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Fresno	County	Fresno	Population	7	Rpt Dist	SW	Beat	00B	Type	0	CalTrans	Badge	P2095	Collision Date	20221205	Time	2346	Day	MON					
Primary Collision Factor		LANE CHANGE		Violation		21658A		Collision Type		REAR END		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20221219			
Weather1 CLOUDY		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	64	F	O			PROC ST	N	A	0100	TOYOT	2019	- -	N	-	-	L G	DRVR	MINOR	64	F	1	0	L	G
2	PRKD	998	-				PARKED	N	F	2100	WALK	2017	- -	N	-	-	-								
Primary Rd H ST		Distance (ft) 0.00		Direction		Secondary Rd		FRESNO ST		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Fresno	County	Fresno	Population	7	Rpt Dist	SW	Beat	00D	Type	0	CalTrans	Badge	P2117	Collision Date	20221223	Time	0320	Day	FRI					
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		HIT OBJECT		Severity		FATAL		#Killed 1		#Injured 0		Tow Away? Y		Process Date 20221226			
Weather1 FOG		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	M	B	IMP UNK	IMP UNK	RAN OFF RD	S	A	0100	KIA	2020	- -	N	-	-	L G	DRVR	KILLED	998	-	1	0	L	G
Primary Rd H ST		Distance (ft) 78.0		Direction		Secondary Rd		PALM AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat	BAKER	Type	0	CalTrans	Badge	P2052	Collision Date	20220320	Time	0500	Day	SUN					
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20220822			
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		MSDMNR		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	PROC ST	-	A	0100	CHRY	2005	- 3	A	-	-	L -								
Primary Rd H ST		Distance (ft) 100.		Direction		Secondary Rd		CHANCE AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Fresno	County	Fresno	Population	7	Rpt Dist		Beat		Type	0	CalTrans	Badge	C226	Collision Date	20220513	Time	2000	Day	FRI					
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20220530			
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	PROC ST	W	A	0100	HONDA	2005	- 3	N	-	-	-								
2	PRKD	998	-				PARKED	-	A	0100	NISSA	2012	- 3	N	-	-	-								

Include State Highways cases

Report Run On: 12/01/2023

Primary Rd		HAMILTON AVE		Distance (ft)		300.		Direction		W		Secondary Rd		CHANCE AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																							
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE		Beat		Type		0		CalTrans		Badge		P1748		Collision Date		20221101		Time 1750 Day TUE																					
Primary Collision Factor				DRVR ALC DRG				Violation				23152A				Collision Type				SIDESWIPE				Severity				PDO				#Killed 0 #Injured 0 Tow Away? N				Process Date 20221117																	
Weather1		RAINING		Weather2				Rdwy Surface		WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2										Spec Cond		0																									
Hit and Run				Motor Vehicle Involved With				PKD MV				Lighting				DARK - ST				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int																					
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		Victim Info																	
1F		DRVR		50		M		W		HBD-UI				UNS TURN		E		A		0100		FORD		2015		-		3		N		-		M		G		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
2		PRKD		998		-								PARKED		E		A		0100		SATUR		2003		-		3		N		-		-		-																	

Primary Rd		HAMILTON AVE		Distance (ft)		0.00		Direction				Secondary Rd		DOUGLAS AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																							
City		Fresno		County		Fresno		Population		7		Rpt Dist		SOUTH		Beat		Type		0		CalTrans		Badge		P1757		Collision Date		20220429		Time 1725 Day FRI																					
Primary Collision Factor				R-O-W AUTO				Violation				21801A				Collision Type				SIDESWIPE				Severity				INJURY				#Killed 0 #Injured 1 Tow Away? N				Process Date 20220503																	
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2										Spec Cond		0																									
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int																					
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		Victim Info																	
1F		DRVR		28		F		H		HNBD				LFT TURN		W		A		0100		LINCO		2017		-		3		N		-		M		G		DRVR		POSSIBL		28		F		1		0		M		G	
2		DRVR		49		M		H		HNBD				PROC ST		E		A		0100		NISSA		2005		-		3		N		-		M		G																	

Primary Rd		HAMILTON AVE		Distance (ft)		42.0		Direction		E		Secondary Rd		FOWLER AVE (S)		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																							
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE		Beat		00G		Type		0		CalTrans		Badge		P1625		Collision Date		20220223		Time 0002 Day WED																			
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type				HIT OBJECT				Severity				PDO				#Killed 0 #Injured 0 Tow Away? Y				Process Date 20220323																	
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2										Spec Cond		0																									
Hit and Run				Motor Vehicle Involved With				FIXED OBJ				Lighting				DARK - ST				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int																					
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		Victim Info																	
1F		DRVR		31		M		B		HNBD				LFT TURN		S		A		0100		HYUND		2005		-		3		N		-		M		-		DRVR		POSSIBL		28		F		1		0		M		G	
2		DRVR		49		M		H		HNBD				PROC ST		E		A		0100		NISSA		2005		-		3		N		-		M		G																	

Primary Rd		HAMPTON WAY		Distance (ft)		45.0		Direction		W		Secondary Rd		COLLEGE AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																							
City		Fresno		County		Fresno		Population		7		Rpt Dist		CE		Beat		00B		Type		0		CalTrans		Badge		P1980		Collision Date		20220212		Time 0558 Day SAT																			
Primary Collision Factor				UNKNOWN				Violation				20002A				Collision Type				SIDESWIPE				Severity				PDO				#Killed 0 #Injured 0 Tow Away? N				Process Date 20220214																	
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2										Spec Cond		0																									
Hit and Run				MSDMNR				Motor Vehicle Involved With				PKD MV				Lighting				DUSK/DAWN				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int																	
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		Victim Info																	
1F		DRVR		998		-				IMP UNK		IMP UNK		PROC ST		-		A		0100		CHEVR		2016		-		-		A		-		-		-		DRVR		POSSIBL		58		F		1		0		M		G	
2		PRKD		998		-								PARKED		-		A		0100		HYUND		2011		-		-		N		-		-		-																	

Primary Rd		HAMPTON WAY		Distance (ft)		0.00		Direction				Secondary Rd		COLLEGE AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																							
City		Fresno		County		Fresno		Population		7		Rpt Dist		CE		Beat		00B		Type		0		CalTrans		Badge		P2054		Collision Date		20220516		Time 0856 Day MON																			
Primary Collision Factor				STOP SGN SIG				Violation				22450A				Collision Type				BROADSIDE				Severity				INJURY				#Killed 0 #Injured 1 Tow Away? N				Process Date 20221101																	
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2										Spec Cond		0																									
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				FNCTNG		Loc Type		Ramp/Int																					
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		Victim Info																	
1		DRVR		57		F		H		HNBD				PROC ST		W		A		0100		FORD		2017		-		3		N		-		M		G		DRVR		POSSIBL		58		F		1		0		M		G	
2F		DRVR		51		F		W		HNBD				PROC ST		N		A		0100		KIA		2015		-		3		N		-		M		G																	

Include State Highways cases

Report Run On: 12/01/2023

Primary Rd		S CHESTNUT AVE		Distance (ft)	0.00	Direction	Secondary Rd		E BUTLER AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City	Fresno	County	Fresno	Population	7	Rpt Dist	2862	Beat	03F	Type	0	CalTrans	Badge	P733	Collision Date	20220224	Time	1945	Day	THU							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20220325									
Weather1		CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DARK - NO		Ped Action		Cntrl Dev		FNCTNG	Loc Type	Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	998	M	B	IMP UNK	IMP UNK	PROC ST	N	A	0100	CHEVR	2007	-	-	A	N	-	-									
2	DRVR	31	F	H	HNBD		STOPPED	N	A	0100	GMC	2021	-	3	N	-	M	G									
Primary Rd		S FOWLER		Distance (ft)	0.00	Direction	Secondary Rd		E PITT		NCIC	1005	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat	00G	Type	0	CalTrans	Badge	P684	Collision Date	20221022	Time	1442	Day	SAT							
Primary Collision Factor		R-O-W AUTO		Violation	21802A	Collision Type		BROADSIDE		Severity	INJURY	#Killed	0	#Injured	3	Tow Away?	Y	Process Date 20221024									
Weather1		CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG	Loc Type	Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	28	M	H	HNBD		LFT TURN	E	A	0100	TOYOT	2016	-	3	L	N	L	G	DRVR	POSSIBL	28	M	1	0	L	G	
2	DRVR	32	F	H	HNBD		PROC ST	S	A	0100	KIA	2018	-	3	N	-	L	G	DRVR	POSSIBL	32	F	1	0	L	G	
																				PASS	POSSIBL	34	M	2	0	L	G
Primary Rd		S FOWLER AVE		Distance (ft)	0.00	Direction	Secondary Rd		E CHURCH AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat	03G	Type	0	CalTrans	Badge	C242	Collision Date	20220916	Time	1550	Day	FRI							
Primary Collision Factor		R-O-W PED		Violation	21950A	Collision Type		HIT OBJECT		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date 20230123									
Weather1		CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		FELONY		Motor Vehicle Involved With		BICYCLE		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR	Loc Type	Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	998	M	H			PROC ST	E	-	9900	TOYOT	-	-	O	-	-	-	-									
2	BICY	14	M	H	HBD-NUI		SLOWING	N	L	0400	-	-	-	N	-	-	-	-	BICY	MINOR	14	M	9	0	-	-	
Primary Rd		S LILY AVE		Distance (ft)	50.0	Direction	S	Secondary Rd		E REVEREND		NCIC	1005	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy								
City	Fresno	County	Fresno	Population	7	Rpt Dist		Beat	0SW	Type	0	CalTrans	Badge	P2067	Collision Date	20220611	Time	1807	Day	SAT							
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20221125									
Weather1		CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR	Loc Type	Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	998	M	H			PROC ST	N	-	9900	-	-	-	A	-	-	-	-									
2	PRKD	998	-				PARKED	-	A	0100	CADIL	2017	-	3	N	-	-	-									
Primary Rd		S PEACH AVE		Distance (ft)	0.00	Direction	Secondary Rd		E OLIVE AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City	Fresno	County	Fresno	Population	7	Rpt Dist	SE	Beat	00D	Type	0	CalTrans	Badge	P1916	Collision Date	20220706	Time	1901	Day	WED							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20230519									
Weather1		CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		MSDMNR		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG	Loc Type	Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	44	M	H	IMP UNK	IMP UNK	PROC ST	N	A	0100	FORD	2012	-	3	A	-	M	-									
2	DRVR	33	M	A	IMP UNK	IMP UNK	STOPPED	N	A	0100	SUBAR	2013	-	3	N	-	M	G									
3	DRVR	39	F		IMP UNK	IMP UNK	STOPPED	N	A	0100	HONDA	2013	-	3	N	-	M	G									
4	DRVR	62	M	B	IMP UNK	IMP UNK	STOPPED	N	A	0100	HYUND	2013	-	3	N	-	M	G									

Primary Rd SR-180		Distance(ft) 500	Direction W	Secondary Rd CLOVIS AVENUE	NCIC 9435	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy												
City FRESNO	County FRESNO	Population 7	Rpt Dist	Beat 183	Type 1	CalTrans Dist	Badge 018746	Crash Date	20230208	Time 0810 Day WED												
Primary Crash Factor	UNSAFE SPEED	Violation 22350	Crash Type	REAR END	Severity PDO	# Killed 0	# Injured 0	Tow Away? N	Process Date	20230215												
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2	Spec Cond	0															
Hit and Run	Motor Veh Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int													
Latitude 36.75297	Longitude 119.70275	Local Rpt #	9435-2023-00489	Case ID	91995482																	
PARTY INFO										VICTIM INFO												
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Crash	Dir	SW Veh	Chp Veh	Make	Year	Sp Info	OAF1 Viol	OAF2	Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected
1F	DRVR	44	F	A	HNBD	PROC ST	W	A	0700	TOYT	2004	- 3	N	-	M G							
2	DRVR	40	F	H	HNBD	PROC ST	W	A	0700	KIA	2021	- 3	N	-	M G							

Primary Rd		CHESTNUT AVE		Distance(ft)	325	Direction	S	Secondary Rd	LANE AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy					
City	FRESNO		County	FRESNO		Population	7	Rpt Dist			Beat			Type	CalTrans Dist	Badge	P959	Crash Date	20230208	Time	0905	Day	WED
Primary Crash Factor		UNSAFE SPEED		Violation	22350	Crash Type	REAR END				Severity	PDO	# Killed	0	# Injured	0	Tow Away?	N	Process Date	20230209			
Weather1	CLEAR		Weather2			Rdwy Surface	DRY				Rdwy Cond1	NO UNUSL CND				Rdwy Cond2			Spec Cond	0			
Hit and Run	MISDEMEANOR		Motor Veh Involved With	OTHER MV		Lighting	DAYLIGHT				Ped Action					Cntrl Dev	NT PRS/FCTR		Loc Type	Ramp/Int			
Latitude	36.73218		Longitude	119.73635		Local Rpt #	2302080357				Case ID	81990358											
PARTY INFO																	VICTIM INFO						
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	Chp Veh	Make	Year	Sp Info	OAF1 Viol	OAF2	Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	PROC ST	N	A	0700	GMC	2003	- 3	N	-	- -							
2	DRVR	30	F	B	HNBD		STOPPED	N	I	1900	GILLI	2012	- 3	N	-	P G							

Primary Rd		CHURCH AVE		Distance(ft)		I		Direction		Secondary Rd		FOWLER AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy											
City		FRESNO		County		FRESNO		Population		7		Rpt Dist		3		Beat		Type		CalTrans		Dist		Badge		P1601		Crash Date		20230208		Time		1249		Day		WED	
Primary Crash Factor		STOP SGN SIG		Violation		22450A		Crash Type		BROADSIDE		Severity		INJURY		# Killed		0		# Injured		1		Tow Away?		Y		Process Date		20230210									
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																					
Hit and Run		Motor Veh Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int																					
Latitude		36.71360		Longitude		119.68357		Local Rpt #		2302080650		Case ID		81991286																									
PARTY INFO																VICTIM INFO																							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW	Veh	Chp	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected												
1F	DRVR	16	M	H	HNBD		PROC ST	E	A	0100		LEXUS	2006	-	3	A	0	-	M	G	DRVR	MINOR	16	M	1	M	G	0											
2	DRVR	31	F	H	HNBD		LFT TURN	W	I	1100		FORD	2020	-	3	N		-	L	G																			

Primary Rd		H ST	Distance(ft)		I	Direction	Secondary Rd		SACRAMENTO ST		NCIC	1005	State Hwy?		N	Route	Postmile Prefix	Postmile	Side of Hwy						
City		FRESNO		County		FRESNO		Population	7	Rpt Dist	SOUTH		Beat	00D		Type	CalTrans Dist	Badge	P1461	Crash Date	20230318	Time	1218	Day	SAT
Primary Crash Factor		IMPROP TURN		Violation		22107		Crash Type		BROADSIDE		Severity		INJURY		# Killed	0	# Injured	2	Tow Away?	Y	Process Date		20230412	
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0							
Hit and Run		Motor Veh Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Latitude		36.74146		Longitude		119.80196		Local Rpt #		2303180512		Case ID		82030153											
PARTY INFO																VICTIM INFO									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	Chp Veh	Make	Year	Sp Info	OAF1 Viol	OAF2 Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected			
1	DRVR	66	F	W	HNBD		PROC ST	N	A	0100	HONDA	1994	- - N	-	L G	DRVR	SERIOUS	66	F	1	L G	0			
																PASS	MINOR	8	F	6	M G	0			
2F	DRVR	22	F	O	HNBD		U-TURN	N	A	0100	BMW	2020	- - A 0	-	M G										

Primary Rd SR-41 N/B		Distance(ft) 528		Direction S		Secondary Rd SHAW AVE		NCIC 9435		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy				
City FRESNO		County FRESNO		Population 7		Rpt Dist		Beat 410		Type 1		CalTrans Dist		Badge 019263		Crash Date 20230318		Time 1355 Day SAT				
Primary Crash Factor		UNSAFE SPEED		Violation 22350		Crash Type		REAR END		Severity PDO		# Killed 0		# Injured 0		Tow Away? N		Process Date 20230322				
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0				
Hit and Run MISDEMEANOR		Motor Veh Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int				
Latitude 36.79041		Longitude 119.78418		Local Rpt #		9435-2023-01028		Case ID		92025605												
PARTY INFO																VICTIM INFO						
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	Chp Veh	Make	Year	Sp Info	OAF1 Viol	OAF2 Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected
							Crash															
1	DRVR	20	M	H	HNBD		PROC ST	N	D	2200	TOYT	1998	- 3	A 22350	-	M G						
2F	DRVR	68	F	H	HNBD		SLOWING	N	A	0700	DODG	2011	- 3	N	-	M G						
3	DRVR	998	-		IMP UNK	IMP UNK	PROC ST	N	A	0100	UNK		- 4	N	-	- -						

Primary Rd	HAMILTON AVE	Distance(ft)	I	Direction	Secondary Rd	FOWLER AVE (N)	NCIC	1005	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy							
City	FRESNO	County	FRESNO	Population	7	Rpt Dist	SOUTH	Beat	03G	Type	CalTrans Dist	Badge	P2169	Crash Date	20230318	Time	1554	Day	SAT		
Primary Crash Factor	DRVR ALC DRG	Violation	23152A	Crash Type	BROADSIDE	Severity	INJURY	# Killed	0	# Injured	1	Tow Away?	Y	Process Date	20230412						
Weather1	CLOUDY	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0										
Hit and Run		Motor Veh Involved With	MV ON OTHER RD	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int										
Latitude	36.72587	Longitude	119.68228	Local Rpt #	2303180693_DUPLICATE	Case ID	82043512														
PARTY INFO												VICTIM INFO									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Crash	Dir	SW Veh	Chp Veh	Make	Year	Sp Info	OAF1 Viol	OAF2 Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected
1F	DRVR	34	M	A	HBD-UI	RGT TURN	N	D	2200	TOYOT	2022	- - A 0	N	L -	DRVR	MINOR	31	F	9	- C	0
2	DRVR	31	M	H	HNBD	STOPPED	W	A	0100	JEEP	2023	- 3 N	-	L C							

Primary Rd E CALIFORNIA &		Distance(ft)70	Direction N	Secondary Rd FRESNO ST		NCIC 1005	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy											
City FRESNO	County FRESNO	Population 7	Rpt Dist SW	Beat 01F	Type CalTrans Dist	Badge P2108	Crash Date 20230628	Time 2100	Day WED													
Primary Crash Factor	IMPROP TURN	Violation 22107	Crash Type	AUTO/PED	Severity PDO	# Killed 0	# Injured 0	Tow Away? N	Process Date	20231018												
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2	Spec Cond	0															
Hit and Run	Motor Veh Involved With	PED	Lighting	DARK - NO ST LTS	Ped Action X-WLK AT IS	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int													
Latitude 36.72147	Longitude 119.81239	Local Rpt # 2306281219	Case ID 82201852																			
PARTY INFO										VICTIM INFO												
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Crash	Dir	SW	Veh Chp	Veh Make	Year	Sp Info	OAF1 Viol	OAF2	Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected
1F	DRVR	56	M	H	HNBD	LFT TURN	N	A	0100	FORD	2007	- 3	A 0	E	M G							
2	PED	35	M	H	HBD-	PROC ST	E	N	6000	-		- 3	N	-	- -							

Primary Rd SR-99 S/B Distance(ft) 1000 Direction S Secondary Rd MCKELVEY AVE NCIC 9435 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy
City FRESNO County FRESNO Population 7 Rpt Dist Beat 105 Type 1 CalTrans Dist Badge 019263 Crash Date 20230629 Time 0745 Day THU
Primary Crash Factor LANE CHANGE Violation 21658A Crash Type SIDESWIPE Severity PDO # Killed 0 # Injured 0 Tow Away? N Process Date 20230630
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0
Hit and Run Motor Veh Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int
Latitude 36.76201 Longitude 119.83274 Local Rpt # 9435-2023-02427 Case ID 92107240

PARTY INFO																						
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Crash Dir SW Veh Chp Veh Make Year Sp Info OAF1 Viol OAF2 Safety Equip																						
1F	DRVR	43	M	H	HNBD	CHANG LN	N	A	0100	NISS	2010	-	3	N	-	M G						
2	DRVR	59	M	H	HNBD	PROC ST	N	E	2235	FORD	2000	-	3	N	-	M G						

Primary Rd		ARMSTRONG AVE		Distance(ft)		I		Direction		Secondary Rd		HAMILTON AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy											
City		FRESNO		County		FRESNO		Population		7		Rpt Dist		SOUTH		Beat		03G		Type		CalTrans Dist		Badge		P2218		Crash Date		20230702		Time		1212		Day		SUN	
Primary Crash Factor		R-O-W AUTO		Violation		21801A		Crash Type		HEAD-ON		Severity		PDO		# Killed		0		# Injured		0		Tow Away?		Y		Process Date		20230717									
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																					
Hit and Run		Motor Veh Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int																					
Latitude		36.72457		Longitude		119.67443		Local Rpt #		2307020523		Case ID		82118268																									
PARTY INFO																VICTIM INFO																							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Crash	Dir	SW	Veh	Chp	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected												
1	DRVR	71	M	O	HNBD		PROC ST	S	A	0100		TOYOT	2019	-	3	N		-		L G																			
2F	DRVR	17	M	A	HNBD		LFT TURN	N	A	0100		HONDA	2009	-	3	N		-		L G																			

Primary Rd	BELMONT AVE	Distance(ft)	I	Direction	Secondary Rd	EFFIE ST	NCIC	1005	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy								
City	FRESNO	County	FRESNO	Population	7	Rpt Dist	SW	Beat	01B	Type	CalTrans Dist	Badge	C252	Crash Date	20230702	Time	1316	Day	SUN			
Primary Crash Factor	UNKNOWN	Violation	20002A	Crash Type	REAR END	Severity	PDO	# Killed	0	# Injured	0	Tow Away?	N	Process Date	20230717							
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0											
Hit and Run	MISDEMEANOR	Motor Veh Involved With	PKD MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int											
Latitude	36.75038	Longitude	119.78811	Local Rpt #	2307020575	Case ID	82118269															
PARTY INFO												VICTIM INFO										
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Crash	Dir	SW	Veh Chp	Veh Make	Year	Sp Info	OAF1 Viol	OAF2	Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected
1	DRVR	998	-			PROC ST	-	-	9900	TOYOT	2014	- 3	A 0	F	- -							
2	PRKD	998	-			PARKED	-	-	9900	NISSA	2023	- 3	M	N	- -							

Primary Rd		FIRST ST		Distance(ft)		198		Direction		S		Secondary Rd		MCKINLEY AVE		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy									
City		FRESNO		County		FRESNO		Population		7		Rpt Dist		SOUTH		Beat		2358		Type		CalTrans Dist		Badge		P1735		Crash Date		20230702		Time		1555		Day		SUN	
Primary Crash Factor		PED VIOL		Violation		21954A		Crash Type		AUTO/PED		Severity		INJURY		# Killed		0		# Injured		1		Tow Away?		N		Process Date		20230728									
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																					
Hit and Run		Motor Veh Involved With		PED		Lighting		DAYLIGHT		Ped Action		NOT IN X-WLK		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int																			
Latitude		36.76510		Longitude		119.77243		Local Rpt #		2307020729		Case ID		82130311																									
PARTY INFO																VICTIM INFO																							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW	Veh	Chp	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety Equip	Role	Ext Of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected												
1F	PED	63	M	H	HNBD	OTHER	E	N	6000	-	-	3	N	-	-	-	-	-	-	-	PED	POSSIBLE	63	M	9	-	P	-											
2	DRVR	19	M	H	HNBD	PROC ST	N	A	0100	HONDA	2009	-	3	N	-	M	G																						

Include State Highways cases

Report Run On: 12/08/2022

Primary Rd CHURCH AV		Distance (ft) 182.		Direction E		Secondary Rd		HOLT AV		NCIC 1013		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Sanger		County Fresno		Population 3		Rpt Dist M120		Beat 001		Type 0		CalTrans		Badge M164		Collision Date 20190806		Time 2203		Day TUE					
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away?		Process Date 20191120							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	M	W	HNBD		RAN OFF RD	W	F	2600	FORD	2003	-	1	F	-	M	G							
2	PRKD	998	-				PARKED	-	I	1100	FORD	2011	-	3	N	-	-	-							

Primary Rd CHURCH AV		Distance (ft) 226.		Direction E		Secondary Rd		INDIANOLA		NCIC 1013		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Sanger		County Fresno		Population 3		Rpt Dist M130		Beat 001		Type 0		CalTrans		Badge M041		Collision Date 20190815		Time 1436		Day THU					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20191115							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	50	M	A	IMP UNK	IMP UNK	PROC ST	E	A	0100	NISSA	2015	-	3	N	-	M	G							
2	DRVR	43	F	H	HNBD		STOPPED	E	A	0100	HONDA	2015	-	3	N	-	M	G							

Primary Rd CHURCH AVE		Distance (ft) 420.		Direction W		Secondary Rd		9TH ST		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 021230		Collision Date 20191006		Time 1815		Day SUN					
Primary Collision Factor		DRVR ALC DRG		Violation 23152A		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20191016							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	38	F	H	HBD-UI		UNS TURN	E	A	0100	FORD	2015	-	3	A	22107	-	L	G						
2	PRKD	998	-				PARKED	E	A	0700	CHEVY	1997	-	3	N	-	-	-							

Primary Rd CHURCH AVE		Distance (ft) 0.00		Direction		Secondary Rd		ARMSTRONG AVE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 020450		Collision Date 20190115		Time 2212		Day TUE					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20190124							
Weather1 CLEAR		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - NO		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	26	M	H	HNBD		STOPPED	W	A	0100	INFI	2003	-	3	N	-	M	G							
2F	DRVR	28	M	H	HNBD		PROC ST	W	A	0100	AUDI	2012	-	3	N	-	M	G							

Primary Rd CHURCH AVE		Distance (ft) 0.00		Direction		Secondary Rd		ARMSTRONG AVE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 020122		Collision Date 20190626		Time 1603		Day WED						
Primary Collision Factor		R-O-W AUTO		Violation 21802A		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 3		Tow Away? Y		Process Date 20190703								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	F	A	HNBD		PROC ST	E	A	0800	DODG	1998	-	3	N	-	M	G	DRVR	POSSIBL	33	F	1	0	M	G
2	DRVR	20	M	B	HNBD		PROC ST	N	A	0100	KIA	2010	-	3	N	-	L	G	DRVR	POSSIBL	20	M	1	0	L	G
																			PASS	MINOR	18	M	6	0	L	G

Include State Highways cases

Report Run On: 12/08/2022

Primary Rd CHURCH AVE		Distance (ft) 0.00		Direction		Secondary Rd		ARMSTRONG AVE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 020095		Collision Date		20190924		Time 1800		Day TUE			
Primary Collision Factor		R-O-W AUTO		Violation 21802A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20191004							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		HOLES		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	62	F	O	HNBD		PROC ST	E	A	0700	LEXU	2017	- 3	N		-	L G								
2	DRVR	20	M	A	HNBD		PROC ST	S	A	0100	LEXU	2006	- 3	N		-	L G								

Primary Rd CHURCH AVE		Distance (ft) 0.00		Direction		Secondary Rd		CEDAR AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Fresno		County Fresno		Population 7		Rpt Dist FRESN		Beat 00E		Type 0		CalTrans		Badge P710		Collision Date		20191228		Time 1030		Day SAT			
Primary Collision Factor		STOP SGN SIG		Violation 21453A		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20191231							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	37	F	H	HNBD		PROC ST	S	A	0100	TOYOT	1999	- 3	N		-	L G	PASS	POSSIBL	34	F	3	0	L	G
2	DRVR	57	F	H	HNBD		PROC ST	W	A	0100	NISSA	2015	- 3	N		-	L G								
3	DRVR	55	M	H	HNBD		STOPPED	E	A	0100	NISSA	2013	- 3	N		-	M G								

Primary Rd CHURCH AVE		Distance (ft) 195.		Direction		Secondary Rd		DICKENSON AVE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City UNINCORP.		County Fresno		Population 9		Rpt Dist		Beat 015		Type 3		CalTrans		Badge 019789		Collision Date		20191026		Time 2047		Day SAT			
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20191104							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - NO		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	31	M	H	HNBD		UNS TURN	E	A	0100	HONDA	2002	- 3	N		-	M G								

Primary Rd CHURCH AVE		Distance (ft) 64.0		Direction		Secondary Rd		LILY AVE		NCIC 1005		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy					
City Fresno		County Fresno		Population 7		Rpt Dist SOUTH		Beat 00G		Type 0		CalTrans		Badge P1709		Collision Date		20191208		Time 0230		Day SUN			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20191224							
Weather1 RAINING		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT FNCT		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		HBD-UNK		PROC ST	E	A	0100	BMW	2006	- -	A		N	- -								
2	PRKD	998	-				PARKED	-	A	0100	CHEVR	2002	- -	N		-	- -								
3	PRKD	998	-				PARKED	-	A	0100	HONDA	2007	- -	N		-	- -								

Primary Rd CHURCH AVE		Distance (ft) 66.0		Direction		Secondary Rd		LOTUS AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Fresno		County Fresno		Population 7		Rpt Dist SOUTH		Beat 00G		Type 0		CalTrans		Badge P1738		Collision Date		20191204		Time 1904		Day WED			
Primary Collision Factor		PED VIOL		Violation 21954A		Collision Type		AUTO/PED		Severity INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20191213							
Weather1 CLOUDY		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		PED		Lighting		DARK - ST		Ped Action		NOT IN X-		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	PED	56	M	H	IMP UNK	IMP UNK	PROC ST	N	N	6000	-	-	- 3	F		-	- -	PED	POSSIBL	56	M	9	-	-	P
2	DRVR	40	M	B			PROC ST	E	I	2000	GILLI	2014	- 3	N		-	M G								

Primary Rd CHURCH AVE		Distance (ft)	0.00	Direction		Secondary Rd	ELM AVE	NCIC	1005	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat	00F	Type	0	CalTrans	Badge	P2017	Collision Date	20201028	Time	1632	Day WED						
Primary Collision Factor		DRVR ALC DRG		Violation	23153B	Collision Type		BROADSIDE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date 20201103							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	62	M	B	HBD-UI		PROC ST	E	D	2200	CHEVR	1999	- 3	N		-	L G								
2	DRVR	76	M	O	HNBD		LFT TURN	S	A	0100	JAGUA	2015	- 3	A		-	L G	DRVR	POSSIBL	76	M	1	0	L	G
Primary Rd CHURCH AVE		Distance (ft)	0.00	Direction		Secondary Rd	FOWLER AVE	NCIC	1005	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist	SOUTH	Beat	00G	Type	0	CalTrans	Badge	P1632	Collision Date	20200602	Time	2500	Day TUE						
Primary Collision Factor		UNKNOWN		Violation		Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20200915							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		OBSTR ON RD		Rdwy Cond2		Spec Cond		0											
Hit and Run		MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	998	-				OTHER	-	-	9900	-	-	-	A		N	-								
Primary Rd CHURCH AVE		Distance (ft)	30.0	Direction	E	Secondary Rd	FOWLER AVE	NCIC	1005	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist		Beat		Type	0	CalTrans	Badge	P1959	Collision Date	20200626	Time	1555	Day FRI						
Primary Collision Factor		IMPROP TURN		Violation	22100B	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20200720							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	24	M	A			LFT TURN	S	A	0100	FORD	2014	- 3	A		N	M G								
Primary Rd CHURCH AVE		Distance (ft)	420.	Direction	W	Secondary Rd	JACKSON AVE	NCIC	1005	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist	SE	Beat		Type	0	CalTrans	Badge	P1117	Collision Date	20200614	Time	1502	Day SUN						
Primary Collision Factor		DRVR ALC DRG		Violation	23152B	Collision Type		HIT OBJECT		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date 20200617							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	M	H	HBD-UI		RAN OFF RD	E	A	0100	CHEVR	2014	- 3	A		N	L -	DRVR	MINOR	29	M	1	0	L	-
Primary Rd CHURCH AVE		Distance (ft)	63.0	Direction	W	Secondary Rd	JACKSON AVE	NCIC	1005	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County	Fresno	Population	7	Rpt Dist		Beat		Type	0	CalTrans	Badge	P1982	Collision Date	20200814	Time	2340	Day FRI						
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20200817							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	PROC ST	E	A	0100	NISSA	2009	- 3	A		N	-								

Include State Highways cases

*Report restricted to 10000 records

Report Run On: 10/31/2022

Primary Rd		CALAVERAS ST		Distance (ft)	338.	Direction	N	Secondary Rd		MCKENZIE AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		Fresno		County	Fresno	Population	7	Rpt Dist		SW	Beat	00B	Type	0	CalTrans	Badge	P1888	Collision Date	20211003	Time	2030	Day	SUN		
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	SIDESWIPE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20211011								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting	DARK - ST	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	M	H	IMP UNK	IMP UNK	PARKING	S	A	0100	FORD	2012	- 3	N	-	-	-								
2	PRKD	998	-				PARKED	S	-	9900	TOYOT	2007	- 3	N	-	-	-								
3	PRKD	998	-				PARKED	S	-	9900	FORD	1989	- 3	N	-	-	-								
Primary Rd		CALIFORNIA AVE		Distance (ft)	45.0	Direction	E	Secondary Rd		ARMSTRONG AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		Fresno		County	Fresno	Population	7	Rpt Dist		SOUTH	Beat	00G	Type	0	CalTrans	Badge	P1655	Collision Date	20210904	Time	1239	Day	SAT		
Primary Collision Factor		R-O-W AUTO		Violation	21801A	Collision Type	HIT OBJECT	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20211004								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FNCTNG	Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	F	O	HNBD		U-TURN	E	A	0100	-	2017	- 3	N	-	-	M	G							
Primary Rd		CALIFORNIA AVE		Distance (ft)	91.0	Direction	W	Secondary Rd		CLARA AVE		NCIC	1005	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		Fresno		County	Fresno	Population	7	Rpt Dist		1E	Beat	2955	Type	0	CalTrans	Badge	P874	Collision Date	20210512	Time	1404	Day	WED		
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20210514								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With		PKD MV		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	B	HNBD		LFT TURN	W	C	0300	HONDA	2021	- 3	A	-	-	W	DRVR	MINOR	21	M	1	0	N	W
2	PRKD	998	-				PARKED	W	A	0100	TOYOT	2004	- -	N	-	-	-								
Primary Rd		CALIFORNIA AVE		Distance (ft)	2640	Direction	W	Secondary Rd		DICKENSON		NCIC	9435	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		UNINCORP.		County	Fresno	Population	9	Rpt Dist			Beat	015	Type	3	CalTrans	Badge	020122	Collision Date	20210803	Time	1015	Day	TUE		
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type	HIT OBJECT	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20210813								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	23	F	W	HNBD		UNS TURN	E	A	0100	LINC	2004	- 3	N	-	-	M	G							
Primary Rd		CALIFORNIA AVE		Distance (ft)	1000	Direction	E	Secondary Rd		FLOYD AVE		NCIC	9435	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy					
City		UNINCORP.		County	Fresno	Population	9	Rpt Dist			Beat	015	Type	3	CalTrans	Badge	021544	Collision Date	20210905	Time	1540	Day	SUN		
Primary Collision Factor		R-O-W AUTO		Violation	21801A	Collision Type	SIDESWIPE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20220113								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	M	H	HNBD		LFT TURN	W	D	2200	FORD	1978	- 3	N	-	-	P	C							
2	DRVR	54	M	W	HNBD		PASSING	W	D	2200	GMC	2016	- 3	N	-	-	M	G							

Include State Highways cases

*Report restricted to 10000 records

Report Run On: 10/31/2022

Primary Rd		CHURCH AV		Distance (ft) 8.00		Direction W		Secondary Rd		ACADEMY AV		NCIC 1013		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy				
City		Sanger		County Fresno		Population 3		Rpt Dist		SANGE		Beat 002		Type 0		CalTrans		Badge M164		Collision Date 20210201		Time 0028 Day MON				
Primary Collision Factor		R-O-W PED		Violation 21950A		Collision Type		AUTO/PED		Severity FATAL		#Killed 1		#Injured 0		Tow Away? N		Process Date 20210812								
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0												
Hit and Run		FELONY		Motor Vehicle Involved With		PED		Lighting		DARK - ST		Ped Action		NOT IN X-		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int				
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	20	M	H	HNBD		PROC ST	W	A	0100	-	2015	-	3	-	-	M	G								
2	PED	46	M	H	HBD-UI			N	N	6000	-		-	3	N	-	-	-	PED	KILLED	48	M	-	-	P	-
Primary Rd		CHURCH AV		Distance (ft) 54.0		Direction W		Secondary Rd		QUALITY AV		NCIC 1013		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy				
City		Sanger		County Fresno		Population 3		Rpt Dist		SANGE		Beat N21		Type 0		CalTrans		Badge M158		Collision Date 20210630		Time 0540 Day WED				
Primary Collision Factor		UNKNOWN		Violation		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20210830								
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0												
Hit and Run		MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - NO		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	998	-		IMP UNK	IMP UNK	RAN OFF RD	S	A	0100	-	2006	-	-	A	10851	-	-	-							
Primary Rd		CHURCH AVE		Distance (ft) 595.		Direction W		Secondary Rd		9TH ST		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy				
City		Fresno		County Fresno		Population 7		Rpt Dist				Beat 034		Type 3		CalTrans		Badge 020095		Collision Date 20211202		Time 1747 Day THU				
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20211214								
Weather1		CLEAR		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0												
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DARK - NO		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	26	F	H	HNBD		SLOWING	E	A	0100	HOND	2014	-	3	N	-	M	G								
2	DRVR	45	M	H	HNBD		RGT TURN	E	D	2200	DODG	2008	-	3	N	-	M	G								
Primary Rd		CHURCH AVE		Distance (ft) 25.0		Direction W		Secondary Rd		ANNA ST		NCIC 1005		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy				
City		Fresno		County Fresno		Population 7		Rpt Dist 1		Beat 00G		Type 0		CalTrans		Badge P1264		Collision Date 20210917		Time 1556 Day FRI						
Primary Collision Factor		NOT DRIVER		Violation		Collision Type		OTHER		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20210927								
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		HOLES		Rdwy Cond2		Spec Cond 0												
Hit and Run				Motor Vehicle Involved With		OTHER OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	51	M	W	HNBD		PROC ST	E	C	0200	BMW	2018	-	3	N	-	-	W								
Primary Rd		CHURCH AVE		Distance (ft) 12.0		Direction E		Secondary Rd		ARMSTRONG AVE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy				
City		UNINCORP.		County Fresno		Population 9		Rpt Dist				Beat 034		Type 3		CalTrans		Badge 021299		Collision Date 20210925		Time 0745 Day SAT				
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20210928								
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0												
Hit and Run		MSDMNR		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	38	M	A	HNBD		STOPPED	W	D	2200	TOYT	1998	-	3	N	-	M	G								
2F	DRVR	998	-		IMP UNK	IMP UNK	PROC ST	W	A	0100	HOND	2014	-	4	N	-	B	B								

Include State Highways cases

*Report restricted to 10000 records

Report Run On: 10/31/2022

Primary Rd FOWLER AVENUE		Distance (ft)	0.00	Direction	Secondary Rd FLORAL AVENUE		NCIC	9435	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy											
City UNINCORP.	County Fresno	Population	9	Rpt Dist	Beat 040	Type	3	CalTrans	Badge	021165	Collision Date	20210821	Time	1750	Day SAT										
Primary Collision Factor R-O-W AUTO		Violation	21800A	Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20210827											
Weather1 CLEAR	Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond		0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT	Ped Action	Cntrl Dev		FNCTNG	Loc Type	Ramp/Int												
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	M	H	HNBD		PROC ST	N	A	0100	KIA	2011	-	3	N	-	M	G							
2	DRVR	37	M	O	HNBD		PROC ST	E	A	0100	TOYT	2020	-	3	N	-	M	G							

Primary Rd FOWLER AVENUE		Distance (ft)	0.00	Direction	Secondary Rd HAMILTON		NCIC	9435	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy											
City UNINCORP.	County Fresno	Population	9	Rpt Dist	Beat 034	Type	3	CalTrans	Badge	021153	Collision Date	20210602	Time	2020	Day WED										
Primary Collision Factor IMPROP TURN		Violation	22107	Collision Type	HIT OBJECT	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20210609											
Weather1 CLEAR	Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond		0															
Hit and Run		MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting	DARK - NO		Ped Action	Cntrl Dev		NT PRS/FCTR	Loc Type	Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	RGT TURN	S	-	9900	TOYT	2006	-	4	N	-	M	B							

Primary Rd FOWLER AVENUE		Distance (ft)	2640	Direction	N	Secondary Rd	HARLAN AVENUE	NCIC	9435	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy											
City UNINCORP.	County Fresno	Population	9	Rpt Dist	Beat 015	Type	3	CalTrans	Badge	020592	Collision Date	20210628	Time	2120	Day MON											
Primary Collision Factor IMPROP TURN		Violation	22107	Collision Type	HEAD-ON	Severity	FATAL	#Killed	1	#Injured	2	Tow Away?	Y	Process Date 20210730												
Weather1 CLEAR	Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond		0																
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting	DARK - NO		Ped Action	Cntrl Dev		NT PRS/FCTR	Loc Type	Ramp/Int												
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	29	M	H	IMP UNK	IMP UNK	OPPOS LN	S	D	2200	FORD	2007	-	3	N	-	L	G	DRVR	KILLED	29	M	1	0	L	G
2	DRVR	34	F	H	HNBD		PROC ST	N	A	0100	CHRY	2015	-	3	N	-	L	G	DRVR	MINOR	34	F	1	0	L	G
																		PASS	MINOR	61	M	3	0	L	G	

Primary Rd FOWLER AVENUE		Distance (ft)	0.00	Direction	Secondary Rd HARLAN AVENUE		NCIC	9435	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy												
City UNINCORP.	County Fresno	Population	9	Rpt Dist	Beat 146	Type	1	CalTrans	Badge	014363	Collision Date	20211008	Time	0700	Day FRI											
Primary Collision Factor UNSAFE SPEED		Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	Y	Process Date 20211020												
Weather1 CLOUDY	Weather2 RAINING	Rdwy Surface WET		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond		0																
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		NT PRS/FCTR	Loc Type	Ramp/Int												
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	60	M	W	HNBD		PROC ST	S	D	2200	RAM	2018	-	3	N	-	M	G								
2	DRVR	38	M	H	HNBD		SLOWING	S	A	0100	HYUN	2008	-	3	N	-	M	G	DRVR	MINOR	38	M	1	0	M	G
																		PASS	SERIOUS	38	M	3	0	M	G	

Primary Rd FOWLER AVENUE		Distance (ft)	0.00	Direction	Secondary Rd LINCOLN AVE		NCIC	9435	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy											
City UNINCORP.	County Fresno	Population	9	Rpt Dist	Beat 034	Type	3	CalTrans	Badge	014363	Collision Date	20210817	Time	0745	Day TUE										
Primary Collision Factor WRONG SIDE		Violation	21752D	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20210825											
Weather1 CLEAR	Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond		0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		NT PRS/FCTR	Loc Type	Ramp/Int											
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	32	F	H			PROC ST	S	A	0100	DODG	2006	-	3	N	-	M	G							
2	DRVR	54	F	H			LFT TURN	S	A	0100	KIA	2013	-	3	N	-	M	A							

Include State Highways cases

*Report restricted to 10000 records

Report Run On: 10/25/2023

Primary Rd FOWLER AVE		Distance (ft) 0.00		Direction		Secondary Rd		FEDORA AVE		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Fresno	County	Fresno	Population	7	Rpt Dist	SE	Beat	00B	Type	0	CalTrans		Badge	P1940	Collision Date		20220918		Time	2115	Day	SUN		
Primary Collision Factor		R-O-W AUTO		Violation		21804A		Collision Type		BROADSIDE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20221107			
Weather1 RAINING		Weather2		Rdwy Surface		WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	73	F	O	HNBD		ENT TRAF	E	A	0100	ACURA	2015	-	3	N	-	M	G							
2	DRVR	44	M	A	HBD-UI		PROC ST	S	A	0100	TOYOT	2017	-	3	N	-	L	G							

Primary Rd FOWLER AVE		Distance (ft) 0.00		Direction		Secondary Rd		FLORAL AVE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City	UNINCORP.	County	Fresno	Population	9	Rpt Dist		Beat	040	Type	3	CalTrans		Badge	020998	Collision Date		20221105		Time	1638	Day	SAT			
Primary Collision Factor		STOP SGN SIG		Violation		22450A		Collision Type		BROADSIDE		Severity		INJURY		#Killed 0		#Injured 2		Tow Away? Y		Process Date 20221115				
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	20	M	H	HNBD		PROC ST	N	A	0100	HOND	2006	-	3	N	-	L	G								
2	DRVR	23	M	H	HNBD		PROC ST	E	A	0100	CHEV	2015	-	3	N	-	L	G	DRVR	POSSIBL	23	M	1	0	L	G
																		PASS	MINOR	17	M	3	0	L	G	

Primary Rd FOWLER AVE		Distance (ft) 60.0		Direction		Secondary Rd		FOUNTAIN WAY		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City	Fresno	County	Fresno	Population	7	Rpt Dist		Beat		Type	0	CalTrans		Badge	P959	Collision Date		20220525		Time	1107	Day	WED			
Primary Collision Factor		IMPROP TURN		Violation		22107		Collision Type		SIDESWIPE		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20220526				
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	34	F	W	HNBD		PASSING	N	A	0700	FORD	2016	-	1	N	-	L	G	DRVR	POSSIBL	34	F	1	0	L	G
2	DRVR	39	M	H	HNBD		PROC ST	N	D	2200	CHEVR	2010	-	3	N	-	M	G								

Primary Rd FOWLER AVE		Distance (ft) 0.00		Direction		Secondary Rd		HAMILTON AVE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	UNINCORP.	County	Fresno	Population	9	Rpt Dist		Beat	034	Type	3	CalTrans		Badge	021589	Collision Date		20220504		Time	0440	Day	WED		
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		HIT OBJECT		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20220811			
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	28	M	H		FATG	PROC ST	W	A	0100	HOND	2007	-	3	N	-	L	G							

Primary Rd FOWLER AVE		Distance (ft) 171.		Direction		Secondary Rd		KINGS CANYON		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City	Fresno	County	Fresno	Population	7	Rpt Dist	SE /	Beat	2666	Type	0	CalTrans		Badge	P1700	Collision Date		20220823		Time	1714	Day	TUE			
Primary Collision Factor		DRVR ALC DRG		Violation		23153A		Collision Type		HIT OBJECT		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20220824				
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	M	H	HBD-UI		PROC ST	N	A	0100	CHEVR	2013	-	3	N	-	M	G	PASS	MINOR	3	F	4	0	M	G

Appendix F: Existing Traffic Conditions



www.JLBtraffic.com
info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

A p p | F

HCM 7th TWSC
1: Fowler Avenue & Hamilton Avenue

Existing AM Peak
11/13/2024

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	128	144	509	97	63	358
Future Vol, veh/h	128	144	509	97	63	358
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	132	148	525	100	65	369

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1076	577	0	0	627
Stage 1	577	-	-	-	-
Stage 2	499	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	242	515	-	-	950
Stage 1	560	-	-	-	-
Stage 2	608	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	225	514	-	-	948
Mov Cap-2 Maneuver	359	-	-	-	-
Stage 1	559	-	-	-	-
Stage 2	566	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	17.61	0	1.36
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	359	514	948	-
HCM Lane V/C Ratio	-	-	0.367	0.289	0.068	-
HCM Control Delay (s/veh)	-	-	20.7	14.8	9.1	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.6	1.2	0.2	-

HCM 7th AWSC
2: Armstrong Avenue & Hamilton Avenue

Existing AM Peak
11/13/2024

Intersection												
Intersection Delay, s/veh	11.1											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	97	62	55	51	52	74	139	114	34	141	23
Future Vol, veh/h	27	97	62	55	51	52	74	139	114	34	141	23
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	114	73	65	60	61	87	164	134	40	166	27
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay, s/veh	10.8	10.5	11.1	11.8
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	139	114	27	97	62	55	51	52	34	141
LT Vol	74	0	0	27	0	0	55	0	0	34	0
Through Vol	0	139	0	0	97	0	0	51	0	0	141
RT Vol	0	0	114	0	0	62	0	0	52	0	0
Lane Flow Rate	87	164	134	32	114	73	65	60	61	40	166
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.168	0.292	0.214	0.065	0.217	0.124	0.133	0.115	0.105	0.08	0.309
Departure Headway (Hd)	6.931	6.431	5.731	7.332	6.832	6.132	7.399	6.899	6.199	7.204	6.704
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	516	556	624	487	524	581	483	517	575	496	534
Service Time	4.694	4.194	3.494	5.101	4.601	3.901	5.172	4.672	3.972	4.972	4.472
HCM Lane V/C Ratio	0.169	0.295	0.215	0.066	0.218	0.126	0.135	0.116	0.106	0.081	0.311
HCM Control Delay, s/veh	11.1	11.9	10.1	10.6	11.5	9.8	11.3	10.6	9.7	10.6	12.5
HCM Lane LOS	B	B	B	B	B	A	B	B	A	B	B
HCM 95th-tile Q	0.6	1.2	0.8	0.2	0.8	0.4	0.5	0.4	0.4	0.3	1.3

HCM 7th AWSC

3: Temperance Avenue & Hamilton Avenue

Existing AM Peak
11/13/2024

Intersection

Intersection Delay, s/veh 14.8

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	261	73	23	183	289	61
Future Vol, veh/h	261	73	23	183	289	61
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	293	82	26	206	325	69
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	15.9	12.5	15.1
HCM LOS	C	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	183	261	73	289	61
LT Vol	23	0	261	0	0	0
Through Vol	0	183	0	0	289	0
RT Vol	0	0	0	73	0	61
Lane Flow Rate	26	206	293	82	325	69
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.049	0.364	0.555	0.128	0.555	0.104
Departure Headway (Hd)	6.885	6.375	6.817	5.604	6.158	5.447
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	519	563	528	639	584	657
Service Time	4.635	4.126	4.56	3.346	3.903	3.191
HCM Lane V/C Ratio	0.05	0.366	0.555	0.128	0.557	0.105
HCM Control Delay, s/veh	10	12.8	17.8	9.2	16.4	8.8
HCM Lane LOS	A	B	C	A	C	A
HCM 95th-tile Q	0.2	1.7	3.4	0.4	3.4	0.3

HCM 7th TWSC
4: Armstrong Avenue & California Avenue

Existing AM Peak
11/13/2024

Intersection							
Int Delay, s/veh	4.9						
Movement	WBU	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	6	153	115	138	77	29	205
Future Vol, veh/h	6	153	115	138	77	29	205
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	-	None	-	None	-	None
Storage Length	-	0	0	-	150	230	-
Veh in Median Storage, #	-	0	-	0	-	-	0
Grade, %	-	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	7	184	139	166	93	35	247

Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	0	483	83	0	0	259	0
Stage 1	0	166	-	-	-	-	-
Stage 2	0	317	-	-	-	-	-
Critical Hdwy	-	6.645	6.945	-	-	4.145	-
Critical Hdwy Stg 1	-	5.845	-	-	-	-	-
Critical Hdwy Stg 2	-	5.445	-	-	-	-	-
Follow-up Hdwy	-	3.5285	3.3285	-	-	2.2285	-
Pot Cap-1 Maneuver	0	525	957	-	-	1298	-
Stage 1	0	844	-	-	-	-	-
Stage 2	0	735	-	-	-	-	-
Platoon blocked, %	-			-	-		-
Mov Cap-1 Maneuver	0	511	957	-	-	1298	-
Mov Cap-2 Maneuver	0	582	-	-	-	-	-
Stage 1	0	844	-	-	-	-	-
Stage 2	0	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.04		0	0.97
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	582 957	1298	-
HCM Lane V/C Ratio	-	-	0.317 0.145	0.027	-
HCM Control Delay (s/veh)	-	-	14 9.4	7.9	-
HCM Lane LOS	-	-	B A	A	-
HCM 95th %tile Q(veh)	-	-	1.4 0.5	0.1	-

HCM 7th AWSC
6: Fowler Avenue & Church Avenue

Existing AM Peak
11/13/2024

Intersection	
Intersection Delay, s/veh	33.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Traffic Vol, veh/h	10	106	125	112	59	93	60	1	130	289	57	1
Future Vol, veh/h	10	106	125	112	59	93	60	1	130	289	57	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	11	116	137	123	65	102	66	1	143	318	63	1
Number of Lanes	0	1	1	1	0	1	0	0	1	1	0	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay, s/veh	16.3	30.6	56.9	23.5
HCM LOS	C	D	F	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	28%	100%	0%	0%
Vol Thru, %	0%	84%	0%	100%	0%	44%	0%	100%	50%
Vol Right, %	0%	16%	0%	0%	100%	28%	0%	0%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	346	116	125	112	212	83	211	211
LT Vol	131	0	116	0	0	59	83	0	0
Through Vol	0	289	0	125	0	93	0	211	105
RT Vol	0	57	0	0	112	60	0	0	106
Lane Flow Rate	144	380	127	137	123	233	91	232	232
Geometry Grp	6	6	5	5	5	6	6	6	6
Degree of Util (X)	0.396	0.977	0.342	0.349	0.287	0.657	0.252	0.606	0.585
Departure Headway (Hd)	9.896	9.255	9.657	9.137	8.409	10.151	9.95	9.43	9.065
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	363	392	372	393	426	354	360	382	397
Service Time	7.686	7.044	7.433	6.912	6.183	7.948	7.74	7.219	6.854
HCM Lane V/C Ratio	0.397	0.969	0.341	0.349	0.289	0.658	0.253	0.607	0.584
HCM Control Delay, s/veh	19.1	71.2	17.4	16.8	14.6	30.6	16.1	25.8	24
HCM Lane LOS	C	F	C	C	B	D	C	D	C
HCM 95th-tile Q	1.8	11.3	1.5	1.5	1.2	4.4	1	3.8	3.6

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBL	SBT	SBR
Lane Configurations			
Traffic Vol, veh/h	82	316	106
Future Vol, veh/h	82	316	106
Peak Hour Factor	0.91	0.91	0.91
Heavy Vehicles, %	3	3	3
Mvmt Flow	90	347	116
Number of Lanes	1	2	0

Approach

Opposing Approach

Opposing Lanes

Conflicting Approach Left

Conflicting Lanes Left

Conflicting Approach Right

Conflicting Lanes Right

HCM Control Delay, s/veh

HCM LOS

HCM 7th AWSC
7: Armstrong Avenue & Church Avenue

Existing AM Peak
11/13/2024

Intersection

Intersection Delay, s/veh 26.9

Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	41	57	157	28	20	18	146	140	33	35	277	66
Future Vol, veh/h	41	57	157	28	20	18	146	140	33	35	277	66
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	53	74	204	36	26	23	190	182	43	45	360	86
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	9.5	12.6	26.2	34.9
HCM LOS	C	B	D	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	46%	16%	42%	9%
Vol Thru, %	44%	22%	30%	73%
Vol Right, %	10%	62%	27%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	319	255	66	378
LT Vol	146	41	28	35
Through Vol	140	57	20	277
RT Vol	33	157	18	66
Lane Flow Rate	414	331	86	491
Geometry Grp	1	1	1	1
Degree of Util (X)	0.744	0.607	0.187	0.848
Departure Headway (Hd)	6.465	6.603	7.85	6.219
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	555	543	460	579
Service Time	4.553	4.689	5.85	4.3
HCM Lane V/C Ratio	0.746	0.61	0.187	0.848
HCM Control Delay, s/veh	26.2	19.5	12.6	34.9
HCM Lane LOS	D	C	B	D
HCM 95th-tile Q	6.4	4	0.7	9.1

HCM 7th TWSC
1: Fowler Avenue & Hamilton Avenue

Existing PM Peak
11/13/2024

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	116	429	63	148	461
Future Vol, veh/h	48	116	429	63	148	461
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	53	129	477	70	164	512

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1353	513	0	0	547
Stage 1	512	-	-	-	-
Stage 2	841	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	164	559	-	-	1018
Stage 1	600	-	-	-	-
Stage 2	421	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	138	559	-	-	1018
Mov Cap-2 Maneuver	260	-	-	-	-
Stage 1	600	-	-	-	-
Stage 2	353	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	16	0	2.24
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	260	559	1018
HCM Lane V/C Ratio	-	-	0.205	0.231	0.162
HCM Control Delay (s/veh)	-	-	22.4	13.4	9.2
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0.9	0.6

HCM 7th AWSC
2: Armstrong Avenue & Hamilton Avenue

Existing PM Peak
11/13/2024

Intersection												
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	55	46	102	46	22	38	128	61	27	100	17
Future Vol, veh/h	14	55	46	102	46	22	38	128	61	27	100	17
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	17	66	55	123	55	27	46	154	73	33	120	20
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay, s/veh	9.5	10.5	10.1	10.2
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	38	128	61	14	55	46	102	46	22	27	100
LT Vol	38	0	0	14	0	0	102	0	0	27	0
Through Vol	0	128	0	0	55	0	0	46	0	0	100
RT Vol	0	0	61	0	0	46	0	0	22	0	0
Lane Flow Rate	46	154	73	17	66	55	123	55	27	33	120
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.083	0.259	0.109	0.032	0.117	0.087	0.228	0.095	0.04	0.061	0.208
Departure Headway (Hd)	6.536	6.036	5.336	6.857	6.357	5.657	6.69	6.19	5.49	6.723	6.223
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	549	595	672	522	564	633	537	579	652	533	577
Service Time	4.269	3.769	3.069	4.596	4.096	3.396	4.426	3.926	3.226	4.46	3.96
HCM Lane V/C Ratio	0.084	0.259	0.109	0.033	0.117	0.087	0.229	0.095	0.041	0.062	0.208
HCM Control Delay, s/veh	9.9	10.9	8.7	9.8	9.9	8.9	11.4	9.6	8.5	9.9	10.6
HCM Lane LOS	A	B	A	A	A	A	B	A	A	A	B
HCM 95th-tile Q	0.3	1	0.4	0.1	0.4	0.3	0.9	0.3	0.1	0.2	0.8

HCM 7th AWSC

3: Temperance Avenue & Hamilton Avenue

Existing PM Peak
11/13/2024

Intersection

Intersection Delay, s/veh 10.3

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	103	27	35	204	206	183
Future Vol, veh/h	103	27	35	204	206	183
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	114	30	39	227	229	203
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	10.6	10.7	9.9
HCM LOS	B	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	204	103	27	206	183
LT Vol	35	0	103	0	0	0
Through Vol	0	204	0	0	206	0
RT Vol	0	0	0	27	0	183
Lane Flow Rate	39	227	114	30	229	203
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.064	0.341	0.21	0.045	0.335	0.258
Departure Headway (Hd)	5.918	5.414	6.609	5.398	5.275	4.57
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	602	660	539	656	678	781
Service Time	3.688	3.184	4.401	3.19	3.034	2.329
HCM Lane V/C Ratio	0.065	0.344	0.212	0.046	0.338	0.26
HCM Control Delay, s/veh	9.1	11	11.2	8.4	10.7	8.9
HCM Lane LOS	A	B	B	A	B	A
HCM 95th-tile Q	0.2	1.5	0.8	0.1	1.5	1

HCM 7th TWSC
4: Armstrong Avenue & California Avenue

Existing PM Peak
11/13/2024

Intersection							
Int Delay, s/veh	4.1						
Movement	WBU	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	1	36	65	104	44	110	99
Future Vol, veh/h	1	36	65	104	44	110	99
Conflicting Peds, #/hr	0	0	0	0	1	1	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	-	None	-	None	-	None
Storage Length	-	0	0	-	150	230	-
Veh in Median Storage, #	-	0	-	0	-	-	0
Grade, %	-	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	1	37	67	107	45	113	102

Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	0	437	55	0	0	154	0
Stage 1	0	108	-	-	-	-	-
Stage 2	0	329	-	-	-	-	-
Critical Hdwy	-	6.645	6.945	-	-	4.145	-
Critical Hdwy Stg 1	-	5.845	-	-	-	-	-
Critical Hdwy Stg 2	-	5.445	-	-	-	-	-
Follow-up Hdwy	-	3.5285	3.3285	-	-	2.2285	-
Pot Cap-1 Maneuver	0	560	998	-	-	1419	-
Stage 1	0	902	-	-	-	-	-
Stage 2	0	726	-	-	-	-	-
Platoon blocked, %	-			-	-		-
Mov Cap-1 Maneuver	0	515	997	-	-	1418	-
Mov Cap-2 Maneuver	0	570	-	-	-	-	-
Stage 1	0	901	-	-	-	-	-
Stage 2	0	668	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.9	0	4.08
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	570	997	1418
HCM Lane V/C Ratio	-	-	0.065	0.067	0.08
HCM Control Delay (s/veh)	-	-	11.8	8.9	7.8
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.3

HCM 7th AWSC
6: Fowler Avenue & Church Avenue

Existing PM Peak
11/13/2024

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Traffic Vol, veh/h	6	134	63	30	21	52	25	0	36	262	25	1
Future Vol, veh/h	6	134	63	30	21	52	25	0	36	262	25	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	6	141	66	32	22	55	26	0	38	276	26	1
Number of Lanes	0	1	1	1	0	1	0	0	1	1	0	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay, s/veh	11.9	12.1	16.6	12
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	21%	100%	0%	0%
Vol Thru, %	0%	91%	0%	100%	0%	53%	0%	100%	34%
Vol Right, %	0%	9%	0%	0%	100%	26%	0%	0%	66%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	287	140	63	30	98	16	125	184
LT Vol	36	0	140	0	0	21	16	0	0
Through Vol	0	262	0	63	0	52	0	125	62
RT Vol	0	25	0	0	30	25	0	0	122
Lane Flow Rate	38	302	147	66	32	103	17	131	194
Geometry Grp	6	6	5	5	5	6	6	6	6
Degree of Util (X)	0.076	0.555	0.296	0.124	0.053	0.213	0.034	0.246	0.339
Departure Headway (Hd)	7.182	6.613	7.234	6.728	6.019	7.44	7.261	6.754	6.284
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	495	541	494	529	590	486	490	528	567
Service Time	4.975	4.405	5.024	4.518	3.808	5.14	5.057	4.55	4.079
HCM Lane V/C Ratio	0.077	0.558	0.298	0.125	0.054	0.212	0.035	0.248	0.342
HCM Control Delay, s/veh	10.6	17.4	13.1	10.5	9.1	12.1	10.3	11.8	12.3
HCM Lane LOS	B	C	B	B	A	B	B	B	B
HCM 95th-tile Q	0.2	3.4	1.2	0.4	0.2	0.8	0.1	1	1.5

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBL	SBT	SBR
Lane Configurations			
Traffic Vol, veh/h	15	187	122
Future Vol, veh/h	15	187	122
Peak Hour Factor	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3
Mvmt Flow	16	197	128
Number of Lanes	1	2	0

Approach

Opposing Approach

Opposing Lanes

Conflicting Approach Left

Conflicting Lanes Left

Conflicting Approach Right

Conflicting Lanes Right

HCM Control Delay, s/veh

HCM LOS

HCM 7th AWSC
7: Armstrong Avenue & Church Avenue

Existing PM Peak
11/13/2024

Intersection

Intersection Delay, s/veh 8.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	36	23	2	13	0	32	110	4	9	54	29
Future Vol, veh/h	44	36	23	2	13	0	32	110	4	9	54	29
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	50	41	26	2	15	0	36	125	5	10	61	33
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	8.3	7.9	8.5	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	43%	13%	10%
Vol Thru, %	75%	35%	87%	59%
Vol Right, %	3%	22%	0%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	146	103	15	92
LT Vol	32	44	2	9
Through Vol	110	36	13	54
RT Vol	4	23	0	29
Lane Flow Rate	166	117	17	105
Geometry Grp	1	1	1	1
Degree of Util (X)	0.203	0.147	0.022	0.124
Departure Headway (Hd)	4.405	4.53	4.726	4.278
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	816	794	758	839
Service Time	2.42	2.548	2.749	2.294
HCM Lane V/C Ratio	0.203	0.147	0.022	0.125
HCM Control Delay, s/veh	8.5	8.3	7.9	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.5	0.1	0.4

Intersection: 1: Fowler Avenue & Hamilton Avenue

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	148	134	22	51
Average Queue (ft)	71	51	1	22
95th Queue (ft)	127	87	10	48
Link Distance (ft)	2565		1307	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		250
Storage Blk Time (%)	7	1		
Queuing Penalty (veh)	10	1		

Intersection: 2: Armstrong Avenue & Hamilton Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	31	78	53	65	62	25	86	65	65	47	59	60
Average Queue (ft)	17	35	25	22	23	21	26	33	30	15	31	12
95th Queue (ft)	39	68	47	44	50	25	53	55	59	38	51	32
Link Distance (ft)		2565			1949			846			1262	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	175		175	200		200	150		150	200		100
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Temperance Avenue & Hamilton Avenue

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	110	77	32	93	144	31
Average Queue (ft)	48	24	21	48	65	22
95th Queue (ft)	85	50	42	73	112	39
Link Distance (ft)		462		475	1255	1255
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	190		200			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Armstrong Avenue & California Avenue

Movement	WB	WB	SB
Directions Served	UL	R	L
Maximum Queue (ft)	130	89	28
Average Queue (ft)	41	27	5
95th Queue (ft)	82	54	23
Link Distance (ft)	794	794	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			230
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Fowler Avenue & Church Avenue

Movement	EB	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	UL	T	R	LTR	UL	TR	UL	T	TR
Maximum Queue (ft)	79	74	75	116	105	167	98	135	105
Average Queue (ft)	47	47	35	60	36	81	36	72	51
95th Queue (ft)	76	71	56	101	71	148	64	115	90
Link Distance (ft)		2491	2491	2578		1078		1880	1880
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	215				240		240		
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 7: Armstrong Avenue & Church Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	102	53	136	138
Average Queue (ft)	48	27	58	65
95th Queue (ft)	77	49	93	107
Link Distance (ft)	2578	2495	2635	638
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 11

Intersection: 1: Fowler Avenue & Hamilton Avenue

Movement	WB	WB	SB
Directions Served	L	R	L
Maximum Queue (ft)	92	97	116
Average Queue (ft)	28	38	37
95th Queue (ft)	66	65	77
Link Distance (ft)	2565		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	250
Storage Blk Time (%)	0	0	
Queuing Penalty (veh)	0	0	

Intersection: 2: Armstrong Avenue & Hamilton Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	30	50	45	54	60	38	49	63	66	47	90	16
Average Queue (ft)	5	26	22	30	23	11	23	30	18	17	28	6
95th Queue (ft)	22	44	42	47	42	30	44	52	38	38	58	16
Link Distance (ft)	2565			1949			846			1262		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	175		175	200		200	150		150	200		100
Storage Blk Time (%)												0
Queuing Penalty (veh)												0

Intersection: 3: Temperance Avenue & Hamilton Avenue

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	24	32	54	104	80	81
Average Queue (ft)	21	7	26	50	38	39
95th Queue (ft)	28	19	48	81	61	63
Link Distance (ft)	462		475		1255	1255
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	190	200				
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Armstrong Avenue & California Avenue

Movement	WB	WB	SB
Directions Served	UL	R	L
Maximum Queue (ft)	55	34	46
Average Queue (ft)	16	13	13
95th Queue (ft)	38	25	37
Link Distance (ft)	794	794	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			230
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Fowler Avenue & Church Avenue

Movement	EB	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	UL	T	R	LTR	UL	TR	UL	T	TR
Maximum Queue (ft)	76	53	51	79	44	94	28	87	117
Average Queue (ft)	43	32	21	35	16	45	9	46	44
95th Queue (ft)	67	43	44	55	33	82	29	73	81
Link Distance (ft)		2491	2491	2578		1078		1880	1880
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	215				240		240		
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 7: Armstrong Avenue & Church Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	53	30	79	80
Average Queue (ft)	31	7	38	33
95th Queue (ft)	41	28	60	56
Link Distance (ft)	2578	2495	2635	638
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

HCS7 Two-Lane Highway Report

Project Information

Analyst	JLB Traffic Engineering, Inc.	Date	12/3/2024
Agency	JLB Traffic Engineering, Inc.	Analysis Year	Existing Traffic Conditions
Jurisdiction	City of Fresno	Time Analyzed	AM Peak
Project Description	Armstrong Avenue between Geary Avenue and Church Avenue	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	461	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.82	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient	3.55202	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.33477	PF Power Coefficient	0.74803
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	52.9

Vehicle Results

Average Speed, mi/h	52.9	Percent Followers, %	52.7
Segment Travel Time, minutes	1.13	Follower Density, followers/mi/ln	4.6
Vehicle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	4.6	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	JLB Traffic Engineering, Inc.	Date	12/3/2024
Agency	JLB Traffic Engineering, Inc.	Analysis Year	Existing Traffic Conditions
Jurisdiction	City of Fresno	Time Analyzed	PM Peak
Project Description	Armstrong Avenue between Geary Avenue and Church Avenue	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	181	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient	3.55202	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.33477	PF Power Coefficient	0.74803
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	54.0

Vehicle Results

Average Speed, mi/h	54.0	Percent Followers, %	31.1
Segment Travel Time, minutes	1.11	Follower Density, followers/mi/ln	1.0
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.0	A

Appendix G: Existing plus Project Traffic Conditions



www.JLBtraffic.com
info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

A p p | G

Intersection						
Int Delay, s/veh	4.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	128	177	511	97	77	358
Future Vol, veh/h	128	177	511	97	77	358
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	132	182	527	100	79	369
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1107	579	0	0	629	0
Stage 1	579	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	232	513	-	-	948	-
Stage 1	559	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	212	512	-	-	947	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Approach	WB	NB	SB			
HCM Ctrl Dly, s/v	18.27	0	1.62			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 347 512	947	-		
HCM Lane V/C Ratio	-	- 0.38 0.356	0.084	-		
HCM Ctrl Dly (s/v)	-	- 21.6 15.9	9.2	-		
HCM Lane LOS	-	- C C	A	-		
HCM 95th %tile Q(veh)	-	- 1.7 1.6	0.3	-		

HCM 7th AWSC
2: Armstrong Avenue & Hamilton Avenue

Existing plus Project AM Peak
12/03/2024

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	27	97	76	53	51	52	107	149	84	34	146	23
Future Vol, veh/h	27	97	76	53	51	52	107	149	84	34	146	23
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	114	89	62	60	61	126	175	99	40	172	27
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay, s/veh	10.9	10.7	11.6	12.1
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	149	84	27	97	76	53	51	52	34	146
LT Vol	107	0	0	27	0	0	53	0	0	34	0
Through Vol	0	149	0	0	97	0	0	51	0	0	146
RT Vol	0	0	84	0	0	76	0	0	52	0	0
Lane Flow Rate	126	175	99	32	114	89	62	60	61	40	172
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.245	0.317	0.159	0.065	0.219	0.154	0.13	0.117	0.108	0.081	0.325
Departure Headway (Hd)	7.003	6.503	5.803	7.42	6.92	6.22	7.526	7.026	6.326	7.305	6.805
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	511	550	615	481	516	573	475	508	563	488	526
Service Time	4.77	4.27	3.57	5.196	4.696	3.996	5.305	4.805	4.105	5.079	4.579
HCM Lane V/C Ratio	0.247	0.318	0.161	0.067	0.221	0.155	0.131	0.118	0.108	0.082	0.327
HCM Control Delay, s/veh	12	12.3	9.7	10.7	11.6	10.1	11.4	10.7	9.9	10.7	12.9
HCM Lane LOS	B	B	A	B	B	B	B	B	A	B	B
HCM 95th-tile Q	1	1.4	0.6	0.2	0.8	0.5	0.4	0.4	0.4	0.3	1.4

Intersection

Intersection Delay, s/veh 14.8

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	231	73	23	237	295	59
Future Vol, veh/h	231	73	23	237	295	59
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	260	82	26	266	331	66
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	14.9	14	15.4
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	237	231	73	295	59
LT Vol	23	0	231	0	0	0
Through Vol	0	237	0	0	295	0
RT Vol	0	0	0	73	0	59
Lane Flow Rate	26	266	260	82	331	66
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.049	0.464	0.503	0.131	0.566	0.1
Departure Headway (Hd)	6.782	6.273	6.972	5.757	6.143	5.432
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	527	573	517	622	587	658
Service Time	4.535	4.026	4.72	3.505	3.892	3.18
HCM Lane V/C Ratio	0.049	0.464	0.503	0.132	0.564	0.1
HCM Control Delay, s/veh	9.9	14.4	16.6	9.4	16.7	8.8
HCM Lane LOS	A	B	C	A	C	A
HCM 95th-tile Q	0.2	2.4	2.8	0.4	3.5	0.3

HCM 7th TWSC
4: Armstrong Avenue & California Avenue

Existing plus Project AM Peak
12/03/2024

Intersection													
Int Delay, s/veh	4.6												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	23	14	21	6	101	2	76	8	146	69	25	211	12
Future Vol, veh/h	23	14	21	6	101	2	76	8	146	69	25	211	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	250	-	120	-	250	-	0	70	-	150	230	-	115
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	28	17	25	7	122	2	92	10	176	83	30	254	14

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	423	593	127	0	391	524	88	269	0	0	259	0	0
Stage 1	314	314	-	0	195	195	-	-	-	-	-	-	-
Stage 2	108	278	-	0	196	329	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	-	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	-	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	513	415	896	0	540	454	950	1285	-	-	1295	-	-
Stage 1	668	652	-	0	785	736	-	-	-	-	-	-	-
Stage 2	882	676	-	0	785	643	-	-	-	-	-	-	-
Platoon blocked, %				-					-	-		-	-
Mov Cap-1 Maneuver	447	402	896	0	488	440	950	1285	-	-	1295	-	-
Mov Cap-2 Maneuver	447	402	-	0	488	440	-	-	-	-	-	-	-
Stage 1	653	637	-	0	779	730	-	-	-	-	-	-	-
Stage 2	789	671	-	0	725	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	12.16	12.41	0.28	0.79
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1285	-	-	447	402	896	488	440	950	1295	-	-
HCM Lane V/C Ratio	0.008	-	-	0.062	0.042	0.028	0.249	0.005	0.096	0.023	-	-
HCM Ctrl Dly (s/v)	7.8	-	-	13.6	14.3	9.1	14.8	13.2	9.2	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0.1	1	0	0.3	0.1	-	-

Intersection							
Int Delay, s/veh	2.2						
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	54	52	9	206	2	362	6
Future Vol, veh/h	54	52	9	206	2	362	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	0	250	-	250	-	250
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	63	60	10	240	2	421	7

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	681	421	428
Stage 1	421	-	-
Stage 2	260	-	-
Critical Hdwy	6.43	6.23	4.13
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.43	-	-
Follow-up Hdwy	3.527	3.327	2.227
Pot Cap-1 Maneuver	414	630	1126
Stage 1	660	-	-
Stage 2	781	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	410	630	1126
Mov Cap-2 Maneuver	410	-	-
Stage 1	654	-	-
Stage 2	781	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.37	0.34	
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBU	SBT	SBR
Capacity (veh/h)	1126	-	410	630	-	-	-
HCM Lane V/C Ratio	0.009	-	0.153	0.096	-	-	-
HCM Ctrl Dly (s/v)	8.2	-	15.3	11.3	-	-	-
HCM Lane LOS	A	-	C	B	-	-	-
HCM 95th %tile Q(veh)	0	-	0.5	0.3	-	-	-

HCM Signalized Intersection Capacity Analysis

6: Fowler Avenue & Church Avenue

Existing plus Project AM Peak
12/03/2024

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Traffic Volume (vph)	10	106	127	112	68	95	60	1	130	291	60	1
Future Volume (vph)	10	106	127	112	68	95	60	1	130	291	60	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Lane Util. Factor		1.00	0.95	1.00	1.00	1.00			1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	0.99	1.00	1.00			1.00	1.00	0.98	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Frt		1.00	1.00	0.85	1.00	0.94			1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (prot)		1752	3505	1548	1752	1737			1752	1845	1535	
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (perm)		1752	3505	1548	1752	1737			1752	1845	1535	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	11	116	140	123	75	104	66	1	143	320	66	1
RTOR Reduction (vph)	0	0	0	91	0	24	0	0	0	0	47	0
Lane Group Flow (vph)	0	127	140	32	75	146	0	0	144	320	19	0
Confl. Peds. (#/hr)				1	1				27		1	
Turn Type	Prot	Prot	NA	Perm	Prot	NA		Prot	Prot	NA	Perm	Prot
Protected Phases	7	7	4		3	8		5	5	2		1
Permitted Phases				4							2	
Actuated Green, G (s)		9.3	18.9	18.9	6.2	15.4			10.4	21.2	21.2	
Effective Green, g (s)		9.3	18.9	18.9	6.2	15.4			10.4	21.2	21.2	
Actuated g/C Ratio		0.13	0.26	0.26	0.09	0.21			0.14	0.29	0.29	
Clearance Time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)		224	913	403	149	368			251	539	448	
v/s Ratio Prot		c0.07	c0.04		0.04	c0.08			c0.08	c0.17		
v/s Ratio Perm				0.02							0.01	
v/c Ratio		0.57	0.15	0.08	0.50	0.40			0.57	0.59	0.04	
Uniform Delay, d1		29.7	20.6	20.2	31.7	24.5			29.0	22.0	18.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		3.3	0.1	0.1	2.7	0.7			3.2	1.8	0.0	
Delay (s)		33.0	20.7	20.3	34.3	25.3			32.1	23.7	18.4	
Level of Service		C	C	C	C	C			C	C	B	
Approach Delay (s/veh)			24.6			28.0				25.3		
Approach LOS			C			C				C		
Intersection Summary												
HCM 2000 Control Delay (s/veh)			25.1			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			72.5			Sum of lost time (s)				19.0		
Intersection Capacity Utilization			58.7%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 6: Fowler Avenue & Church Avenue

Existing plus Project AM Peak
12/03/2024



Movement	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	82	316	106
Future Volume (vph)	82	316	106
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.2	5.3	5.3
Lane Util. Factor	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1492
Flt Permitted	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1492
Peak-hour factor, PHF	0.91	0.91	0.91
Adj. Flow (vph)	90	347	116
RTOR Reduction (vph)	0	0	87
Lane Group Flow (vph)	91	347	29
Confl. Peds. (#/hr)	1		27
Turn Type	Prot	NA	Perm
Protected Phases	1	6	
Permitted Phases			6
Actuated Green, G (s)	7.6	18.4	18.4
Effective Green, g (s)	7.6	18.4	18.4
Actuated g/C Ratio	0.10	0.25	0.25
Clearance Time (s)	4.2	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	183	889	378
v/s Ratio Prot	0.05	0.10	
v/s Ratio Perm			0.02
v/c Ratio	0.50	0.39	0.08
Uniform Delay, d1	30.6	22.4	20.6
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	2.1	0.3	0.1
Delay (s)	32.8	22.7	20.7
Level of Service	C	C	C
Approach Delay (s/veh)		23.9	
Approach LOS		C	
Intersection Summary			

Intersection

Intersection Delay, s/veh 26.2

Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	57	157	28	20	24	146	138	33	30	261	77
Future Vol, veh/h	46	57	157	28	20	24	146	138	33	30	261	77
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	60	74	204	36	26	31	190	179	43	39	339	100
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 20		12.8	26.3	33
HCM LOS	C	B	D	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	46%	18%	39%	8%
Vol Thru, %	44%	22%	28%	71%
Vol Right, %	10%	60%	33%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	317	260	72	368
LT Vol	146	46	28	30
Through Vol	138	57	20	261
RT Vol	33	157	24	77
Lane Flow Rate	412	338	94	478
Geometry Grp	1	1	1	1
Degree of Util (X)	0.744	0.62	0.202	0.83
Departure Headway (Hd)	6.504	6.611	7.794	6.253
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	552	544	463	574
Service Time	4.596	4.701	5.794	4.341
HCM Lane V/C Ratio	0.746	0.621	0.203	0.833
HCM Control Delay, s/veh	26.3	20	12.8	33
HCM Lane LOS	D	C	B	D
HCM 95th-tile Q	6.4	4.2	0.7	8.6

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	141	429	63	181	461
Future Vol, veh/h	48	141	429	63	181	461
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	53	157	477	70	201	512

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1426	513	0	0	547
Stage 1	512	-	-	-	-
Stage 2	914	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	148	559	-	-	1018
Stage 1	600	-	-	-	-
Stage 2	389	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	119	559	-	-	1018
Mov Cap-2 Maneuver	234	-	-	-	-
Stage 1	600	-	-	-	-
Stage 2	312	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.7	0	2.65
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 234 559 1018	-	-
HCM Lane V/C Ratio	-	- 0.228 0.28 0.198	-	-
HCM Ctrl Dly (s/v)	-	- 24.8 13.9 9.4	-	-
HCM Lane LOS	-	- C B A	-	-
HCM 95th %tile Q(veh)	-	- 0.9 1.1 0.7	-	-

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	55	79	50	46	22	63	136	43	27	118	17
Future Vol, veh/h	14	55	79	50	46	22	63	136	43	27	118	17
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	17	66	95	60	55	27	76	164	52	33	142	20
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay, s/veh	9.6	9.9	10.4	10.5
HCM LOS	A	A	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	136	43	14	55	79	50	46	22	27	118
LT Vol	63	0	0	14	0	0	50	0	0	27	0
Through Vol	0	136	0	0	55	0	0	46	0	0	118
RT Vol	0	0	43	0	0	79	0	0	22	0	0
Lane Flow Rate	76	164	52	17	66	95	60	55	27	33	142
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.137	0.273	0.076	0.032	0.116	0.149	0.115	0.098	0.042	0.06	0.244
Departure Headway (Hd)	6.504	6.004	5.304	6.827	6.327	5.627	6.88	6.38	5.68	6.688	6.188
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	552	600	676	525	567	637	521	561	630	536	580
Service Time	4.235	3.735	3.035	4.563	4.063	3.363	4.619	4.119	3.419	4.422	3.922
HCM Lane V/C Ratio	0.138	0.273	0.077	0.032	0.116	0.149	0.115	0.098	0.043	0.062	0.245
HCM Control Delay, s/veh	10.3	11	8.5	9.8	9.9	9.4	10.5	9.8	8.7	9.9	10.9
HCM Lane LOS	B	B	A	A	A	A	B	A	A	A	B
HCM 95th-tile Q	0.5	1.1	0.2	0.1	0.4	0.5	0.4	0.3	0.1	0.2	1

Intersection

Intersection Delay, s/veh 11.2

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	85	27	35	233	289	131
Future Vol, veh/h	85	27	35	233	289	131
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	94	30	39	259	321	146
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh 10.4		11.3	11.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	233	85	27	289	131
LT Vol	35	0	85	0	0	0
Through Vol	0	233	0	0	289	0
RT Vol	0	0	0	27	0	131
Lane Flow Rate	39	259	94	30	321	146
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.064	0.387	0.178	0.046	0.467	0.183
Departure Headway (Hd)	5.889	5.385	6.77	5.558	5.24	4.535
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	605	663	526	637	684	786
Service Time	3.659	3.154	4.566	3.353	2.999	2.294
HCM Lane V/C Ratio	0.064	0.391	0.179	0.047	0.469	0.186
HCM Control Delay, s/veh	9.1	11.6	11	8.6	12.6	8.3
HCM Lane LOS	A	B	B	A	B	A
HCM 95th-tile Q	0.2	1.8	0.6	0.1	2.5	0.7

HCM 7th TWSC
4: Armstrong Avenue & California Avenue

Existing plus Project PM Peak
12/03/2024

Intersection													
Int Delay, s/veh	4												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	23	6	15	1	27	17	43	21	112	20	46	111	34
Future Vol, veh/h	23	6	15	1	27	17	43	21	112	20	46	111	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	250	-	120	-	250	-	0	70	-	150	230	-	115
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	24	6	15	1	28	18	44	22	115	21	47	114	35

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	319	390	57	0	315	404	59	149	0	0	137	0	0
Stage 1	209	209	-	0	160	160	-	-	-	-	-	-	-
Stage 2	110	180	-	0	155	244	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	-	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	-	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	608	542	994	0	612	532	991	1422	-	-	1437	-	-
Stage 1	770	725	-	0	824	762	-	-	-	-	-	-	-
Stage 2	881	747	-	0	829	700	-	-	-	-	-	-	-
Platoon blocked, %				-					-	-		-	-
Mov Cap-1 Maneuver	535	516	994	0	566	506	991	1422	-	-	1436	-	-
Mov Cap-2 Maneuver	535	516	-	0	566	506	-	-	-	-	-	-	-
Stage 1	745	701	-	0	810	750	-	-	-	-	-	-	-
Stage 2	809	735	-	0	782	677	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.9	10.39	1.04	1.83
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	535	516	994	566	506	991	1436	-	-
HCM Lane V/C Ratio	0.015	-	-	0.044	0.012	0.016	0.049	0.035	0.045	0.033	-	-
HCM Ctrl Dly (s/v)	7.6	-	-	12	12.1	8.7	11.7	12.4	8.8	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	0.2	0.1	0.1	0.1	-	-

Intersection							
Int Delay, s/veh	1.1						
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	29	11	25	239	1	233	83
Future Vol, veh/h	29	11	25	239	1	233	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	0	250	-	250	-	250
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	32	12	28	266	1	259	92

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	580	259	351
Stage 1	259	-	-
Stage 2	321	-	-
Critical Hdwy	6.43	6.23	4.13
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.43	-	-
Follow-up Hdwy	3.527	3.327	2.227
Pot Cap-1 Maneuver	475	777	1202
Stage 1	782	-	-
Stage 2	733	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	464	777	1202
Mov Cap-2 Maneuver	464	-	-
Stage 1	764	-	-
Stage 2	733	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.34	0.76	
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBU	SBT	SBR
Capacity (veh/h)	1202	-	464	777	-	-	-
HCM Lane V/C Ratio	0.023	-	0.069	0.016	-	-	-
HCM Ctrl Dly (s/v)	8.1	-	13.3	9.7	-	-	-
HCM Lane LOS	A	-	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0	-	-	-

HCM Signalized Intersection Capacity Analysis

6: Fowler Avenue & Church Avenue

Existing plus Project PM Peak
12/03/2024

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	6	134	66	30	23	57	25	36	262	28	1	15
Future Volume (vph)	6	134	66	30	23	57	25	36	262	28	1	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	4.9	4.9	4.2	5.3		4.2	5.3	5.3		4.2
Lane Util. Factor		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)		1752	3505	1568	1752	1761		1752	1845	1568		1752
Flt Permitted		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.95
Satd. Flow (perm)		1752	3505	1568	1752	1761		1752	1845	1568		1752
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	141	69	32	24	60	26	38	276	29	1	16
RTOR Reduction (vph)	0	0	0	20	0	17	0	0	0	20	0	0
Lane Group Flow (vph)	0	147	69	12	24	69	0	38	276	9	0	17
Confl. Peds. (#/hr)								4				
Turn Type	Prot	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	Prot
Protected Phases	7	7	4		3	8		5	2		1	1
Permitted Phases				4						2		
Actuated Green, G (s)		11.6	24.1	24.1	0.8	12.9		2.5	20.7	20.7		0.8
Effective Green, g (s)		11.6	24.1	24.1	0.8	12.9		2.5	20.7	20.7		0.8
Actuated g/C Ratio		0.18	0.37	0.37	0.01	0.20		0.04	0.32	0.32		0.01
Clearance Time (s)		4.2	4.9	4.9	4.2	5.3		4.2	5.3	5.3		4.2
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		312	1299	581	21	349		67	587	499		21
v/s Ratio Prot		c0.08	0.02		0.01	c0.04		c0.02	c0.15			0.01
v/s Ratio Perm				0.01						0.01		
v/c Ratio		0.47	0.05	0.02	1.14	0.20		0.57	0.47	0.02		0.81
Uniform Delay, d1		23.9	13.1	13.0	32.1	21.7		30.7	17.8	15.2		32.0
Progression Factor		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2		1.1	0.0	0.0	244.5	0.3		10.6	0.6	0.0		109.0
Delay (s)		25.1	13.1	13.0	276.6	22.0		41.3	18.4	15.2		141.1
Level of Service		C	B	B	F	C		D	B	B		F
Approach Delay (s/veh)			20.2			77.6			20.6			
Approach LOS			C			E			C			
Intersection Summary												
HCM 2000 Control Delay (s/veh)			27.4									
HCM 2000 Volume to Capacity ratio			0.42									
Actuated Cycle Length (s)			65.0									
Intersection Capacity Utilization			46.7%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: Fowler Avenue & Church Avenue

Existing plus Project PM Peak
12/03/2024



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	187	122
Future Volume (vph)	187	122
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.3	5.3
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3505	1531
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3505	1531
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	197	128
RTOR Reduction (vph)	0	91
Lane Group Flow (vph)	197	37
Confl. Peds. (#/hr)		4
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	19.0	19.0
Effective Green, g (s)	19.0	19.0
Actuated g/C Ratio	0.29	0.29
Clearance Time (s)	5.3	5.3
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1024	447
v/s Ratio Prot	0.06	
v/s Ratio Perm		0.02
v/c Ratio	0.19	0.08
Uniform Delay, d1	17.2	16.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.1	0.1
Delay (s)	17.3	16.8
Level of Service	B	B
Approach Delay (s/veh)	23.3	
Approach LOS	C	
Intersection Summary		

Intersection

Intersection Delay, s/veh 8.4

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	50	36	23	2	13	0	32	117	4	10	62	36
Future Vol, veh/h	50	36	23	2	13	0	32	117	4	10	62	36
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	57	41	26	2	15	0	36	133	5	11	70	41
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	8.5	7.9	8.7	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	46%	13%	9%
Vol Thru, %	76%	33%	87%	57%
Vol Right, %	3%	21%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	109	15	108
LT Vol	32	50	2	10
Through Vol	117	36	13	62
RT Vol	4	23	0	36
Lane Flow Rate	174	124	17	123
Geometry Grp	1	1	1	1
Degree of Util (X)	0.215	0.158	0.023	0.147
Departure Headway (Hd)	4.448	4.606	4.801	4.3
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	808	780	746	836
Service Time	2.464	2.627	2.827	2.318
HCM Lane V/C Ratio	0.215	0.159	0.023	0.147
HCM Control Delay, s/veh	8.7	8.5	7.9	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.6	0.1	0.5

Intersection: 1: Fowler Avenue & Hamilton Avenue

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	251	200	55	116
Average Queue (ft)	81	71	4	32
95th Queue (ft)	172	141	23	71
Link Distance (ft)	2565		1307	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		250
Storage Blk Time (%)	13	1		
Queuing Penalty (veh)	23	1		

Intersection: 2: Armstrong Avenue & Hamilton Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	46	79	54	41	68	48	68	92	45	43	64	93
Average Queue (ft)	21	37	32	23	28	18	30	41	23	15	33	10
95th Queue (ft)	42	63	52	37	55	38	49	74	40	34	57	39
Link Distance (ft)		2565			1949			846			1262	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	175		175	200		200	150		150	200		100
Storage Blk Time (%)												0
Queuing Penalty (veh)												0

Intersection: 3: Temperance Avenue & Hamilton Avenue

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	118	42	31	115	124	71
Average Queue (ft)	47	19	13	51	64	27
95th Queue (ft)	83	33	37	80	102	54
Link Distance (ft)		462		475	1255	1255
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	190		200			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Armstrong Avenue & California Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	R	UL	T	R	L	L
Maximum Queue (ft)	50	24	66	84	18	60	49	41
Average Queue (ft)	18	8	15	29	1	18	2	5
95th Queue (ft)	41	25	38	54	6	35	19	24
Link Distance (ft)	1964			794		794		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250		120	250			70	230
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 5: Temperance Avenue & California Avenue

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	46	38	26
Average Queue (ft)	20	16	2
95th Queue (ft)	38	32	12
Link Distance (ft)	1680	1680	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		250	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Fowler Avenue & Church Avenue

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	UL	T	T	R	L	TR	UL	T	R	UL	T	T
Maximum Queue (ft)	152	110	109	43	107	129	154	399	65	189	177	138
Average Queue (ft)	71	51	11	23	44	57	78	150	17	62	94	48
95th Queue (ft)	124	90	49	42	94	114	141	267	44	135	134	114
Link Distance (ft)		2479	2479			897		1067	1067		1880	1880
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215			115	200		240			240		
Storage Blk Time (%)			0					1				
Queuing Penalty (veh)			0					2				

Intersection: 6: Fowler Avenue & Church Avenue

Movement	SB
Directions Served	R
Maximum Queue (ft)	54
Average Queue (ft)	29
95th Queue (ft)	54
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	170
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Armstrong Avenue & Church Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	143	53	135	146
Average Queue (ft)	65	28	56	68
95th Queue (ft)	104	49	94	112
Link Distance (ft)	1612	2495	2635	638
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 25

Intersection: 1: Fowler Avenue & Hamilton Avenue

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	74	130	52	93
Average Queue (ft)	27	46	4	42
95th Queue (ft)	58	87	22	75
Link Distance (ft)	2565		1307	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		250
Storage Blk Time (%)		1		
Queuing Penalty (veh)		0		

Intersection: 2: Armstrong Avenue & Hamilton Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	30	50	53	48	74	24	49	64	20	42	56	34
Average Queue (ft)	8	26	29	24	21	9	24	34	13	17	23	7
95th Queue (ft)	28	46	45	41	49	25	41	56	27	34	45	20
Link Distance (ft)		2565			1949			846			1262	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	175		175	200		200	150		150	200		100
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Temperance Avenue & Hamilton Avenue

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	45	33	32	98	135	79
Average Queue (ft)	22	8	17	52	52	36
95th Queue (ft)	35	24	43	83	93	63
Link Distance (ft)		462		475	1255	1255
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	190		200			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Armstrong Avenue & California Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	R	UL	T	R	L	L	R
Maximum Queue (ft)	48	24	21	44	42	37	25	26	12
Average Queue (ft)	14	3	8	16	7	13	2	6	0
95th Queue (ft)	37	16	24	34	25	25	14	22	4
Link Distance (ft)	1970				794	794			
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		120	250			70	230	115
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 5: Temperance Avenue & California Avenue

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	23	18	31
Average Queue (ft)	12	6	5
95th Queue (ft)	27	19	21
Link Distance (ft)	1672	1672	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		250	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Fowler Avenue & Church Avenue

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	UL	T	T	R	L	TR	UL	T	R	UL	T	T
Maximum Queue (ft)	136	68	22	60	45	85	47	239	20	52	116	50
Average Queue (ft)	73	26	1	11	16	31	16	74	7	14	59	10
95th Queue (ft)	118	56	8	30	40	69	45	148	20	39	103	35
Link Distance (ft)		2479	2479			903		1067	1067		1880	1880
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215			115	200		240			240		
Storage Blk Time (%)								0				
Queuing Penalty (veh)								0				

Intersection: 6: Fowler Avenue & Church Avenue

Movement	SB
Directions Served	R
Maximum Queue (ft)	72
Average Queue (ft)	35
95th Queue (ft)	67
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	170
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Armstrong Avenue & Church Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	80	30	55	68
Average Queue (ft)	36	14	34	31
95th Queue (ft)	62	36	47	43
Link Distance (ft)	1606	2495	2635	638
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

HCS7 Two-Lane Highway Report

Project Information

Analyst	JLB Traffic Engineering, Inc.	Date	12/3/2024
Agency	JLB Traffic Engineering, Inc.	Analysis Year	Existing plus Project Traffic Conditions
Jurisdiction	City of Fresno	Time Analyzed	AM Peak
Project Description	Armstrong Avenue between Geary Avenue and Church Avenue	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	449	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.82	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient	3.55202	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.33477	PF Power Coefficient	0.74803
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	52.9

Vehicle Results

Average Speed, mi/h	52.9	Percent Followers, %	52.0
Segment Travel Time, minutes	1.13	Follower Density, followers/mi/ln	4.4
Vehicle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	4.4	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	JLB Traffic Engineering, Inc.	Date	12/3/2024
Agency	JLB Traffic Engineering, Inc.	Analysis Year	Existing plus Project Traffic Conditions
Jurisdiction	City of Fresno	Time Analyzed	PM Peak
Project Description	Armstrong Avenue between Geary Avenue and Church Avenue	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	196	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient	3.55202	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.33477	PF Power Coefficient	0.74803
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	53.9

Vehicle Results

Average Speed, mi/h	53.9	Percent Followers, %	32.6
Segment Travel Time, minutes	1.11	Follower Density, followers/mi/ln	1.2
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.2	A

Appendix H: Near Term plus Project Traffic Conditions



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516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

A p p | H

HCM 7th TWSC
1: Fowler Avenue & Hamilton Avenue

Near Term plus Project AM Peak
11/14/2024

Intersection						
Int Delay, s/veh	5.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	128	214	583	97	92	446
Future Vol, veh/h	128	214	583	97	92	446
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	132	221	601	100	95	460

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1303	653	0	0	703
Stage 1	653	-	-	-	-
Stage 2	649	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	176	466	-	-	890
Stage 1	516	-	-	-	-
Stage 2	518	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	157	465	-	-	888
Mov Cap-2 Maneuver	294	-	-	-	-
Stage 1	515	-	-	-	-
Stage 2	463	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v22.29		0	1.63
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	294	465	888
HCM Lane V/C Ratio	-	-	0.449	0.475	0.107
HCM Control Delay (s/veh)	-	-	26.9	19.6	9.5
HCM Lane LOS	-	-	D	C	A
HCM 95th %tile Q(veh)	-	-	2.2	2.5	0.4

HCM 7th AWSC
2: Armstrong Avenue & Hamilton Avenue

Near Term plus Project AM Peak

11/14/2024

Intersection												
Intersection Delay, s/veh	14											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	97	92	64	51	55	145	207	100	36	204	24
Future Vol, veh/h	28	97	92	64	51	55	145	207	100	36	204	24
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	33	114	108	75	60	65	171	244	118	42	240	28
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay, s/veh	12.3	12	14.4	15.9
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	145	207	100	28	97	92	64	51	55	36	204
LT Vol	145	0	0	28	0	0	64	0	0	36	0
Through Vol	0	207	0	0	97	0	0	51	0	0	204
RT Vol	0	0	100	0	0	92	0	0	55	0	0
Lane Flow Rate	171	244	118	33	114	108	75	60	65	42	240
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.358	0.477	0.207	0.075	0.245	0.212	0.175	0.131	0.129	0.094	0.497
Departure Headway (Hd)	7.545	7.045	6.345	8.241	7.741	7.041	8.369	7.869	7.169	7.957	7.457
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	478	511	566	435	464	510	429	455	500	451	482
Service Time	5.284	4.784	4.084	5.986	5.486	4.786	6.116	5.616	4.916	5.701	5.201
HCM Lane V/C Ratio	0.358	0.477	0.208	0.076	0.246	0.212	0.175	0.132	0.13	0.093	0.498
HCM Control Delay, s/veh	14.5	16.1	10.7	11.7	13	11.7	12.9	11.8	11	11.5	17.4
HCM Lane LOS	B	C	B	B	B	B	B	B	B	B	C
HCM 95th-tile Q	1.6	2.5	0.8	0.2	1	0.8	0.6	0.4	0.4	0.3	2.7

Intersection

Intersection Delay, s/veh 38.7

Intersection LOS E

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	239	128	40	346	472	63
Future Vol, veh/h	239	128	40	346	472	63
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	269	144	45	389	530	71
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	18.5	26.9	61.1
HCM LOS	C	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	346	239	128	472	63
LT Vol	40	0	239	0	0	0
Through Vol	0	346	0	0	472	0
RT Vol	0	0	0	128	0	63
Lane Flow Rate	45	389	269	144	530	71
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.094	0.756	0.593	0.273	1.011	0.121
Departure Headway (Hd)	7.643	7.129	8.083	6.831	6.865	6.148
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	472	509	448	528	530	586
Service Time	5.343	4.829	5.783	4.552	4.571	3.854
HCM Lane V/C Ratio	0.095	0.764	0.6	0.273	1	0.121
HCM Control Delay, s/veh	11.1	28.7	21.9	12.1	68	9.7
HCM Lane LOS	B	D	C	B	F	A
HCM 95th-tile Q	0.3	6.5	3.8	1.1	14.5	0.4

HCM 7th TWSC
4: Armstrong Avenue & California Avenue

Near Term plus Project AM Peak

11/14/2024

Intersection													
Int Delay, s/veh	6.3												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	62	24	47	8	109	5	78	19	226	77	34	283	25
Future Vol, veh/h	62	24	47	8	109	5	78	19	226	77	34	283	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	250	-	120	-	250	-	0	70	-	150	230	-	115
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	75	29	57	10	131	6	94	23	272	93	41	341	30

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	608	834	170	0	585	771	136	371	0	0	365	0	0
Stage 1	423	423	-	0	318	318	-	-	-	-	-	-	-
Stage 2	185	411	-	0	267	453	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	-	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	-	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	378	301	840	0	392	327	884	1177	-	-	1183	-	-
Stage 1	576	584	-	0	665	650	-	-	-	-	-	-	-
Stage 2	796	591	-	0	713	566	-	-	-	-	-	-	-
Platoon blocked, %				-					-	-		-	-
Mov Cap-1 Maneuver	314	285	840	0	313	310	884	1177	-	-	1183	-	-
Mov Cap-2 Maneuver	314	285	-	0	313	310	-	-	-	-	-	-	-
Stage 1	557	563	-	0	652	637	-	-	-	-	-	-	-
Stage 2	691	579	-	0	609	546	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v16.17		18.27	0.48	0.81
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1177	-	-	314	285	840	313	310	884	1183	-	-
HCM Lane V/C Ratio	0.019	-	-	0.238	0.102	0.067	0.42	0.019	0.106	0.035	-	-
HCM Control Delay (s/veh)	8.1	-	-	20	19.1	9.6	24.6	16.9	9.6	8.2	-	-
HCM Lane LOS	A	-	-	C	C	A	C	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0.3	0.2	2	0.1	0.4	0.1	-	-

Intersection							
Int Delay, s/veh	4.9						
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	108	118	10	288	2	576	10
Future Vol, veh/h	108	118	10	288	2	576	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	0	250	-	250	-	250
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	126	137	12	335	2	670	12

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1028	670	681
Stage 1	670	-	-
Stage 2	358	-	-
Critical Hdwy	6.43	6.23	4.13
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.43	-	-
Follow-up Hdwy	3.527	3.327	2.227
Pot Cap-1 Maneuver	258	455	907
Stage 1	507	-	-
Stage 2	705	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	255	455	907
Mov Cap-2 Maneuver	255	-	-
Stage 1	500	-	-
Stage 2	705	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v23.84		0.3	
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBU	SBT	SBR
Capacity (veh/h)	907	-	255	455	-	-	-
HCM Lane V/C Ratio	0.013	-	0.493	0.301	-	-	-
HCM Control Delay (s/veh)	9	-	32.1	16.3	-	-	-
HCM Lane LOS	A	-	D	C	-	-	-
HCM 95th %tile Q(veh)	0	-	2.5	1.3	-	-	-

HCM Signalized Intersection Capacity Analysis

Near Term plus Project AM Peak

6: Fowler Avenue & Church Avenue

11/14/2024

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Traffic Volume (vph)	10	118	143	151	125	112	67	38	182	337	98	1
Future Volume (vph)	10	118	143	151	125	112	67	38	182	337	98	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Lane Util. Factor		1.00	0.95	1.00	1.00	1.00			1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	0.99	1.00	1.00			1.00	1.00	0.98	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Frt		1.00	1.00	0.85	1.00	0.94			1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (prot)		1752	3505	1548	1752	1741			1752	1845	1535	
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (perm)		1752	3505	1548	1752	1741			1752	1845	1535	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	11	130	157	166	137	123	74	42	200	370	108	1
RTOR Reduction (vph)	0	0	0	131	0	24	0	0	0	0	73	0
Lane Group Flow (vph)	0	141	157	35	137	173	0	0	242	370	35	0
Confl. Peds. (#/hr)				1	1				27		1	
Turn Type	Prot	Prot	NA	Perm	Prot	NA		Prot	Prot	NA	Perm	Prot
Protected Phases	7	7	4		3	8		5	5	2		1
Permitted Phases				4							2	
Actuated Green, G (s)		8.2	15.5	15.5	8.2	15.1			11.4	23.6	23.6	
Effective Green, g (s)		8.2	15.5	15.5	8.2	15.1			11.4	23.6	23.6	
Actuated g/C Ratio		0.11	0.21	0.21	0.11	0.21			0.16	0.32	0.32	
Clearance Time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)		197	746	329	197	361			274	598	497	
v/s Ratio Prot		c0.08	0.04		0.08	c0.10			c0.14	c0.20		
v/s Ratio Perm				0.02							0.02	
v/c Ratio		0.72	0.21	0.11	0.70	0.48			0.88	0.62	0.07	
Uniform Delay, d1		31.2	23.6	23.1	31.1	25.4			30.0	20.8	17.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		11.7	0.1	0.1	10.2	1.0			26.6	1.9	0.1	
Delay (s)		42.9	23.7	23.2	41.3	26.4			56.7	22.7	17.1	
Level of Service		D	C	C	D	C			E	C	B	
Approach Delay (s/veh)			29.4			32.5				33.3		
Approach LOS			C			C				C		
Intersection Summary												
HCM 2000 Control Delay (s/veh)			29.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			72.8				Sum of lost time (s)			19.0		
Intersection Capacity Utilization			66.3%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: Fowler Avenue & Church Avenue

Near Term plus Project AM Peak

11/14/2024



Movement	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	92	388	114
Future Volume (vph)	92	388	114
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.2	5.3	5.3
Lane Util. Factor	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1492
Flt Permitted	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1492
Peak-hour factor, PHF	0.91	0.91	0.91
Adj. Flow (vph)	101	426	125
RTOR Reduction (vph)	0	0	92
Lane Group Flow (vph)	102	426	33
Confl. Peds. (#/hr)	1		27
Turn Type	Prot	NA	Perm
Protected Phases	1	6	
Permitted Phases			6
Actuated Green, G (s)	6.9	19.1	19.1
Effective Green, g (s)	6.9	19.1	19.1
Actuated g/C Ratio	0.09	0.26	0.26
Clearance Time (s)	4.2	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	166	919	391
v/s Ratio Prot	0.06	0.12	
v/s Ratio Perm			0.02
v/c Ratio	0.61	0.46	0.08
Uniform Delay, d1	31.7	22.5	20.3
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	6.6	0.4	0.1
Delay (s)	38.3	22.9	20.3
Level of Service	D	C	C
Approach Delay (s/veh)		24.8	
Approach LOS		C	
Intersection Summary			

Intersection

Intersection Delay, s/veh 254.9

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	240	181	30	298	27	183	150	33	30	310	104
Future Vol, veh/h	61	240	181	30	298	27	183	150	33	30	310	104
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	79	312	235	39	387	35	238	195	43	39	403	135
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 184.6		173.5	191	286
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	13%	8%	7%
Vol Thru, %	41%	50%	84%	70%
Vol Right, %	9%	38%	8%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	366	482	355	444
LT Vol	183	61	30	30
Through Vol	150	240	298	310
RT Vol	33	181	27	104
Lane Flow Rate	475	626	461	577
Geometry Grp	1	1	1	1
Degree of Util (X)	1.28	1.643	1.232	1.525
Departure Headway (Hd)	14.373	12.724	14.517	13.204
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	257	294	254	283
Service Time	12.373	10.724	12.517	11.204
HCM Lane V/C Ratio	1.848	2.129	1.815	2.039
HCM Control Delay, s/veh	191	334.6	173.5	286
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	16.2	28.8	14.9	24.3

HCM 7th TWSC
1: Fowler Avenue & Hamilton Avenue

Near Term plus Project PM Peak

11/14/2024

Intersection						
Int Delay, s/veh	4.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	174	516	63	220	535
Future Vol, veh/h	48	174	516	63	220	535
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	53	193	573	70	244	594
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1692	609	0	0	643	0
Stage 1	608	-	-	-	-	-
Stage 2	1083	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	102	493	-	-	937	-
Stage 1	541	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	75	493	-	-	937	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	541	-	-	-	-	-
Stage 2	239	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	20.5	0	2.97			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 179 493	937	-		
HCM Lane V/C Ratio	-	- 0.298 0.393	0.261	-		
HCM Control Delay (s/veh)	-	- 33.4 17	10.2	-		
HCM Lane LOS	-	- D C	B	-		
HCM 95th %tile Q(veh)	-	- 1.2 1.8	1	-		

HCM 7th AWSC
2: Armstrong Avenue & Hamilton Avenue

Near Term plus Project PM Peak

11/14/2024

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	16	55	114	62	46	25	96	172	58	32	146	20
Future Vol, veh/h	16	55	114	62	46	25	96	172	58	32	146	20
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	66	137	75	55	30	116	207	70	39	176	24
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay, s/veh	10.7	10.8	11.8	12
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	172	58	16	55	114	62	46	25	32	146
LT Vol	96	0	0	16	0	0	62	0	0	32	0
Through Vol	0	172	0	0	55	0	0	46	0	0	146
RT Vol	0	0	58	0	0	114	0	0	25	0	0
Lane Flow Rate	116	207	70	19	66	137	75	55	30	39	176
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.221	0.367	0.11	0.039	0.126	0.234	0.155	0.107	0.052	0.077	0.326
Departure Headway (Hd)	6.883	6.383	5.683	7.341	6.841	6.141	7.451	6.951	6.251	7.175	6.675
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	562	628	486	522	582	480	513	570	498	537
Service Time	4.642	4.142	3.442	5.11	4.61	3.91	5.224	4.724	4.024	4.94	4.44
HCM Lane V/C Ratio	0.223	0.368	0.111	0.039	0.126	0.235	0.156	0.107	0.053	0.078	0.328
HCM Control Delay, s/veh	11.6	12.8	9.2	10.4	10.6	10.8	11.6	10.6	9.4	10.5	12.7
HCM Lane LOS	B	B	A	B	B	B	B	B	A	B	B
HCM 95th-tile Q	0.8	1.7	0.4	0.1	0.4	0.9	0.5	0.4	0.2	0.2	1.4

Intersection

Intersection Delay, s/veh 15.1

Intersection LOS C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	91	31	37	337	383	147
Future Vol, veh/h	91	31	37	337	383	147
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	101	34	41	374	426	163
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	1.4	15.7	15.5
HCM LOS	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	337	91	31	383	147
LT Vol	37	0	91	0	0	0
Through Vol	0	337	0	0	383	0
RT Vol	0	0	0	31	0	147
Lane Flow Rate	41	374	101	34	426	163
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.071	0.592	0.208	0.059	0.655	0.22
Departure Headway (Hd)	6.201	5.695	7.419	6.199	5.545	4.838
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	579	637	484	578	655	746
Service Time	3.927	3.422	5.157	3.937	3.245	2.538
HCM Lane V/C Ratio	0.071	0.587	0.209	0.059	0.65	0.218
HCM Control Delay, s/veh	9.4	16.4	12.1	9.3	18.1	8.9
HCM Lane LOS	A	C	B	A	C	A
HCM 95th-tile Q	0.2	3.9	0.8	0.2	4.9	0.8

HCM 7th TWSC
4: Armstrong Avenue & California Avenue

Near Term plus Project PM Peak

11/14/2024

Intersection													
Int Delay, s/veh	4.5												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	50	12	32	1	28	28	46	44	171	32	51	126	86
Future Vol, veh/h	50	12	32	1	28	28	46	44	171	32	51	126	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	250	-	120	-	250	-	0	70	-	150	230	-	115
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	52	12	33	1	29	29	47	45	176	33	53	130	89

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	428	536	65	0	444	592	89	219	0	0	210	0	0
Stage 1	235	235	-	0	268	268	-	-	-	-	-	-	-
Stage 2	193	301	-	0	176	324	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	-	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	-	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	508	447	982	0	495	416	948	1341	-	-	1350	-	-
Stage 1	744	707	-	0	712	684	-	-	-	-	-	-	-
Stage 2	787	661	-	0	805	646	-	-	-	-	-	-	-
Platoon blocked, %				-					-	-		-	-
Mov Cap-1 Maneuver	417	415	982	0	431	385	947	1341	-	-	1349	-	-
Mov Cap-2 Maneuver	417	415	-	0	431	385	-	-	-	-	-	-	-
Stage 1	715	679	-	0	687	660	-	-	-	-	-	-	-
Stage 2	691	638	-	0	734	621	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v12.67		12.03	1.39	1.51
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	417	415	982	431	385	947	1349	-	-
HCM Lane V/C Ratio	0.034	-	-	0.124	0.03	0.034	0.067	0.075	0.05	0.039	-	-
HCM Control Delay (s/veh)	7.8	-	-	14.9	13.9	8.8	13.9	15.1	9	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.1	0.1	0.2	0.2	0.2	0.1	-	-

HCM 7th TWSC
5: Temperance Avenue & California Avenue

Near Term plus Project PM Peak

11/14/2024

Intersection							
Int Delay, s/veh	1.2						
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	38	11	27	340	1	318	99
Future Vol, veh/h	38	11	27	340	1	318	99
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	0	250	-	250	-	250
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	42	12	30	378	1	353	110

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	791	353	463
Stage 1	353	-	-
Stage 2	438	-	-
Critical Hdwy	6.43	6.23	4.13
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.43	-	-
Follow-up Hdwy	3.527	3.327	2.227
Pot Cap-1 Maneuver	357	688	1093
Stage 1	709	-	-
Stage 2	649	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	347	688	1093
Mov Cap-2 Maneuver	347	-	-
Stage 1	689	-	-
Stage 2	649	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v15.34		0.62	
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBU	SBT	SBR
Capacity (veh/h)	1093	-	347	688	-	-	-
HCM Lane V/C Ratio	0.027	-	0.122	0.018	-	-	-
HCM Control Delay (s/veh)	8.4	-	16.8	10.3	-	-	-
HCM Lane LOS	A	-	C	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.1	-	-	-

HCM Signalized Intersection Capacity Analysis

Near Term plus Project PM Peak

6: Fowler Avenue & Church Avenue

11/14/2024

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Traffic Volume (vph)	6	150	74	45	36	61	29	14	60	335	44	1
Future Volume (vph)	6	150	74	45	36	61	29	14	60	335	44	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Lane Util. Factor		1.00	0.95	1.00	1.00	1.00			1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Frt		1.00	1.00	0.85	1.00	0.95			1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (prot)		1752	3505	1568	1752	1754			1752	1845	1568	
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (perm)		1752	3505	1568	1752	1754			1752	1845	1568	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	158	78	47	38	64	31	15	63	353	46	1
RTOR Reduction (vph)	0	0	0	32	0	20	0	0	0	0	29	0
Lane Group Flow (vph)	0	164	78	15	38	75	0	0	78	353	17	0
Confl. Peds. (#/hr)									4			
Turn Type	Prot	Prot	NA	Perm	Prot	NA		Prot	Prot	NA	Perm	Prot
Protected Phases	7	7	4		3	8		5	5	2		1
Permitted Phases				4							2	
Actuated Green, G (s)		12.3	21.6	21.6	2.6	11.5			6.1	24.5	24.5	
Effective Green, g (s)		12.3	21.6	21.6	2.6	11.5			6.1	24.5	24.5	
Actuated g/C Ratio		0.18	0.32	0.32	0.04	0.17			0.09	0.36	0.36	
Clearance Time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)		315	1110	496	66	295			156	662	563	
v/s Ratio Prot		c0.09	0.02		0.02	c0.04			c0.04	c0.19		
v/s Ratio Perm				0.01							0.01	
v/c Ratio		0.52	0.07	0.03	0.58	0.25			0.50	0.53	0.03	
Uniform Delay, d1		25.3	16.3	16.1	32.3	24.6			29.6	17.3	14.1	
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		1.6	0.0	0.0	11.6	0.5			2.5	0.8	0.0	
Delay (s)		26.8	16.3	16.1	43.8	25.1			32.1	18.1	14.2	
Level of Service		C	B	B	D	C			C	B	B	
Approach Delay (s/veh)			22.2			30.4				20.0		
Approach LOS			C			C				C		
Intersection Summary												
HCM 2000 Control Delay (s/veh)			24.2			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			68.2			Sum of lost time (s)				19.0		
Intersection Capacity Utilization			51.4%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: Fowler Avenue & Church Avenue

Near Term plus Project PM Peak

11/14/2024



Movement	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	20	239	140
Future Volume (vph)	20	239	140
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.2	5.3	5.3
Lane Util. Factor	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1530
Flt Permitted	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1530
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	21	252	147
RTOR Reduction (vph)	0	0	105
Lane Group Flow (vph)	22	252	42
Confl. Peds. (#/hr)			4
Turn Type	Prot	NA	Perm
Protected Phases	1	6	
Permitted Phases			6
Actuated Green, G (s)	0.9	19.3	19.3
Effective Green, g (s)	0.9	19.3	19.3
Actuated g/C Ratio	0.01	0.28	0.28
Clearance Time (s)	4.2	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	23	991	432
v/s Ratio Prot	0.01	0.07	
v/s Ratio Perm			0.03
v/c Ratio	0.96	0.25	0.10
Uniform Delay, d1	33.6	18.9	18.0
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	166.5	0.1	0.1
Delay (s)	200.2	19.0	18.1
Level of Service	F	B	B
Approach Delay (s/veh)		28.2	
Approach LOS		C	
Intersection Summary			

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	58	107	33	2	79	3	41	155	6	14	80	41
Future Vol, veh/h	58	107	33	2	79	3	41	155	6	14	80	41
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	66	122	38	2	90	3	47	176	7	16	91	47
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	10.3	9.1	10.4	9.3
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	29%	2%	10%
Vol Thru, %	77%	54%	94%	59%
Vol Right, %	3%	17%	4%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	198	84	135
LT Vol	41	58	2	14
Through Vol	155	107	79	80
RT Vol	6	33	3	41
Lane Flow Rate	230	225	95	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.317	0.311	0.137	0.208
Departure Headway (Hd)	4.969	4.97	5.175	4.892
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	716	718	684	726
Service Time	3.046	3.047	3.268	2.976
HCM Lane V/C Ratio	0.321	0.313	0.139	0.211
HCM Control Delay, s/veh	10.4	10.3	9.1	9.3
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.4	1.3	0.5	0.8

HCM 7th Signalized Intersection Summary

3: Temperance Avenue & Hamilton Avenue

Near Term plus Project AM Peak
12/02/2024

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	239	128	40	346	0	472	63
Future Volume (veh/h)	239	128	40	346	0	472	63
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856		1856	1856
Adj Flow Rate, veh/h	269	144	45	389		530	71
Peak Hour Factor	0.89	0.89	0.89	0.89		0.89	0.89
Percent Heavy Veh, %	3	3	3	3		3	3
Cap, veh/h	378	337	133	1005		685	581
Arrive On Green	0.21	0.21	0.08	0.54		0.37	0.37
Sat Flow, veh/h	1767	1572	1767	1856		1856	1572
Grp Volume(v), veh/h	269	144	45	389		530	71
Grp Sat Flow(s),veh/h/ln	1767	1572	1767	1856		1856	1572
Q Serve(g_s), s	6.1	3.4	1.0	5.3		10.9	1.3
Cycle Q Clear(g_c), s	6.1	3.4	1.0	5.3		10.9	1.3
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	378	337	133	1005		685	581
V/C Ratio(X)	0.71	0.43	0.34	0.39		0.77	0.12
Avail Cap(c_a), veh/h	1508	1342	318	1301		1301	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	15.8	14.7	19.0	5.8		12.1	9.0
Incr Delay (d2), s/veh	2.5	0.9	1.5	0.2		1.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.1	0.4	1.0		3.4	0.3
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	18.3	15.6	20.5	6.0		14.0	9.1
LnGrp LOS	B	B	C	A		B	A
Approach Vol, veh/h	413			434		601	
Approach Delay, s/veh	17.3			7.5		13.4	
Approach LOS	B			A		B	
Timer - Assigned Phs		2		4		5 6	
Phs Duration (G+Y+Rc), s		28.8		14.6		7.5 21.3	
Change Period (Y+Rc), s		5.3		5.3		4.2 5.3	
Max Green Setting (Gmax), s		30.4		37.0		7.8 30.4	
Max Q Clear Time (g_c+l1), s		7.3		8.1		3.0 12.9	
Green Ext Time (p_c), s		2.1		1.2		0.0 3.1	
Intersection Summary							
HCM 7th Control Delay, s/veh			12.8				
HCM 7th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

HCM 7th Signalized Intersection Summary

7: Armstrong Avenue & Church Avenue

Near Term plus Project AM Peak
12/02/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	240	181	30	298	27	183	150	33	30	310	104
Future Volume (veh/h)	61	240	181	30	298	27	183	150	33	30	310	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	79	312	235	39	387	35	238	195	43	39	403	135
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	123	506	429	92	427	39	246	615	136	92	439	147
Arrive On Green	0.07	0.27	0.27	0.05	0.25	0.25	0.14	0.42	0.42	0.05	0.33	0.33
Sat Flow, veh/h	1767	1856	1572	1767	1677	152	1767	1472	325	1767	1330	445
Grp Volume(v), veh/h	79	312	235	39	0	422	238	0	238	39	0	538
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1828	1767	0	1797	1767	0	1775
Q Serve(g_s), s	4.3	14.6	12.7	2.1	0.0	22.2	13.3	0.0	8.8	2.1	0.0	28.9
Cycle Q Clear(g_c), s	4.3	14.6	12.7	2.1	0.0	22.2	13.3	0.0	8.8	2.1	0.0	28.9
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.18	1.00		0.25
Lane Grp Cap(c), veh/h	123	506	429	92	0	466	246	0	750	92	0	586
V/C Ratio(X)	0.64	0.62	0.55	0.43	0.00	0.91	0.97	0.00	0.32	0.43	0.00	0.92
Avail Cap(c_a), veh/h	139	575	487	139	0	554	246	0	750	139	0	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.9	31.5	30.8	45.5	0.0	35.8	42.4	0.0	19.4	45.5	0.0	31.9
Incr Delay (d2), s/veh	8.0	1.6	1.1	3.1	0.0	16.7	47.9	0.0	1.1	3.1	0.0	21.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.4	4.5	1.0	0.0	11.2	8.7	0.0	3.5	1.0	0.0	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.9	33.1	31.9	48.6	0.0	52.4	90.3	0.0	20.5	48.6	0.0	53.6
LnGrp LOS	D	C	C	D		D	F		C	D		D
Approach Vol, veh/h	626			461			476			577		
Approach Delay, s/veh	35.1			52.1			55.4			53.2		
Approach LOS	D			D			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	47.4	9.3	33.0	18.0	38.7	11.1	31.2				
Change Period (Y+Rc), s	4.2	6.0	4.2	* 6	4.2	* 6	4.2	6.0				
Max Green Setting (Gmax), s	7.8	38.0	7.8	* 31	13.8	* 33	7.8	30.0				
Max Q Clear Time (g_c+I1), s	4.1	10.8	4.1	16.6	15.3	30.9	6.3	24.2				
Green Ext Time (p_c), s	0.0	1.2	0.0	2.1	0.0	0.6	0.0	1.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	48.2											
HCM 7th LOS	D											
Notes												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 7th Signalized Intersection Summary 3: Temperance Avenue & Hamilton Avenue

Near Term plus Project PM Peak
12/02/2024

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	91	31	37	337	0	383	147
Future Volume (veh/h)	91	31	37	337	0	383	147
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856		1856	1856
Adj Flow Rate, veh/h	101	34	41	374		426	163
Peak Hour Factor	0.90	0.90	0.90	0.90		0.90	0.90
Percent Heavy Veh, %	3	3	3	3		3	3
Cap, veh/h	288	256	129	990		632	534
Arrive On Green	0.16	0.16	0.07	0.53		0.34	0.34
Sat Flow, veh/h	1767	1572	1767	1856		1856	1570
Grp Volume(v), veh/h	101	34	41	374		426	163
Grp Sat Flow(s),veh/h/ln	1767	1572	1767	1856		1856	1570
Q Serve(g_s), s	1.8	0.6	0.8	4.1		6.9	2.7
Cycle Q Clear(g_c), s	1.8	0.6	0.8	4.1		6.9	2.7
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	288	256	129	990		632	534
V/C Ratio(X)	0.35	0.13	0.32	0.38		0.67	0.30
Avail Cap(c_a), veh/h	1870	1664	394	1614		1614	1365
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	13.0	12.5	15.4	4.8		9.9	8.5
Incr Delay (d2), s/veh	0.7	0.2	1.4	0.2		1.3	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.3	0.5		1.8	0.6
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	13.7	12.7	16.8	5.0		11.1	8.8
LnGrp LOS	B	B	B	A		B	A
Approach Vol, veh/h	135			415		589	
Approach Delay, s/veh	13.5			6.2		10.5	
Approach LOS	B			A		B	
Timer - Assigned Phs	2		4		5	6	
Phs Duration (G+Y+Rc), s	24.0		11.0		6.8	17.2	
Change Period (Y+Rc), s	5.3		5.3		4.2	5.3	
Max Green Setting (Gmax), s	30.4		37.0		7.8	30.4	
Max Q Clear Time (g_c+l1), s	6.1		3.8		2.8	8.9	
Green Ext Time (p_c), s	2.0		0.4		0.0	2.9	
Intersection Summary							
HCM 7th Control Delay, s/veh			9.3				
HCM 7th LOS			A				
Notes							
User approved ignoring U-Turning movement.							

HCM 7th Signalized Intersection Summary

7: Armstrong Avenue & Church Avenue

Near Term plus Project PM Peak
12/02/2024

																								
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR												
Lane Configurations																								
Traffic Volume (veh/h)	58	107	33	2	79	3	41	155	6	14	80	41												
Future Volume (veh/h)	58	107	33	2	79	3	41	155	6	14	80	41												
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0												
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00												
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Work Zone On Approach	No			No			No			No														
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856												
Adj Flow Rate, veh/h	66	122	38	2	90	3	47	176	7	16	91	47												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88												
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3												
Cap, veh/h	174	494	419	8	307	10	137	401	16	56	208	107												
Arrive On Green	0.10	0.27	0.27	0.00	0.17	0.17	0.08	0.23	0.23	0.03	0.18	0.18												
Sat Flow, veh/h	1767	1856	1572	1767	1785	60	1767	1772	70	1767	1153	595												
Grp Volume(v), veh/h	66	122	38	2	0	93	47	0	183	16	0	138												
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1845	1767	0	1843	1767	0	1748												
Q Serve(g_s), s	1.5	2.2	0.8	0.0	0.0	1.9	1.1	0.0	3.7	0.4	0.0	3.0												
Cycle Q Clear(g_c), s	1.5	2.2	0.8	0.0	0.0	1.9	1.1	0.0	3.7	0.4	0.0	3.0												
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.04	1.00		0.34												
Lane Grp Cap(c), veh/h	174	494	419	8	0	317	137	0	417	56	0	315												
V/C Ratio(X)	0.38	0.25	0.09	0.26	0.00	0.29	0.34	0.00	0.44	0.29	0.00	0.44												
Avail Cap(c_a), veh/h	359	1188	1007	319	0	1108	319	0	1150	319	0	1119												
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00												
Uniform Delay (d), s/veh	18.3	12.5	11.9	21.5	0.0	15.6	18.9	0.0	14.4	20.5	0.0	15.8												
Incr Delay (d2), s/veh	1.4	0.3	0.1	17.5	0.0	0.5	1.5	0.0	0.7	2.8	0.0	1.0												
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.2	0.1	0.0	0.6	0.4	0.0	1.2	0.2	0.0	1.0												
Unsig. Movement Delay, s/veh																								
LnGrp Delay(d), s/veh	19.6	12.7	12.0	39.0	0.0	16.1	20.4	0.0	15.1	23.3	0.0	16.7												
LnGrp LOS	B	B	B	D		B	C		B	C		B												
Approach Vol, veh/h	226			95			230			154														
Approach Delay, s/veh	14.6			16.6			16.2			17.4														
Approach LOS	B			B			B			B														
Timer - Assigned Phs	1	2	3	4	5	6	7	8																
Phs Duration (G+Y+Rc), s	5.6	15.8	4.4	17.5	7.6	13.8	8.5	13.4																
Change Period (Y+Rc), s	4.2	6.0	4.2	* 6	4.2	* 6	4.2	6.0																
Max Green Setting (Gmax), s	7.8	27.0	7.8	* 28	7.8	* 28	8.8	26.0																
Max Q Clear Time (g_c+l1), s	2.4	5.7	2.0	4.2	3.1	5.0	3.5	3.9																
Green Ext Time (p_c), s	0.0	0.8	0.0	0.6	0.0	0.6	0.0	0.3																
Intersection Summary																								
HCM 7th Control Delay, s/veh				16.0																				
HCM 7th LOS				B																				
Notes																								
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.																								

Intersection: 1: Fowler Avenue & Hamilton Avenue

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	573	200	32	91
Average Queue (ft)	197	123	2	38
95th Queue (ft)	427	236	15	72
Link Distance (ft)	2565		1307	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		250
Storage Blk Time (%)	55	6		
Queuing Penalty (veh)	117	8		

Intersection: 2: Armstrong Avenue & Hamilton Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	48	111	68	50	50	46	73	159	60	64	79	39
Average Queue (ft)	18	35	34	24	21	20	35	47	29	21	42	11
95th Queue (ft)	42	64	55	44	43	42	58	94	50	46	75	28
Link Distance (ft)		2565			1949			846			1262	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	175		175	200		200	150		150	200		100
Storage Blk Time (%)								0				
Queuing Penalty (veh)								1				

Intersection: 3: Temperance Avenue & Hamilton Avenue

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	159	66	51	198	238	31
Average Queue (ft)	88	33	24	74	120	18
95th Queue (ft)	140	61	50	138	193	39
Link Distance (ft)		462		475	1255	1255
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	190		200			
Storage Blk Time (%)				0	0	
Queuing Penalty (veh)				0	0	

Intersection: 4: Armstrong Avenue & California Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	R	UL	T	R	L	L
Maximum Queue (ft)	66	46	70	66	42	41	28	70
Average Queue (ft)	31	14	18	34	6	17	7	6
95th Queue (ft)	61	39	43	56	23	33	25	30
Link Distance (ft)	1964			794		794		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250	120		250			70	230
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 5: Temperance Avenue & California Avenue

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	107	122	27
Average Queue (ft)	39	38	3
95th Queue (ft)	76	83	16
Link Distance (ft)	1680	1680	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	250		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Fowler Avenue & Church Avenue

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	UL	T	T	R	L	TR	UL	T	R	UL	T	T
Maximum Queue (ft)	170	126	43	87	203	237	230	321	64	160	214	146
Average Queue (ft)	79	61	11	39	87	98	130	138	17	78	116	85
95th Queue (ft)	147	110	34	69	147	176	198	248	41	136	186	155
Link Distance (ft)		2479	2479			915		1067	1067		1880	1880
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215			115	200		240			240		
Storage Blk Time (%)					1		0	1				
Queuing Penalty (veh)					2		0	2				

Intersection: 6: Fowler Avenue & Church Avenue

Movement	SB
Directions Served	R
Maximum Queue (ft)	73
Average Queue (ft)	38
95th Queue (ft)	64
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	170
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Armstrong Avenue & Church Avenue

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	140	273	116	97	265	273	257	74	395
Average Queue (ft)	49	119	59	28	166	129	85	31	177
95th Queue (ft)	106	206	100	69	265	231	195	61	284
Link Distance (ft)		1588			2489		2616		632
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250	250		250		250	
Storage Blk Time (%)		1			2	1	0		3
Queuing Penalty (veh)		1			0	1	0		1

Network Summary

Network wide Queuing Penalty: 134

Intersection: 1: Fowler Avenue & Hamilton Avenue

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	113	74	52	117
Average Queue (ft)	33	46	4	52
95th Queue (ft)	76	73	22	92
Link Distance (ft)	2565		1307	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		250
Storage Blk Time (%)	1			
Queuing Penalty (veh)	2			

Intersection: 2: Armstrong Avenue & Hamilton Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	51	94	74	50	48	38	47	97	45	25	45	35
Average Queue (ft)	8	26	34	25	20	13	28	42	17	15	29	7
95th Queue (ft)	30	57	54	44	44	34	40	68	36	32	47	25
Link Distance (ft)		2565			1949			846			1262	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	175		175	200		200	150		150	200		100
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Temperance Avenue & Hamilton Avenue

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	135	20	72	182	225	79
Average Queue (ft)	39	5	22	60	88	29
95th Queue (ft)	84	16	53	139	165	59
Link Distance (ft)		462		475	1255	1255
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	190		200			
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

Intersection: 4: Armstrong Avenue & California Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	R	UL	T	R	L	L	R
Maximum Queue (ft)	67	24	44	43	57	38	44	47	16
Average Queue (ft)	26	11	14	15	17	11	6	12	1
95th Queue (ft)	51	30	32	37	43	25	25	33	7
Link Distance (ft)	1970				794	794			
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		120	250			70	230	115
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 5: Temperance Avenue & California Avenue

Movement	EB	EB	NB	SB
Directions Served	L	R	L	U
Maximum Queue (ft)	63	20	88	26
Average Queue (ft)	24	6	9	1
95th Queue (ft)	48	20	40	9
Link Distance (ft)	1672	1672		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			250	250
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Fowler Avenue & Church Avenue

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	UL	T	T	R	L	TR	UL	T	R	UL	T	T
Maximum Queue (ft)	176	64	22	78	67	80	106	178	20	76	117	103
Average Queue (ft)	81	31	2	17	19	41	41	94	9	20	65	26
95th Queue (ft)	133	59	13	40	48	76	91	161	21	60	110	70
Link Distance (ft)		2479	2479			909		1067	1067		1880	1880
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215			115	200		240			240		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: Fowler Avenue & Church Avenue

Movement	SB
Directions Served	R
Maximum Queue (ft)	55
Average Queue (ft)	33
95th Queue (ft)	51
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	170
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Armstrong Avenue & Church Avenue

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	75	97	119	25	74	47	107	31	94
Average Queue (ft)	34	42	18	2	37	18	41	12	38
95th Queue (ft)	67	80	56	15	67	42	93	34	73
Link Distance (ft)		1594			2489		2616		632
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250	250		250		250	
Storage Blk Time (%)									
Queuing Penalty (veh)									

Network Summary

Network wide Queuing Penalty: 2

HCS7 Two-Lane Highway Report

Project Information

Analyst	JLB Traffic Engineering, Inc.	Date	12/3/2024
Agency	JLB Traffic Engineering, Inc.	Analysis Year	Near Term plus Project Traffic Conditions
Jurisdiction	City of Fresno	Time Analyzed	AM Peak
Project Description	Armstrong Avenue between Geary Avenue and Church Avenue	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	541	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.82	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.32

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient	3.55202	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.33477	PF Power Coefficient	0.74803
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	52.7

Vehicle Results

Average Speed, mi/h	52.7	Percent Followers, %	57.0
Segment Travel Time, minutes	1.14	Follower Density, followers/mi/ln	5.9
Vehicle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	5.9	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	JLB Traffic Engineering, Inc.	Date	12/3/2024
Agency	JLB Traffic Engineering, Inc.	Analysis Year	Near Term plus Project Traffic Conditions
Jurisdiction	City of Fresno	Time Analyzed	PM Peak
Project Description	Armstrong Avenue between Geary Avenue and Church Avenue	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	254	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient	3.55202	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.33477	PF Power Coefficient	0.74803
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	53.6

Vehicle Results

Average Speed, mi/h	53.6	Percent Followers, %	38.1
Segment Travel Time, minutes	1.12	Follower Density, followers/mi/ln	1.8
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.8	A

Appendix I: Cumulative Year 2046 plus Project Traffic Conditions



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516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

A p p | I

HCM 7th TWSC
1: Fowler Avenue & Hamilton Avenue

Cumulative Year 2046 plus Project AM Peak

11/22/2024

Intersection						
Int Delay, s/veh	6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	148	172	702	108	94	495
Future Vol, veh/h	148	172	702	108	94	495
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	153	177	724	111	97	510

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1486	781	0	0	837
Stage 1	781	-	-	-	-
Stage 2	704	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	~ 136	393	-	-	793
Stage 1	449	-	-	-	-
Stage 2	489	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 120	392	-	-	791
Mov Cap-2 Maneuver	255	-	-	-	-
Stage 1	449	-	-	-	-
Stage 2	429	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v29.27		0	1.63
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	255	392	791
HCM Lane V/C Ratio	-	-	0.599	0.452	0.122
HCM Control Delay (s/veh)	-	-	38.3	21.5	10.2
HCM Lane LOS	-	-	E	C	B
HCM 95th %tile Q(veh)	-	-	3.5	2.3	0.4

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 7th AWSC
2: Armstrong Avenue & Hamilton Avenue

Cumulative Year 2046 plus Project AM Peak

11/22/2024

Intersection												
Intersection Delay, s/veh	12.6											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	120	77	60	69	68	100	203	94	40	191	27
Future Vol, veh/h	31	120	77	60	69	68	100	203	94	40	191	27
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	34	130	84	65	75	74	109	221	102	43	208	29
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay, s/veh	11.8	11.4	13	13.8
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	203	94	31	120	77	60	69	68	40	191
LT Vol	100	0	0	31	0	0	60	0	0	40	0
Through Vol	0	203	0	0	120	0	0	69	0	0	191
RT Vol	0	0	94	0	0	77	0	0	68	0	0
Lane Flow Rate	109	221	102	34	130	84	65	75	74	43	208
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.224	0.424	0.177	0.074	0.267	0.155	0.144	0.155	0.138	0.093	0.414
Departure Headway (Hd)	7.424	6.924	6.224	7.866	7.366	6.666	7.945	7.445	6.745	7.681	7.181
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	487	523	580	456	488	538	452	482	531	467	502
Service Time	5.124	4.624	3.924	5.605	5.105	4.405	5.685	5.185	4.485	5.417	4.917
HCM Lane V/C Ratio	0.224	0.423	0.176	0.075	0.266	0.156	0.144	0.156	0.139	0.092	0.414
HCM Control Delay, s/veh	12.3	14.6	10.3	11.2	12.8	10.6	12	11.6	10.6	11.2	14.9
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.9	2.1	0.6	0.2	1.1	0.5	0.5	0.5	0.5	0.3	2

HCM 7th AWSC
3: Temperance Avenue & Hamilton Avenue

Cumulative Year 2046 plus Project AM Peak

11/22/2024

Intersection

Intersection Delay, s/veh 65.2

Intersection LOS F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	261	112	36	916	1148	86
Future Vol, veh/h	261	112	36	916	1148	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	284	122	39	996	1248	93
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh 25.3		437.1	619.9
HCM LOS	D	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	916	261	112	1148	86
LT Vol	36	0	261	0	0	0
Through Vol	0	916	0	0	1148	0
RT Vol	0	0	0	112	0	86
Lane Flow Rate	39	996	284	122	1248	93
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.082	1.946	0.645	0.236	2.425	0.163
Departure Headway (Hd)	9.063	8.539	10.34	9.025	8.069	7.34
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	398	438	352	401	462	492
Service Time	6.763	6.239	8.04	6.725	5.769	5.04
HCM Lane V/C Ratio	0.098	2.274	0.807	0.304	2.701	0.189
HCM Control Delay, s/veh	12.6	453.8	30	14.5	665.5	11.5
HCM Lane LOS	B	F	D	B	F	B
HCM 95th-tile Q	0.3	55.4	4.3	0.9	84.3	0.6

HCM 7th TWSC
4: Armstrong Avenue & California Avenue

Cumulative Year 2046 plus Project AM Peak

11/22/2024

Intersection													
Int Delay, s/veh	8.2												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	25	105	37	7	107	54	78	18	220	76	31	271	11
Future Vol, veh/h	25	105	37	7	107	54	78	18	220	76	31	271	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	250	-	120	-	250	-	0	70	-	150	230	-	115
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	27	114	40	8	116	59	85	20	239	83	34	295	12

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	550	723	147	0	550	652	120	307	0	0	322	0	0
Stage 1	362	362	-	0	278	278	-	-	-	-	-	-	-
Stage 2	188	361	-	0	272	374	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	-	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	-	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	416	349	870	0	416	384	906	1244	-	-	1228	-	-
Stage 1	626	621	-	0	702	676	-	-	-	-	-	-	-
Stage 2	793	622	-	0	708	614	-	-	-	-	-	-	-
Platoon blocked, %				-					-	-		-	-
Mov Cap-1 Maneuver	305	334	870	0	254	367	906	1244	-	-	1228	-	-
Mov Cap-2 Maneuver	305	334	-	0	254	367	-	-	-	-	-	-	-
Stage 1	609	604	-	0	691	666	-	-	-	-	-	-	-
Stage 2	645	612	-	0	533	597	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v18.12		20.56	0.46	0.79
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1244	-	-	305	334	870	254	367	906	1228	-	-
HCM Lane V/C Ratio	0.016	-	-	0.089	0.342	0.046	0.459	0.16	0.094	0.027	-	-
HCM Control Delay (s/veh)	7.9	-	-	17.9	21.3	9.3	30.7	16.7	9.4	8	-	-
HCM Lane LOS	A	-	-	C	C	A	D	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1.5	0.1	2.2	0.6	0.3	0.1	-	-

HCM 7th TWSC
5: Temperance Avenue & California Avenue

Cumulative Year 2046 plus Project AM Peak

11/22/2024

Intersection							
Int Delay, s/veh	103.6						
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	142	105	10	810	2	1171	58
Future Vol, veh/h	142	105	10	810	2	1171	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	0	250	-	250	-	250
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	165	122	12	942	2	1362	67

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2327	1362	1429
Stage 1	1362	-	-
Stage 2	965	-	-
Critical Hdwy	6.43	6.23	4.13
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.43	-	-
Follow-up Hdwy	3.527	3.327	2.227
Pot Cap-1 Maneuver	~ 41	180	473
Stage 1	237	-	-
Stage 2	368	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 40	180	473
Mov Cap-2 Maneuver	~ 40	-	-
Stage 1	231	-	-
Stage 2	368	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	963.26	0.16	
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBU	SBT	SBR
Capacity (veh/h)	473	-	40	180	-	-	-
HCM Lane V/C Ratio	0.025	-	4.167	0.677	-	-	-
HCM Control Delay (s/veh)	12.8	\$	1631.9	59	-	-	-
HCM Lane LOS	B	-	F	F	-	-	-
HCM 95th %tile Q(veh)	0.1	-	19	4	-	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM Signalized Intersection Capacity Analysis Cumulative Year 2046 plus Project AM Peak

6: Fowler Avenue & Church Avenue

11/22/2024

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Traffic Volume (vph)	10	121	165	160	130	113	75	47	194	415	102	1
Future Volume (vph)	10	121	165	160	130	113	75	47	194	415	102	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Lane Util. Factor		1.00	0.95	1.00	1.00	1.00			1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	0.99	1.00	1.00			1.00	1.00	0.98	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Frt		1.00	1.00	0.85	1.00	0.94			1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (prot)		1752	3505	1548	1752	1735			1752	1845	1535	
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (perm)		1752	3505	1548	1752	1735			1752	1845	1535	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	11	133	181	176	143	124	82	52	213	456	112	1
RTOR Reduction (vph)	0	0	0	147	0	24	0	0	0	0	74	0
Lane Group Flow (vph)	0	144	181	29	143	182	0	0	265	456	38	0
Confl. Peds. (#/hr)				1	1				27		1	
Turn Type	Prot	Prot	NA	Perm	Prot	NA		Prot	Prot	NA	Perm	Prot
Protected Phases	7	7	4		3	8		5	5	2		1
Permitted Phases				4							2	
Actuated Green, G (s)		9.2	13.4	13.4	12.3	16.1			18.0	27.1	27.1	
Effective Green, g (s)		9.2	13.4	13.4	12.3	16.1			18.0	27.1	27.1	
Actuated g/C Ratio		0.11	0.17	0.17	0.15	0.20			0.22	0.33	0.33	
Clearance Time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)		199	580	256	266	345			389	618	514	
v/s Ratio Prot		c0.08	0.05		0.08	c0.10			0.15	c0.25		
v/s Ratio Perm				0.02							0.02	
v/c Ratio		0.72	0.31	0.11	0.54	0.53			0.68	0.74	0.07	
Uniform Delay, d1		34.6	29.7	28.7	31.7	29.0			28.8	23.8	18.3	
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		12.2	0.3	0.2	2.1	1.5			4.9	4.6	0.1	
Delay (s)		46.9	30.0	28.9	33.8	30.5			33.7	28.4	18.4	
Level of Service		D	C	C	C	C			C	C	B	
Approach Delay (s/veh)			34.5			31.8				28.7		
Approach LOS			C			C				C		
Intersection Summary												
HCM 2000 Control Delay (s/veh)			30.5			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			80.9			Sum of lost time (s)			19.0			
Intersection Capacity Utilization			68.8%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 6: Fowler Avenue & Church Avenue

Cumulative Year 2046 plus Project AM Peak
11/22/2024

			
Movement	SBL	SBT	SBR
Lane Configurations		 	
Traffic Volume (vph)	94	444	117
Future Volume (vph)	94	444	117
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.2	5.3	5.3
Lane Util. Factor	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1487
Flt Permitted	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1487
Peak-hour factor, PHF	0.91	0.91	0.91
Adj. Flow (vph)	103	488	129
RTOR Reduction (vph)	0	0	99
Lane Group Flow (vph)	104	488	30
Confl. Peds. (#/hr)	1		27
Turn Type	Prot	NA	Perm
Protected Phases	1	6	
Permitted Phases			6
Actuated Green, G (s)	9.5	18.6	18.6
Effective Green, g (s)	9.5	18.6	18.6
Actuated g/C Ratio	0.12	0.23	0.23
Clearance Time (s)	4.2	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	205	805	341
v/s Ratio Prot	0.06	c0.14	
v/s Ratio Perm			0.02
v/c Ratio	0.51	0.61	0.09
Uniform Delay, d1	33.5	27.9	24.5
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	2.0	1.3	0.1
Delay (s)	35.5	29.2	24.6
Level of Service	D	C	C
Approach Delay (s/veh)		29.3	
Approach LOS		C	
Intersection Summary			

HCM 7th AWSC
7: Armstrong Avenue & Church Avenue

Cumulative Year 2046 plus Project AM Peak

11/22/2024

Intersection

Intersection Delay, s/veh 234.4

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	74	288	187	30	367	39	192	145	33	34	281	99
Future Vol, veh/h	74	288	187	30	367	39	192	145	33	34	281	99
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	86	335	217	35	427	45	223	169	38	40	327	115
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 17.7		215.4	145	184.1
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	52%	13%	7%	8%
Vol Thru, %	39%	52%	84%	68%
Vol Right, %	9%	34%	9%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	370	549	436	414
LT Vol	192	74	30	34
Through Vol	145	288	367	281
RT Vol	33	187	39	99
Lane Flow Rate	430	638	507	481
Geometry Grp	1	1	1	1
Degree of Util (X)	1.159	1.679	1.353	1.273
Departure Headway (Hd)	13.889	11.985	13.207	13.208
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	267	313	279	279
Service Time	11.889	9.985	11.207	11.208
HCM Lane V/C Ratio	1.61	2.038	1.817	1.724
HCM Control Delay, s/veh	145	347.7	215.4	184.1
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	13.5	31.5	19.2	17

HCM 7th TWSC
1: Fowler Avenue & Hamilton Avenue

Cumulative Year 2046 plus Project PM Peak

11/22/2024

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	130	557	82	176	610
Future Vol, veh/h	52	130	557	82	176	610
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	57	141	605	89	191	663

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1696	651	0	0	695	0
Stage 1	650	-	-	-	-	-
Stage 2	1046	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	101	467	-	-	896	-
Stage 1	518	-	-	-	-	-
Stage 2	337	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	80	466	-	-	896	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	518	-	-	-	-	-
Stage 2	265	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v20.45		0	2.26
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	192 466	896	-
HCM Lane V/C Ratio	-	-	0.295 0.303	0.213	-
HCM Control Delay (s/veh)	-	-	31.5 16	10.1	-
HCM Lane LOS	-	-	D C	B	-
HCM 95th %tile Q(veh)	-	-	1.2 1.3	0.8	-

HCM 7th AWSC
2: Armstrong Avenue & Hamilton Avenue

Cumulative Year 2046 plus Project PM Peak

11/22/2024

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	90	58	98	50	25	49	181	65	34	140	20
Future Vol, veh/h	16	90	58	98	50	25	49	181	65	34	140	20
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	17	98	63	107	54	27	53	197	71	37	152	22
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay, s/veh	10.2	10.8	11.2	11.1
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	181	65	16	90	58	98	50	25	34	140
LT Vol	49	0	0	16	0	0	98	0	0	34	0
Through Vol	0	181	0	0	90	0	0	50	0	0	140
RT Vol	0	0	65	0	0	58	0	0	25	0	0
Lane Flow Rate	53	197	71	17	98	63	107	54	27	37	152
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.1	0.341	0.109	0.034	0.18	0.103	0.209	0.099	0.044	0.071	0.273
Departure Headway (Hd)	6.74	6.24	5.54	7.107	6.607	5.907	7.061	6.561	5.861	6.948	6.448
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	531	574	645	503	542	605	507	545	609	515	555
Service Time	4.489	3.989	3.289	4.863	4.363	3.663	4.816	4.316	3.616	4.7	4.2
HCM Lane V/C Ratio	0.1	0.343	0.11	0.034	0.181	0.104	0.211	0.099	0.044	0.072	0.274
HCM Control Delay, s/veh	10.2	12.2	9	10.1	10.8	9.3	11.7	10	8.9	10.2	11.6
HCM Lane LOS	B	B	A	B	B	A	B	A	A	B	B
HCM 95th-tile Q	0.3	1.5	0.4	0.1	0.7	0.3	0.8	0.3	0.1	0.2	1.1

HCM 7th AWSC
3: Temperance Avenue & Hamilton Avenue

Cumulative Year 2046 plus Project PM Peak

11/22/2024

Intersection

Intersection Delay, s/veh 408.9

Intersection LOS F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	142	34	39	1029	1117	179
Future Vol, veh/h	142	34	39	1029	1117	179
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	154	37	42	1118	1214	195
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh 6.9		439.3	437.1
HCM LOS	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	1029	142	34	1117	179
LT Vol	39	0	142	0	0	0
Through Vol	0	1029	0	0	1117	0
RT Vol	0	0	0	34	0	179
Lane Flow Rate	42	1118	154	37	1214	195
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.08	1.958	0.351	0.072	2.072	0.294
Departure Headway (Hd)	7.805	7.292	9.982	8.686	7.019	6.299
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	462	514	363	415	534	574
Service Time	5.505	4.992	7.682	6.386	4.719	3.999
HCM Lane V/C Ratio	0.091	2.175	0.424	0.089	2.273	0.34
HCM Control Delay, s/veh	11.2	455.5	18	12.1	505.3	11.6
HCM Lane LOS	B	F	C	B	F	B
HCM 95th-tile Q	0.3	64.7	1.5	0.2	74.1	1.2

HCM 7th TWSC
4: Armstrong Avenue & California Avenue

Cumulative Year 2046 plus Project PM Peak

11/22/2024

Intersection													
Int Delay, s/veh	5.9												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	22	28	24	1	27	105	46	33	158	28	51	136	42
Future Vol, veh/h	22	28	24	1	27	105	46	33	158	28	51	136	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	250	-	120	-	250	-	0	70	-	150	230	-	115
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	23	29	25	1	28	108	47	34	163	29	53	140	43

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	449	506	70	0	422	521	82	184	0	0	193	0	0
Stage 1	245	245	-	0	232	232	-	-	-	-	-	-	-
Stage 2	204	261	-	0	190	289	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	-	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	-	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	491	465	975	0	514	456	957	1382	-	-	1371	-	-
Stage 1	734	699	-	0	747	709	-	-	-	-	-	-	-
Stage 2	776	689	-	0	791	669	-	-	-	-	-	-	-
Platoon blocked, %				-					-	-		-	-
Mov Cap-1 Maneuver	332	436	975	0	440	428	956	1382	-	-	1369	-	-
Mov Cap-2 Maneuver	332	436	-	0	440	428	-	-	-	-	-	-	-
Stage 1	706	673	-	0	728	691	-	-	-	-	-	-	-
Stage 2	607	671	-	0	710	644	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v13.03		13.98	1.16	1.72
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1382	-	-	332	436	975	440	428	956	1369	-	-
HCM Lane V/C Ratio	0.025	-	-	0.068	0.066	0.025	0.063	0.253	0.05	0.038	-	-
HCM Control Delay (s/veh)	7.7	-	-	16.6	13.8	8.8	13.7	16.2	9	7.7	-	-
HCM Lane LOS	A	-	-	C	B	A	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.2	0.1	0.2	1	0.2	0.1	-	-

HCM 7th TWSC
5: Temperance Avenue & California Avenue

Cumulative Year 2046 plus Project PM Peak

11/22/2024

Intersection							
Int Delay, s/veh	14.5						
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱	↰
Traffic Vol, veh/h	61	12	28	1007	1	983	168
Future Vol, veh/h	61	12	28	1007	1	983	168
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	0	250	-	250	-	250
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	68	13	31	1119	1	1092	187

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2273	1092	1279
Stage 1	1092	-	-
Stage 2	1181	-	-
Critical Hdwy	6.43	6.23	4.13
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.43	-	-
Follow-up Hdwy	3.527	3.327	2.227
Pot Cap-1 Maneuver	~ 44	260	539
Stage 1	320	-	-
Stage 2	290	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	~ 41	260	539
Mov Cap-2 Maneuver	~ 41	-	-
Stage 1	302	-	-
Stage 2	290	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	442.94	0.33	
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBU	SBT	SBR
Capacity (veh/h)	539	-	41	260	-	-	-
HCM Lane V/C Ratio	0.058	-	1.637	0.051	-	-	-
HCM Control Delay (s/veh)	12.1	-	526.2	19.6	-	-	-
HCM Lane LOS	B	-	F	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	7	0.2	-	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM Signalized Intersection Capacity Analysis Cumulative Year 2046 plus Project PM Peak

6: Fowler Avenue & Church Avenue

11/22/2024

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Traffic Volume (vph)	6	155	76	47	38	61	29	18	65	368	46	1
Future Volume (vph)	6	155	76	47	38	61	29	18	65	368	46	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Lane Util. Factor		1.00	0.95	1.00	1.00	1.00			1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Frt		1.00	1.00	0.85	1.00	0.95			1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (prot)		1752	3505	1568	1752	1754			1752	1845	1568	
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	
Satd. Flow (perm)		1752	3505	1568	1752	1754			1752	1845	1568	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	163	80	49	40	64	31	19	68	387	48	1
RTOR Reduction (vph)	0	0	0	33	0	20	0	0	0	0	31	0
Lane Group Flow (vph)	0	169	80	16	40	75	0	0	87	387	17	0
Confl. Peds. (#/hr)									4			
Turn Type	Prot	Prot	NA	Perm	Prot	NA		Prot	Prot	NA	Perm	Prot
Protected Phases	7	7	4		3	8		5	5	2		1
Permitted Phases				4							2	
Actuated Green, G (s)		12.6	22.2	22.2	2.4	11.6			6.0	24.2	24.2	
Effective Green, g (s)		12.6	22.2	22.2	2.4	11.6			6.0	24.2	24.2	
Actuated g/C Ratio		0.18	0.32	0.32	0.03	0.17			0.09	0.35	0.35	
Clearance Time (s)		4.2	4.9	4.9	4.2	5.3			4.2	5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)		316	1114	498	60	291			150	639	543	
v/s Ratio Prot		c0.10	0.02		0.02	c0.04			c0.05	c0.21		
v/s Ratio Perm				0.01							0.01	
v/c Ratio		0.53	0.07	0.03	0.67	0.26			0.58	0.61	0.03	
Uniform Delay, d1		25.9	16.6	16.4	33.3	25.3			30.7	18.9	15.1	
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2		1.7	0.0	0.0	24.5	0.5			5.4	1.6	0.0	
Delay (s)		27.7	16.6	16.4	57.8	25.8			36.0	20.5	15.1	
Level of Service		C	B	B	E	C			D	C	B	
Approach Delay (s/veh)			22.9			35.3				22.6		
Approach LOS			C			D				C		
Intersection Summary												
HCM 2000 Control Delay (s/veh)			22.9			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			69.8			Sum of lost time (s)				19.0		
Intersection Capacity Utilization			53.5%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 6: Fowler Avenue & Church Avenue

Cumulative Year 2046 plus Project PM Peak
11/22/2024



Movement	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	20	262	145
Future Volume (vph)	20	262	145
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.2	5.3	5.3
Lane Util. Factor	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1530
Flt Permitted	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1530
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	21	276	153
RTOR Reduction (vph)	0	0	108
Lane Group Flow (vph)	22	276	45
Confl. Peds. (#/hr)			4
Turn Type	Prot	NA	Perm
Protected Phases	1	6	
Permitted Phases			6
Actuated Green, G (s)	2.4	20.6	20.6
Effective Green, g (s)	2.4	20.6	20.6
Actuated g/C Ratio	0.03	0.30	0.30
Clearance Time (s)	4.2	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	60	1034	451
v/s Ratio Prot	0.01	0.08	
v/s Ratio Perm			0.03
v/c Ratio	0.37	0.27	0.10
Uniform Delay, d1	33.0	18.8	17.9
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	3.8	0.1	0.1
Delay (s)	36.7	19.0	18.0
Level of Service	D	B	B
Approach Delay (s/veh)		19.5	
Approach LOS		B	
Intersection Summary			

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	59	127	35	2	96	7	43	130	6	18	81	41
Future Vol, veh/h	59	127	35	2	96	7	43	130	6	18	81	41
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	66	141	39	2	107	8	48	144	7	20	90	46
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	9.3	10.2	9.4
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	27%	2%	13%
Vol Thru, %	73%	57%	91%	58%
Vol Right, %	3%	16%	7%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	179	221	105	140
LT Vol	43	59	2	18
Through Vol	130	127	96	81
RT Vol	6	35	7	41
Lane Flow Rate	199	246	117	156
Geometry Grp	1	1	1	1
Degree of Util (X)	0.281	0.337	0.166	0.215
Departure Headway (Hd)	5.078	4.939	5.12	4.967
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	700	719	692	714
Service Time	3.165	3.024	3.219	3.058
HCM Lane V/C Ratio	0.284	0.342	0.169	0.218
HCM Control Delay, s/veh	10.2	10.6	9.3	9.4
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.2	1.5	0.6	0.8

HCM 7th Signalized Intersection Summary

3: Temperance Avenue & Hamilton Avenue

Cumulative Year 2046 plus Project AM Peak

11/25/2024



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations						 	
Traffic Volume (veh/h)	261	112	36	916	0	1148	86
Future Volume (veh/h)	261	112	36	916	0	1148	86
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856		1856	1856
Adj Flow Rate, veh/h	284	122	39	996		1248	93
Peak Hour Factor	0.92	0.92	0.92	0.92		0.92	0.92
Percent Heavy Veh, %	3	3	3	3		3	3
Cap, veh/h	325	289	489	1339		1436	641
Arrive On Green	0.18	0.18	0.28	0.72		0.41	0.41
Sat Flow, veh/h	1767	1572	1767	1856		3618	1572
Grp Volume(v), veh/h	284	122	39	996		1248	93
Grp Sat Flow(s),veh/h/ln	1767	1572	1767	1856		1763	1572
Q Serve(g_s), s	17.5	7.7	1.8	36.2		36.4	4.2
Cycle Q Clear(g_c), s	17.5	7.7	1.8	36.2		36.4	4.2
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	325	289	489	1339		1436	641
V/C Ratio(X)	0.87	0.42	0.08	0.74		0.87	0.15
Avail Cap(c_a), veh/h	584	519	489	1339		1649	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	44.4	40.4	30.0	9.4		30.4	20.9
Incr Delay (d2), s/veh	7.3	1.0	0.1	3.8		7.4	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	7.0	0.8	12.4		15.8	1.6
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	51.7	41.4	30.0	13.2		37.8	21.4
LnGrp LOS	D	D	C	B		D	C
Approach Vol, veh/h	406			1035		1341	
Approach Delay, s/veh	48.6			13.8		36.7	
Approach LOS	D			B		D	
Timer - Assigned Phs	2		4		5	6	
Phs Duration (G+Y+Rc), s	86.1		25.9		35.2	50.9	
Change Period (Y+Rc), s	5.3		5.3		4.2	5.3	
Max Green Setting (Gmax), s	52.4		37.0		7.8	52.4	
Max Q Clear Time (g_c+l1), s	38.2		19.5		3.8	38.4	
Green Ext Time (p_c), s	6.2		1.1		0.0	7.3	
Intersection Summary							
HCM 7th Control Delay, s/veh			29.9				
HCM 7th LOS			C				
Notes							
User approved ignoring U-Turning movement.							

HCM 7th Signalized Intersection Summary 5: Temperance Avenue & California Avenue

Cumulative Year 2046 plus Project AM Peak

11/25/2024

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	142	105	10	810	2	1171	58
Future Volume (veh/h)	142	105	10	810	2	1171	58
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856		1856	1856
Adj Flow Rate, veh/h	165	122	12	942		1362	67
Peak Hour Factor	0.86	0.86	0.86	0.86		0.86	0.86
Percent Heavy Veh, %	3	3	3	3		3	3
Cap, veh/h	206	183	38	1476		2595	1157
Arrive On Green	0.12	0.12	0.02	0.80		0.74	0.74
Sat Flow, veh/h	1767	1572	1767	1856		3618	1572
Grp Volume(v), veh/h	165	122	12	942		1362	67
Grp Sat Flow(s),veh/h/ln	1767	1572	1767	1856		1763	1572
Q Serve(g_s), s	10.2	8.3	0.7	23.6		18.6	1.3
Cycle Q Clear(g_c), s	10.2	8.3	0.7	23.6		18.6	1.3
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	206	183	38	1476		2595	1157
V/C Ratio(X)	0.80	0.67	0.31	0.64		0.52	0.06
Avail Cap(c_a), veh/h	584	519	123	1476		2595	1157
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	48.2	47.4	54.0	4.8		6.4	4.1
Incr Delay (d2), s/veh	7.1	4.1	4.6	2.1		0.8	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	7.4	0.4	6.3		5.4	0.4
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	55.3	51.5	58.5	6.9		7.1	4.2
LnGrp LOS	E	D	E	A		A	A
Approach Vol, veh/h	287			954		1429	
Approach Delay, s/veh	53.7			7.5		7.0	
Approach LOS	D			A		A	
Timer - Assigned Phs	2		4		5	6	
Phs Duration (G+Y+Rc), s	94.4		17.6		6.6	87.7	
Change Period (Y+Rc), s	5.3		4.6		4.2	5.3	
Max Green Setting (Gmax), s	53.1		37.0		7.8	53.1	
Max Q Clear Time (g_c+I1), s	25.6		12.2		2.7	20.6	
Green Ext Time (p_c), s	7.6		0.8		0.0	12.1	
Intersection Summary							
HCM 7th Control Delay, s/veh			12.2				
HCM 7th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

HCM 7th Signalized Intersection Summary

7: Armstrong Avenue & Church Avenue

Cumulative Year 2046 plus Project AM Peak

11/25/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	288	187	30	367	39	192	145	33	34	281	99
Future Volume (veh/h)	74	288	187	30	367	39	192	145	33	34	281	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	86	335	217	35	427	45	223	169	38	40	327	115
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	144	584	495	92	471	50	189	481	108	100	365	128
Arrive On Green	0.08	0.31	0.31	0.05	0.29	0.29	0.11	0.33	0.33	0.06	0.28	0.28
Sat Flow, veh/h	1767	1856	1572	1767	1650	174	1767	1466	330	1767	1311	461
Grp Volume(v), veh/h	86	335	217	35	0	472	223	0	207	40	0	442
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1824	1767	0	1796	1767	0	1773
Q Serve(g_s), s	3.9	12.4	9.0	1.6	0.0	20.5	8.8	0.0	7.2	1.8	0.0	19.7
Cycle Q Clear(g_c), s	3.9	12.4	9.0	1.6	0.0	20.5	8.8	0.0	7.2	1.8	0.0	19.7
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.18	1.00		0.26
Lane Grp Cap(c), veh/h	144	584	495	92	0	521	189	0	590	100	0	493
V/C Ratio(X)	0.60	0.57	0.44	0.38	0.00	0.91	1.18	0.00	0.35	0.40	0.00	0.90
Avail Cap(c_a), veh/h	167	618	523	167	0	592	189	0	596	167	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	23.6	22.4	37.7	0.0	28.3	36.8	0.0	21.0	37.5	0.0	28.6
Incr Delay (d2), s/veh	4.3	1.2	0.6	2.6	0.0	16.4	122.5	0.0	0.4	2.5	0.0	14.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	5.1	3.0	0.7	0.0	10.2	9.9	0.0	2.7	0.8	0.0	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.8	24.7	23.0	40.3	0.0	44.7	159.3	0.0	21.3	40.0	0.0	43.5
LnGrp LOS	D	C	C	D		D	F		C	D		D
Approach Vol, veh/h	638			507			430			482		
Approach Delay, s/veh	26.3			44.4			92.9			43.2		
Approach LOS	C			D			F			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	33.0	8.5	31.9	13.0	28.9	10.9	29.5				
Change Period (Y+Rc), s	4.2	6.0	4.2	* 6	4.2	* 6	4.2	6.0				
Max Green Setting (Gmax), s	7.8	27.3	7.8	* 27	8.8	* 27	7.8	26.7				
Max Q Clear Time (g_c+I1), s	3.8	9.2	3.6	14.4	10.8	21.7	5.9	22.5				
Green Ext Time (p_c), s	0.0	0.9	0.0	2.1	0.0	1.2	0.0	1.0				

Intersection Summary

HCM 7th Control Delay, s/veh	48.6
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Summary

3: Temperance Avenue & Hamilton Avenue

Cumulative Year 2046 plus Project PM Peak

11/25/2024



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	142	34	39	1029	0	1117	179
Future Volume (veh/h)	142	34	39	1029	0	1117	179
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856		1856	1856
Adj Flow Rate, veh/h	154	37	42	1118		1214	195
Peak Hour Factor	0.92	0.92	0.92	0.92		0.92	0.92
Percent Heavy Veh, %	3	3	3	3		3	3
Cap, veh/h	190	169	90	1481		2502	1115
Arrive On Green	0.11	0.11	0.05	0.80		0.71	0.71
Sat Flow, veh/h	1767	1572	1767	1856		3618	1571
Grp Volume(v), veh/h	154	37	42	1118		1214	195
Grp Sat Flow(s),veh/h/ln	1767	1572	1767	1856		1763	1571
Q Serve(g_s), s	9.5	2.4	2.6	34.3		17.1	4.6
Cycle Q Clear(g_c), s	9.5	2.4	2.6	34.3		17.1	4.6
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	190	169	90	1481		2502	1115
V/C Ratio(X)	0.81	0.22	0.47	0.76		0.49	0.17
Avail Cap(c_a), veh/h	626	557	170	1481		2502	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	48.9	45.7	51.7	5.7		7.2	5.4
Incr Delay (d2), s/veh	8.1	0.6	3.8	3.6		0.7	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	2.2	1.2	9.2		5.3	1.3
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	56.9	46.3	55.4	9.4		7.9	5.7
LnGrp LOS	E	D	E	A		A	A
Approach Vol, veh/h	191			1160		1409	
Approach Delay, s/veh	54.9			11.0		7.6	
Approach LOS	D			B		A	
Timer - Assigned Phs	2		4		5	6	
Phs Duration (G+Y+Rc), s	94.7		17.3		9.9	84.8	
Change Period (Y+Rc), s	5.3		5.3		4.2	5.3	
Max Green Setting (Gmax), s	47.7		39.7		10.8	46.7	
Max Q Clear Time (g_c+l1), s	36.3		11.5		4.6	19.1	
Green Ext Time (p_c), s	6.3		0.5		0.0	10.3	
Intersection Summary							
HCM 7th Control Delay, s/veh			12.3				
HCM 7th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

HCM 7th Signalized Intersection Summary 5: Temperance Avenue & California Avenue

Cumulative Year 2046 plus Project PM Peak

11/25/2024



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	61	12	28	1007	1	983	168
Future Volume (veh/h)	61	12	28	1007	1	983	168
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856		1856	1856
Adj Flow Rate, veh/h	68	13	31	1119		1092	187
Peak Hour Factor	0.90	0.90	0.90	0.90		0.90	0.90
Percent Heavy Veh, %	3	3	3	3		3	3
Cap, veh/h	113	101	76	1573		2704	1206
Arrive On Green	0.06	0.06	0.04	0.85		0.77	0.77
Sat Flow, veh/h	1767	1572	1767	1856		3618	1572
Grp Volume(v), veh/h	68	13	31	1119		1092	187
Grp Sat Flow(s),veh/h/ln	1767	1572	1767	1856		1763	1572
Q Serve(g_s), s	4.2	0.9	1.9	25.9		11.7	3.5
Cycle Q Clear(g_c), s	4.2	0.9	1.9	25.9		11.7	3.5
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	113	101	76	1573		2704	1206
V/C Ratio(X)	0.60	0.13	0.41	0.71		0.40	0.16
Avail Cap(c_a), veh/h	622	553	170	1573		2704	1206
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	51.0	49.5	52.2	3.3		4.4	3.5
Incr Delay (d2), s/veh	5.0	0.6	3.5	2.8		0.5	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.8	0.9	4.6		3.1	0.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	56.1	50.0	55.7	6.0		4.9	3.7
LnGrp LOS	E	D	E	A		A	A
Approach Vol, veh/h	81			1150		1279	
Approach Delay, s/veh	55.1			7.4		4.7	
Approach LOS	E			A		A	
Timer - Assigned Phs	2		4		5	6	
Phs Duration (G+Y+Rc), s	100.2		11.8		9.0	91.2	
Change Period (Y+Rc), s	5.3		4.6		4.2	5.3	
Max Green Setting (Gmax), s	48.7		39.4		10.8	47.7	
Max Q Clear Time (g_c+l1), s	27.9		6.2		3.9	13.7	
Green Ext Time (p_c), s	9.2		0.2		0.0	9.6	

Intersection Summary

HCM 7th Control Delay, s/veh	7.5
HCM 7th LOS	A

Notes

User approved ignoring U-Turning movement.

HCM 7th Signalized Intersection Summary

7: Armstrong Avenue & Church Avenue

Cumulative Year 2046 plus Project PM Peak

11/25/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	127	35	2	96	7	43	130	6	18	81	41
Future Volume (veh/h)	59	127	35	2	96	7	43	130	6	18	81	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	66	141	39	2	107	8	48	144	7	20	90	46
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	174	507	430	8	306	23	139	378	18	68	202	103
Arrive On Green	0.10	0.27	0.27	0.00	0.18	0.18	0.08	0.22	0.22	0.04	0.17	0.17
Sat Flow, veh/h	1767	1856	1572	1767	1705	127	1767	1755	85	1767	1157	592
Grp Volume(v), veh/h	66	141	39	2	0	115	48	0	151	20	0	136
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1833	1767	0	1840	1767	0	1749
Q Serve(g_s), s	1.5	2.6	0.8	0.0	0.0	2.4	1.1	0.0	3.1	0.5	0.0	3.0
Cycle Q Clear(g_c), s	1.5	2.6	0.8	0.0	0.0	2.4	1.1	0.0	3.1	0.5	0.0	3.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.05	1.00		0.34
Lane Grp Cap(c), veh/h	174	507	430	8	0	328	139	0	396	68	0	306
V/C Ratio(X)	0.38	0.28	0.09	0.26	0.00	0.35	0.34	0.00	0.38	0.29	0.00	0.44
Avail Cap(c_a), veh/h	357	1211	1026	317	0	1124	317	0	1112	317	0	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	12.4	11.8	21.6	0.0	15.6	19.0	0.0	14.6	20.4	0.0	16.1
Incr Delay (d2), s/veh	1.4	0.3	0.1	17.5	0.0	0.6	1.5	0.0	0.6	2.4	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.8	0.2	0.1	0.0	0.8	0.4	0.0	1.0	0.2	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.7	12.7	11.9	39.1	0.0	16.3	20.4	0.0	15.2	22.7	0.0	17.1
LnGrp LOS	B	B	B	D		B	C		B	C		B
Approach Vol, veh/h	246			117			199			156		
Approach Delay, s/veh	14.5			16.7			16.5			17.8		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	15.4	4.4	17.9	7.6	13.6	8.5	13.8				
Change Period (Y+Rc), s	4.2	6.0	4.2	* 6	4.2	* 6	4.2	6.0				
Max Green Setting (Gmax), s	7.8	26.3	7.8	* 28	7.8	* 27	8.8	26.7				
Max Q Clear Time (g_c+I1), s	2.5	5.1	2.0	4.6	3.1	5.0	3.5	4.4				
Green Ext Time (p_c), s	0.0	0.6	0.0	0.8	0.0	0.6	0.0	0.4				

Intersection Summary

HCM 7th Control Delay, s/veh	16.1
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 1: Fowler Avenue & Hamilton Avenue

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	363	200	31	76
Average Queue (ft)	157	97	4	32
95th Queue (ft)	320	198	19	62
Link Distance (ft)	2565		1307	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		250
Storage Blk Time (%)	50	4		
Queuing Penalty (veh)	86	5		

Intersection: 2: Armstrong Avenue & Hamilton Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	30	96	54	87	93	61	106	105	57	61	67	47
Average Queue (ft)	16	39	30	29	28	20	40	46	27	21	38	11
95th Queue (ft)	39	70	47	58	54	44	77	81	50	45	62	29
Link Distance (ft)		2565			1949			846			1262	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	175		175	200		200	150		150	200		100
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Temperance Avenue & Hamilton Avenue

Movement	EB	EB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	R
Maximum Queue (ft)	278	270	96	423	369	352	55
Average Queue (ft)	164	59	24	219	157	138	21
95th Queue (ft)	248	170	61	382	270	262	49
Link Distance (ft)		450		475	1256	1256	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	190		200				250
Storage Blk Time (%)	9	2		6	1	1	
Queuing Penalty (veh)	11	4		2	0	1	

Intersection: 4: Armstrong Avenue & California Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	R	UL	T	R	L	L
Maximum Queue (ft)	65	86	58	115	44	57	26	26
Average Queue (ft)	18	38	17	40	18	19	2	6
95th Queue (ft)	42	65	39	78	36	37	15	21
Link Distance (ft)	1964			794		794		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250	120		250			70	230
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 5: Temperance Avenue & California Avenue

Movement	EB	EB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	L	T	U	T	T	R
Maximum Queue (ft)	193	107	31	323	26	250	237	53
Average Queue (ft)	96	40	6	147	2	76	83	12
95th Queue (ft)	165	81	24	278	14	184	199	38
Link Distance (ft)	1668	1668		1997		1276	1276	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250			250		
Storage Blk Time (%)				2				0
Queuing Penalty (veh)				0				0

Intersection: 6: Fowler Avenue & Church Avenue

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	UL	T	T	R	L	TR	UL	T	R	UL	T	T
Maximum Queue (ft)	186	173	132	65	173	150	318	335	51	160	242	182
Average Queue (ft)	92	70	22	32	86	78	141	180	17	78	129	102
95th Queue (ft)	159	135	66	59	157	140	244	306	36	142	201	166
Link Distance (ft)		2479	2479			884		1067	1067		1880	1880
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215			115	200		240			240		
Storage Blk Time (%)			0				1	4			0	0
Queuing Penalty (veh)			0				3	10			0	0

Intersection: 6: Fowler Avenue & Church Avenue

Movement	SB
Directions Served	R
Maximum Queue (ft)	97
Average Queue (ft)	41
95th Queue (ft)	82
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	170
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Armstrong Avenue & Church Avenue

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	118	198	119	53	247	201	147	74	241
Average Queue (ft)	49	111	55	19	165	120	69	20	165
95th Queue (ft)	101	193	98	47	236	185	126	50	244
Link Distance (ft)		1619			2489		2616		632
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250	250		250		250	
Storage Blk Time (%)					0				0
Queuing Penalty (veh)					0				0

Network Summary

Network wide Queuing Penalty: 124

Intersection: 1: Fowler Avenue & Hamilton Avenue

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	136	111	51	93	29
Average Queue (ft)	42	49	5	44	1
95th Queue (ft)	91	86	24	76	10
Link Distance (ft)	2565		1307		1306
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		250	
Storage Blk Time (%)	2	1			
Queuing Penalty (veh)	2	0			

Intersection: 2: Armstrong Avenue & Hamilton Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	30	72	54	51	27	44	49	91	65	25	68	64
Average Queue (ft)	17	31	29	30	22	14	25	39	22	16	35	8
95th Queue (ft)	39	58	52	51	35	33	47	66	49	32	62	30
Link Distance (ft)		2565			1949			846			1262	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	175		175	200		200	150		150	200		100
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Temperance Avenue & Hamilton Avenue

Movement	EB	EB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	R
Maximum Queue (ft)	134	64	289	510	300	301	54
Average Queue (ft)	79	16	37	238	153	125	28
95th Queue (ft)	130	43	123	476	272	248	50
Link Distance (ft)		450		475	1256	1256	
Upstream Blk Time (%)				1			
Queuing Penalty (veh)				6			
Storage Bay Dist (ft)	190		200				250
Storage Blk Time (%)				8	1	1	
Queuing Penalty (veh)				3	0	2	

Intersection: 4: Armstrong Avenue & California Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	R	UL	T	R	L	L	R
Maximum Queue (ft)	49	24	45	23	86	39	51	26	12
Average Queue (ft)	14	16	14	11	40	12	8	7	0
95th Queue (ft)	40	33	34	29	76	25	30	24	4
Link Distance (ft)	1970				794	794			
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		120	250			70	230	115
Storage Blk Time (%)							0		
Queuing Penalty (veh)							0		

Intersection: 5: Temperance Avenue & California Avenue

Movement	EB	EB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	L	T	U	T	T	R
Maximum Queue (ft)	104	19	96	474	25	288	292	55
Average Queue (ft)	25	3	31	167	1	74	80	18
95th Queue (ft)	59	14	75	408	8	221	242	48
Link Distance (ft)	1660	1660		1997		1277	1277	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250		250			250
Storage Blk Time (%)				5		1	1	
Queuing Penalty (veh)				1		0	2	

Intersection: 6: Fowler Avenue & Church Avenue

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	UL	T	T	R	L	TR	UL	T	R	UL	T	T
Maximum Queue (ft)	185	149	22	43	88	149	86	255	20	53	160	161
Average Queue (ft)	82	33	3	12	21	41	42	107	9	12	80	39
95th Queue (ft)	156	80	14	32	58	95	76	199	22	36	140	115
Link Distance (ft)		2479	2479			901		1067	1067		1880	1880
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215			115	200		240			240		
Storage Blk Time (%)								0				0
Queuing Penalty (veh)								0				0

Intersection: 6: Fowler Avenue & Church Avenue

Movement	SB
Directions Served	R
Maximum Queue (ft)	96
Average Queue (ft)	38
95th Queue (ft)	73
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	170
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Armstrong Avenue & Church Avenue

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	95	53	52	31	76	68	90	54	124
Average Queue (ft)	40	30	16	4	43	21	44	21	44
95th Queue (ft)	74	58	42	19	76	47	84	53	88
Link Distance (ft)		1602			2489		2616		632
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250	250		250		250	
Storage Blk Time (%)									
Queuing Penalty (veh)									

Network Summary

Network wide Queuing Penalty: 17

HCS7 Two-Lane Highway Report

Project Information

Analyst	JLB Traffic Engineering, Inc.	Date	12/3/2024
Agency	JLB Traffic Engineering, Inc.	Analysis Year	Cumulative Year 2046 plus Project Traffic Conditions
Jurisdiction	City of Fresno	Time Analyzed	AM Peak
Project Description	Armstrong Avenue between Geary Avenue and Church Avenue	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	487	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.29

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient	3.55202	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.33477	PF Power Coefficient	0.74803
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	52.8

Vehicle Results

Average Speed, mi/h	52.8	Percent Followers, %	54.1
Segment Travel Time, minutes	1.14	Follower Density, followers/mi/ln	5.0
Vehicle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	5.0	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	JLB Traffic Engineering, Inc.	Date	12/3/2024
Agency	JLB Traffic Engineering, Inc.	Analysis Year	Cumulative Year 2046 plus Project Traffic Conditions
Jurisdiction	City of Fresno	Time Analyzed	PM Peak
Project Description	Armstrong Avenue between Geary Avenue and Church Avenue	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	218	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.13

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient	3.55202	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.33477	PF Power Coefficient	0.74803
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	53.7

Vehicle Results

Average Speed, mi/h	53.7	Percent Followers, %	34.7
Segment Travel Time, minutes	1.12	Follower Density, followers/mi/ln	1.4
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.4	A

Appendix J: Traffic Signal Warrants



www.JLBtraffic.com
info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

App | J

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006 DIST	Fresno CO	N/A RTE	N/A KPM	COUNT DATE 09/17/24	
				CALC DC	DATE 10/07/24
				CHK AB	DATE 10/07/24

Major St: Fowler Ave	Critical Approach Speed <u>45</u> MPH
Minor St: Hamilton Ave	Critical Approach Speed <u>45</u> MPH

Critical speed of major street traffic > 64 km/h (40 mph)..... ☒

In built up area of isolated community of < 10,000 population ☐

☒ or ☐ } RURAL (R)
☐ } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

SATISFIED YES ☒ NO ☐

100% SATISFIED YES ☒ NO ☐

80 % SATISFIED YES ☒ NO ☐

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		500	350	600	420	945	810	735	794	961	1101	1142	911	
Major Street		(400)	(280)	(480)	(336)	945	810	735	794	961	1101	1142	911	
Highest Approach		150	105	200	140	262	165	122	147	144	147	165	154	
Minor Street		(120)	(84)	(160)	(112)	262	165	122	147	144	147	165	154	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES ☒ NO ☐

80 % SATISFIED YES ☒ NO ☐

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		750	525	900	630	945	810	735	794	961	1101	1142	911	
Major Street		(600)	(420)	(720)	(504)	945	810	735	794	961	1101	1142	911	
Highest Approach		75	53	100	70	262	165	122	147	144	147	165	154	
Minor Street		(60)	(42)	(80)	(56)	262	165	122	147	144	147	165	154	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES ☒ NO ☐

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME	Yes ☒ No ☐
	2. INTERRUPTION OF CONTINUOUS TRAFFIC	



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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006	Fresno	N/A	N/A	COUNT DATE	06/04/24
DIST	CO	RTE	KPM	CALC	DC
				DATE	07/05/24
				CHK	AB
				DATE	07/05/24

Major St: Armstrong Ave	Critical Approach Speed	40	MPH
Minor St: Hamilton Ave	Critical Approach Speed	45	MPH

Critical speed of major street traffic > 64 km/h (40 mph).....

In built up area of isolated community of < 10,000 population

☒ or ☐

} RURAL (R)
 } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

SATISFIED YES ☐ NO ☒

100% SATISFIED YES ☐ NO ☒

80 % SATISFIED YES ☐ NO ☒

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		500	350	600	420	486	359	283	325	390	371	339	292	
Major Street		(400)	(280)	(480)	(336)	486	359	283	325	390	371	339	292	
Highest Approach		150	105	200	140	160	131	87	132	168	170	157	122	
Minor Street		(120)	(84)	(160)	(112)	160	131	87	132	168	170	157	122	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES ☐ NO ☒

80 % SATISFIED YES ☐ NO ☒

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		750	525	900	630	486	359	283	325	390	371	339	292	
Major Street		(600)	(420)	(720)	(504)	486	359	283	325	390	371	339	292	
Highest Approach		75	53	100	70	160	131	87	132	168	170	157	122	
Minor Street		(60)	(42)	(80)	(56)	160	131	87	132	168	170	157	122	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES ☐ NO ☒

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME	Yes ☐ No ☒
	2. INTERRUPTION OF CONTINUOUS TRAFFIC	



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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006 DIST	Fresno CO	N/A RTE	N/A KPM	COUNT DATE 06/04/24
				CALC DC DATE 07/05/24
				CHK AB DATE 07/05/24

Major St: Temperance Ave	Critical Approach Speed <u>45</u> MPH
Minor St: Hamilton Ave	Critical Approach Speed <u>45</u> MPH

Critical speed of major street traffic > 64 km/h (40 mph)..... ☒

In built up area of isolated community of < 10,000 population ☐

☒ or ☐ } RURAL (R)
☐ } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

SATISFIED YES ☒ NO ☐

100% SATISFIED YES ☒ NO ☐

80 % SATISFIED YES ☒ NO ☐

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		500	350	600	420	536	418	380	439	591	628	576	400	
Major Street		(400)	(280)	(480)	(336)	536	418	380	439	591	628	576	400	
Highest Approach		150	105	200	140	346	188	108	107	147	129	133	132	
Minor Street		(120)	(84)	(160)	(112)	346	188	108	107	147	129	133	132	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES ☐ NO ☒

80 % SATISFIED YES ☐ NO ☒

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		750	525	900	630	536	418	380	439	591	628	576	400	
Major Street		(600)	(420)	(720)	(504)	536	418	380	439	591	628	576	400	
Highest Approach		75	53	100	70	346	188	108	107	147	129	133	132	
Minor Street		(60)	(42)	(80)	(56)	346	188	108	107	147	129	133	132	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES ☐ NO ☒

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME	Yes ☐ No ☒
	2. INTERRUPTION OF CONTINUOUS TRAFFIC	



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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006	Fresno	N/A	N/A	COUNT DATE	06/04/24
DIST	CO	RTE	KPM	CALC	DC
				DATE	07/11/24
				CHK	AB
				DATE	07/11/24

Major St: Armstrong Ave	Critical Approach Speed	45	MPH
Minor St: California Ave	Critical Approach Speed	35	MPH

Critical speed of major street traffic > 64 km/h (40 mph).....

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☒ or ☐

} RURAL (R)
 } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

SATISFIED YES ☐ NO ☒

100% SATISFIED YES ☐ NO ☒

80 % SATISFIED YES ☐ NO ☒

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	8:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	6:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		500	350	600	420	383	317	317	252	303	472	368	292	
Major Street		(400)	(280)	(480)	(336)	383	317	317	252	303	472	368	292	
Highest Approach		150	105	200	140	262	142	142	91	106	97	78	77	
Minor Street		(120)	(84)	(160)	(112)	262	142	142	91	106	97	78	77	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES ☐ NO ☒

80 % SATISFIED YES ☐ NO ☒

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	8:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	6:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		750	525	900	630	383	317	317	252	303	472	368	292	
Major Street		(600)	(420)	(720)	(504)	383	317	317	252	303	472	368	292	
Highest Approach		75	53	100	70	262	142	142	91	106	97	78	77	
Minor Street		(60)	(42)	(80)	(56)	262	142	142	91	106	97	78	77	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES ☐ NO ☒

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME	Yes ☐ No ☒
	2. INTERRUPTION OF CONTINUOUS TRAFFIC	



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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006	Fresno	N/A	N/A	COUNT DATE	06/04/24
DIST	CO	RTE	KPM	CALC	DC DATE 07/05/24
				CHK	AB DATE 07/05/24

Major St: Fowler Ave	Critical Approach Speed	45	MPH
Minor St: Church Ave	Critical Approach Speed	45	MPH

Critical speed of major street traffic > 64 km/h (40 mph).....

In built up area of isolated community of < 10,000 population

☒ or ☐

} RURAL (R)
 } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

SATISFIED YES ☒ NO ☐

100% SATISFIED YES ☒ NO ☐

80 % SATISFIED YES ☒ NO ☐

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		500	350	600	420	677	773	522	444	548	670	648	603	
Major Street		(400)	(280)	(480)	(336)	677	773	522	444	548	670	648	603	
Highest Approach		150	105	200	140	354	233	139	148	184	253	233	201	
Minor Street		(120)	(84)	(160)	(112)	354	233	139	148	184	253	233	201	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES ☐ NO ☒

80 % SATISFIED YES ☒ NO ☐

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		750	525	900	630	677	773	522	444	548	670	648	603	
Major Street		(600)	(420)	(720)	(504)	677	773	522	444	548	670	648	603	
Highest Approach		75	53	100	70	354	233	139	148	184	253	233	201	
Minor Street		(60)	(42)	(80)	(56)	354	233	139	148	184	253	233	201	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES ☒ NO ☐

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME	Yes ☒ No ☐
	2. INTERRUPTION OF CONTINUOUS TRAFFIC	



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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006	Fresno	N/A	N/A	COUNT DATE	06/04/24
DIST	CO	RTE	KPM	CALC	DC
				DATE	07/05/24
				CHK	AB
				DATE	07/05/24

Major St: <u>Armstrong Ave</u>	Critical Approach Speed	45	MPH
Minor St: <u>Church Ave</u>	Critical Approach Speed	45	MPH

Critical speed of major street traffic > 64 km/h (40 mph).....

In built up area of isolated community of < 10,000 population

☒ or ☐

} RURAL (R)
 } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

SATISFIED YES ☐ NO ☒

100% SATISFIED YES ☐ NO ☒

80 % SATISFIED YES ☐ NO ☒

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	9:00 AM	12:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		500	350	600	420	629	304	223	172	342	352	238	228	
Major Street		(400)	(280)	(480)	(336)	629	304	223	172	342	352	238	228	
Highest Approach		150	105	200	140	230	141	40	91	123	153	103	77	
Minor Street		(120)	(84)	(160)	(112)	230	141	40	91	123	153	103	77	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES ☐ NO ☒

80 % SATISFIED YES ☐ NO ☒

		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 AM	8:00 AM	9:00 AM	12:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	
APPROACH	LANES	1		2 or More										
Both Approaches		750	525	900	630	629	304	223	172	342	352	238	228	
Major Street		(600)	(420)	(720)	(504)	629	304	223	172	342	352	238	228	
Highest Approach		75	53	100	70	230	141	40	91	123	153	103	77	
Minor Street		(60)	(42)	(80)	(56)	230	141	40	91	123	153	103	77	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES ☐ NO ☒

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME	Yes ☐ No ☒
	2. INTERRUPTION OF CONTINUOUS TRAFFIC	



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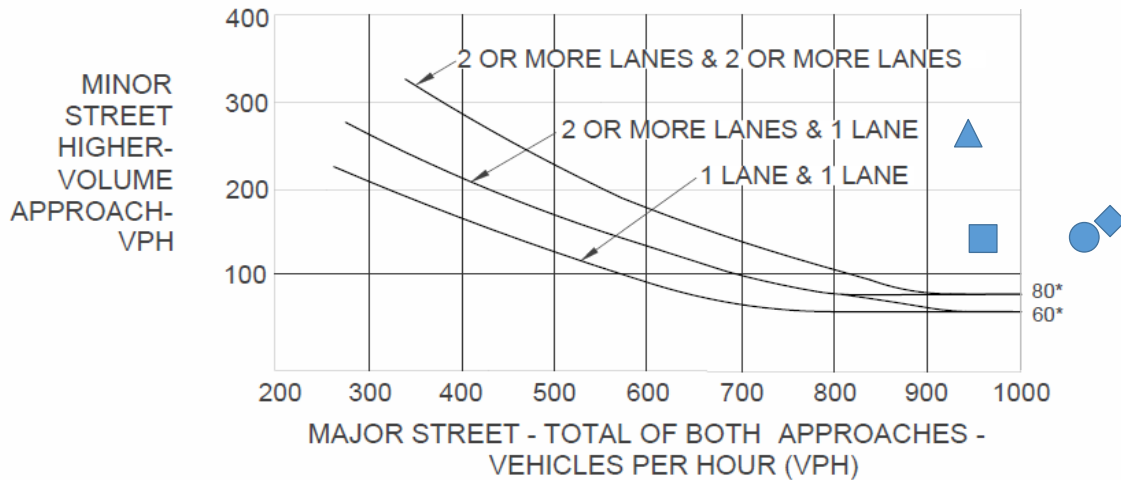
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Warrant 2: Four-Hour Vehicular Volume (Rural)

Existing Traffic Conditions

1. Fowler Ave / Hamilton Ave

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one lane.

	1 Lane & 1 Lane	2 or More Lanes & 1 Lane	2 or More Lanes & 2 or More Lanes	 7:00 AM Volume	 3:00 PM Volume	 4:00 PM Volume	 5:00 PM Volume
Major Street (Total of Both Approaches)	☒	☐	☐	945	961	1101	1142
Minor Street (Higher Volume Approach)				262	144	147	165

Satisfied: ☒ Yes ☐ No

Calculated By: DC
Checked By: AB

Date: 10/07/24
Date: 10/07/24

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
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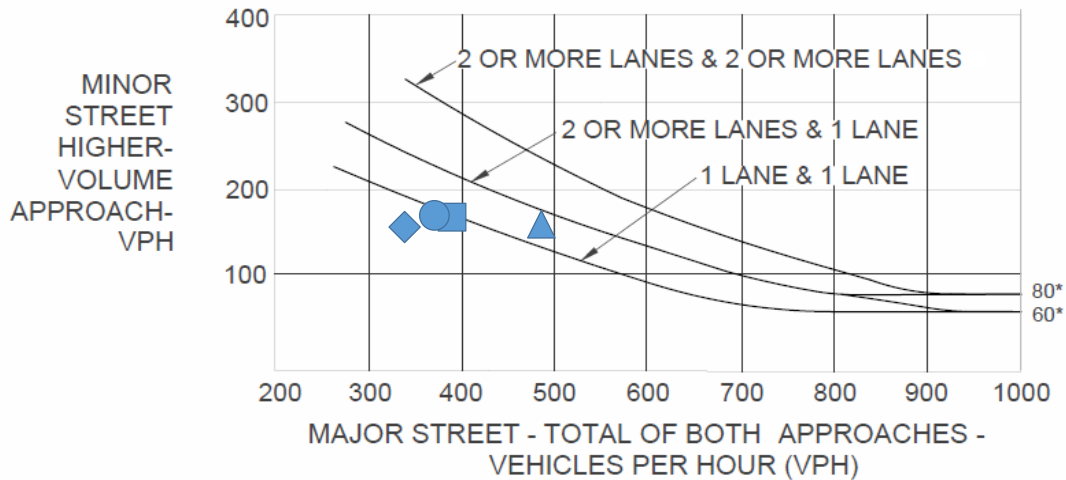
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Warrant 2: Four-Hour Vehicular Volume (Rural)

Existing Traffic Conditions

2. Armstrong Ave / Hamilton Ave

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one lane.

	1 Lane & 1 Lane	2 or More Lanes & 1 Lane	2 or More Lanes & 2 or More Lanes	7:00 AM Volume	3:00 PM Volume	4:00 PM Volume	5:00 PM Volume
Major Street (Total of Both Approaches)	☐	☒	☐	486	390	371	339
Minor Street (Higher Volume Approach)				160	168	170	157

Satisfied: ☐ **Yes** ☒ **No**

Calculated By: DC
Checked By: AB

Date: 07/05/24
Date: 07/05/24

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
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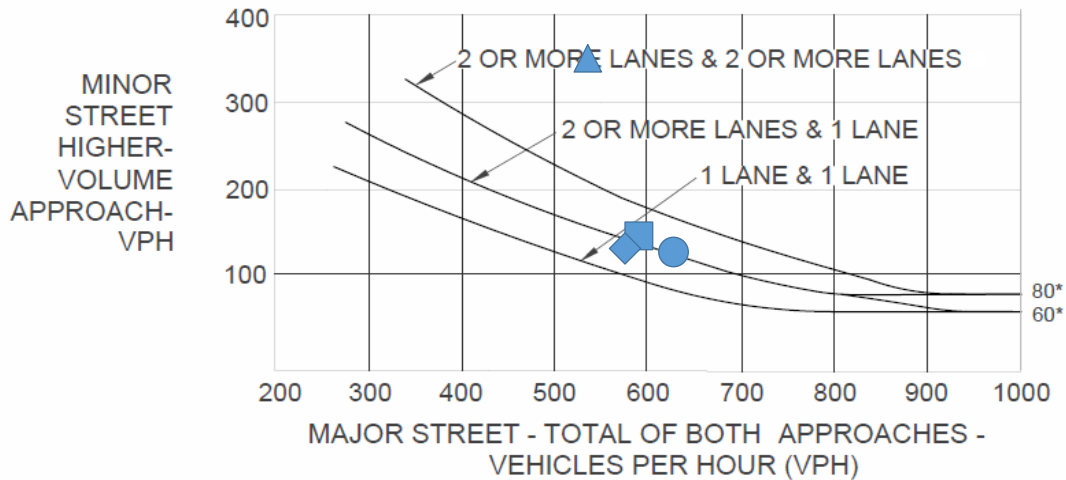
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Warrant 2: Four-Hour Vehicular Volume (Rural)

Existing Traffic Conditions

3. Temperance Ave / Hamilton Ave

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one lane.

	1 Lane & 1 Lane	2 or More Lanes & 1 Lane	2 or More Lanes & 2 or More Lanes	7:00 AM Volume	3:00 PM Volume	4:00 PM Volume	5:00 PM Volume
Major Street (Total of Both Approaches)	☒	☐	☐	536	591	628	576
Minor Street (Higher Volume Approach)				346	147	129	133

Satisfied: ☒ Yes ☐ No

Calculated By: DC
Checked By: AB

Date: 07/05/24
Date: 07/05/24

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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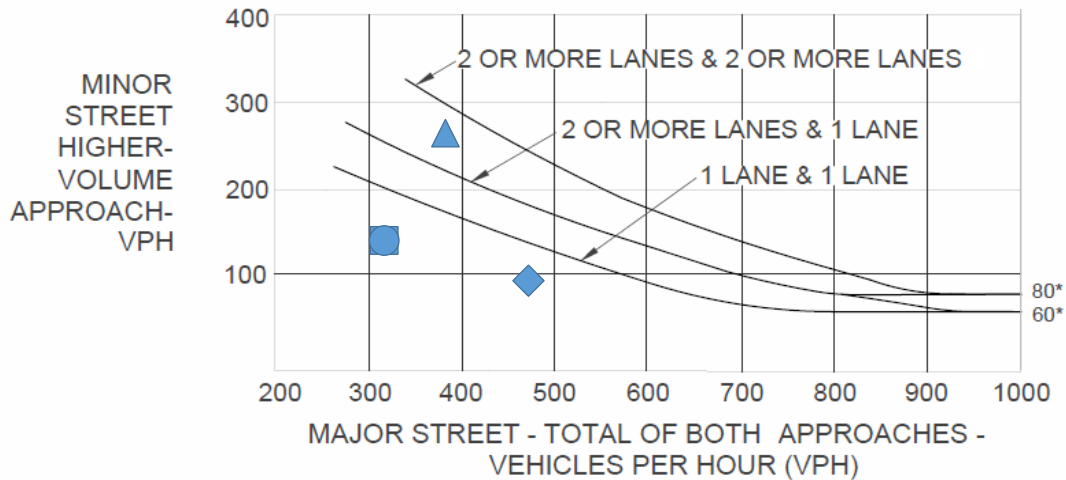
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Warrant 2: Four-Hour Vehicular Volume (Rural)

Existing Traffic Conditions 4. Armstrong Ave / California Ave

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one lane.

	1 Lane & 1 Lane	2 or More Lanes & 1 Lane	2 or More Lanes & 2 or More Lanes	 7:00 AM Volume	 8:00 AM Volume	 8:00 AM Volume	 3:00 PM Volume
Major Street (Total of Both Approaches)	☒	☐	☐	383	317	317	472
Minor Street (Higher Volume Approach)				262	142	142	97

Satisfied: ☐ Yes ☒ No

Calculated By: DC
Checked By: AB

Date: 07/11/24
Date: 07/11/24

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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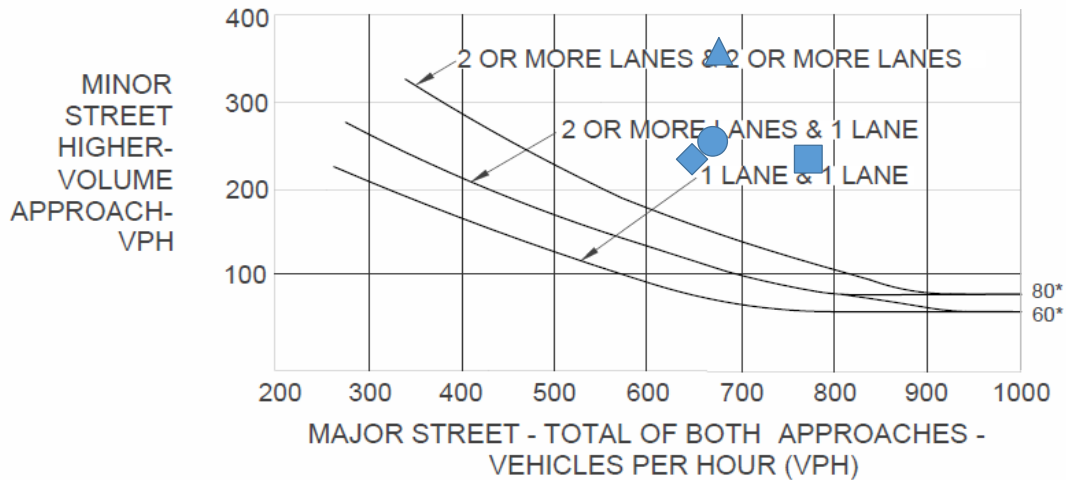
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Warrant 2: Four-Hour Vehicular Volume (Rural)

Existing Traffic Conditions

6. Fowler Ave / Church Ave

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one lane.

	1 Lane & 1 Lane	2 or More Lanes & 1 Lane	2 or More Lanes & 2 or More Lanes	▲ 7:00 AM Volume	■ 8:00 AM Volume	● 3:00 PM Volume	◆ 4:00 PM Volume
Major Street (Total of Both Approaches)	☒	☐	☐	677	773	670	648
Minor Street (Higher Volume Approach)				354	233	253	233

Satisfied: ☒ Yes ☐ No

Calculated By: DC
Checked By: AB

Date: 07/05/24
Date: 07/05/24

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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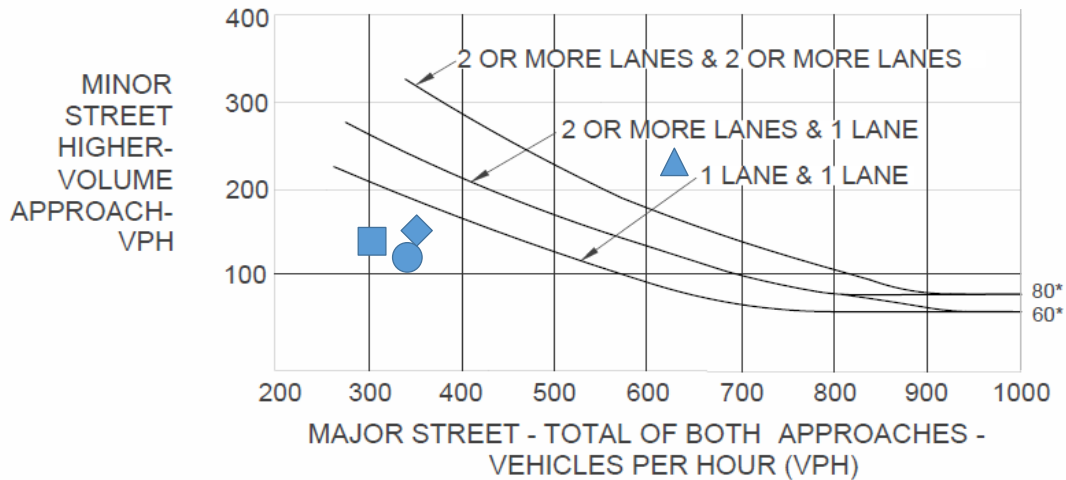
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Warrant 2: Four-Hour Vehicular Volume (Rural)

Existing Traffic Conditions

7. Armstrong Ave / Church Ave

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one lane.

	1 Lane & 1 Lane	2 or More Lanes & 1 Lane	2 or More Lanes & 2 or More Lanes	7:00 AM Volume	8:00 AM Volume	2:00 PM Volume	3:00 PM Volume
Major Street (Total of Both Approaches)	☒	☐	☐	629	304	342	352
Minor Street (Higher Volume Approach)				230	141	123	153

Satisfied: ☐ Yes ☒ No

Calculated By: DC
Checked By: AB

Date: 07/05/24
Date: 07/05/24

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014



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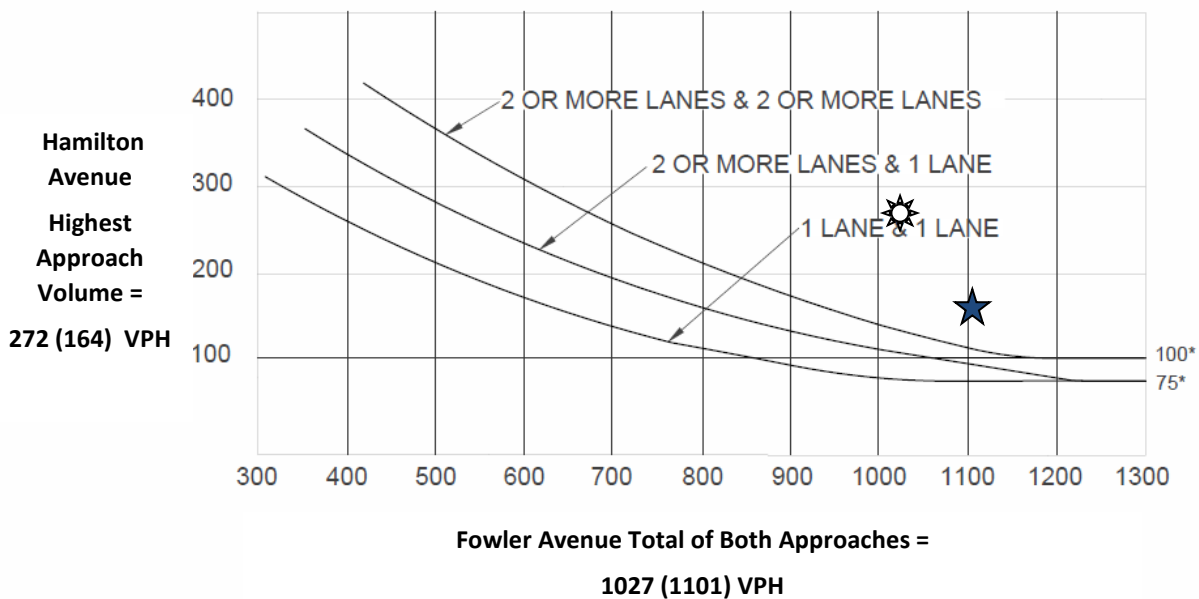
Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions

1. Fowler Avenue / Hamilton Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



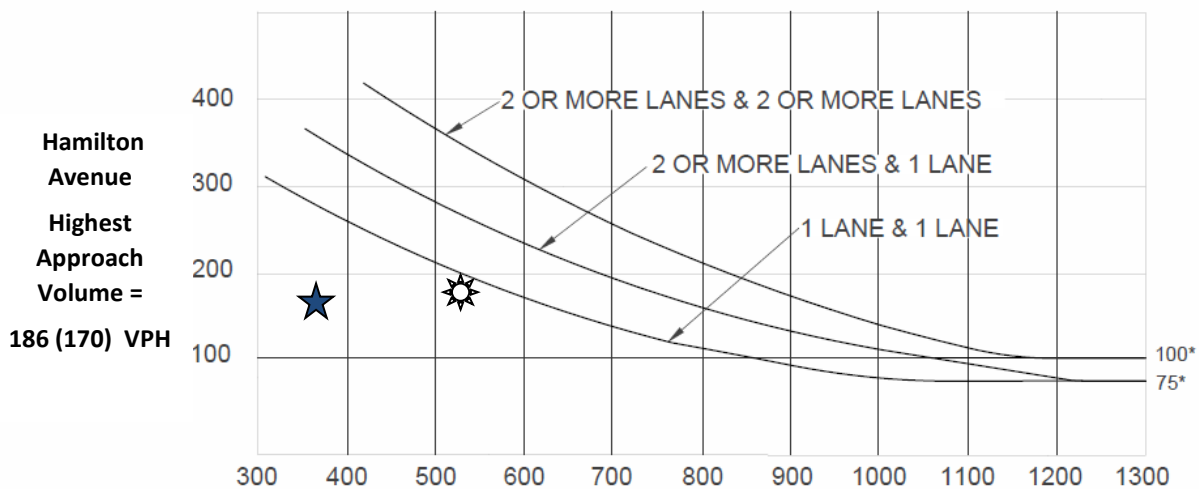
PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions
2. Armstrong Avenue / Hamilton Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

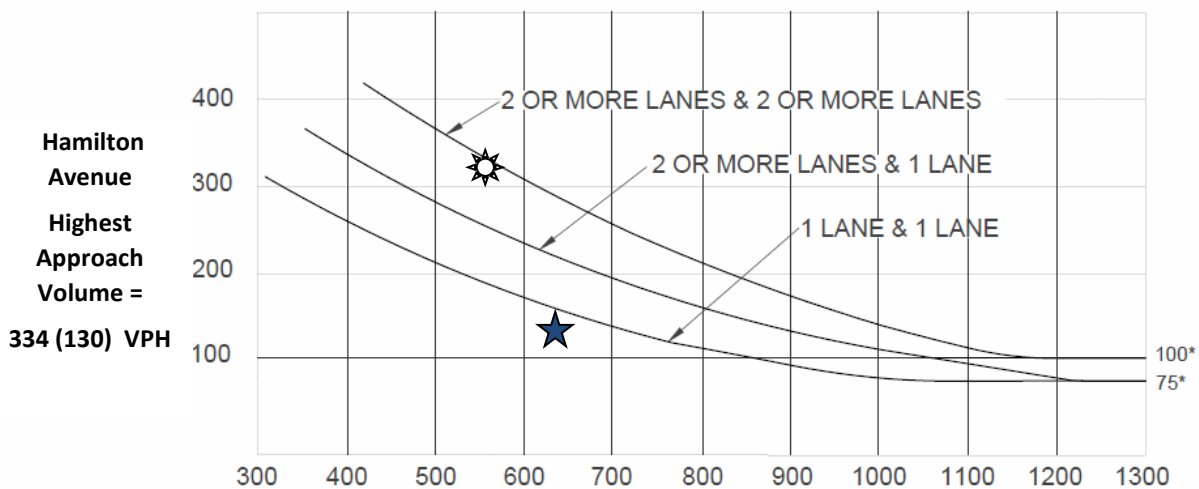
-  **AM Peak Hour – Signal Warrant is Not Met**
-  **PM Peak Hour – Signal Warrant is Not Met**

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014

Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions
3. Temperance Avenue / Hamilton Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Temperance Avenue Total of Both Approaches =

556 (628) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014

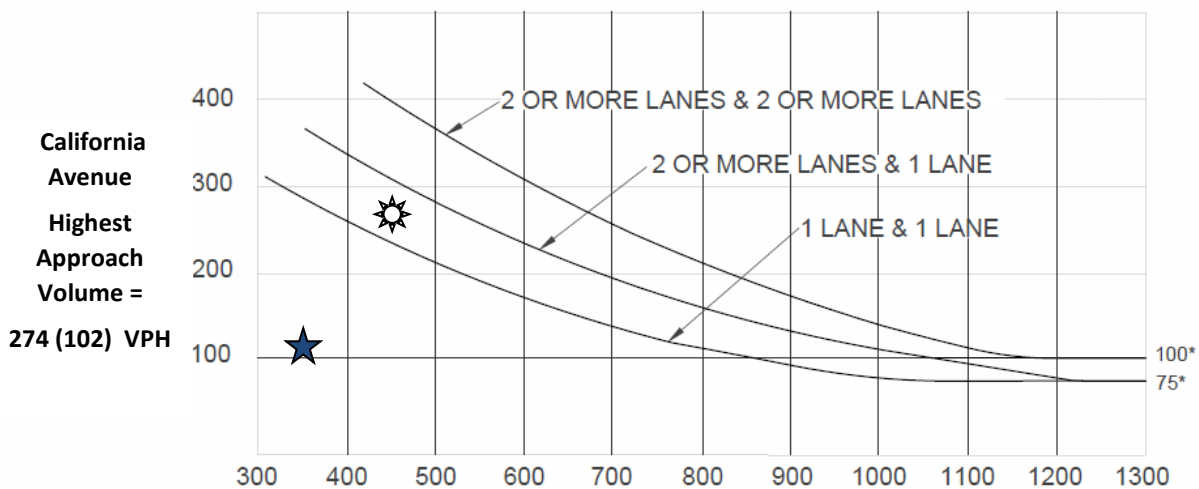
Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions

4. Armstrong Avenue / California Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Armstrong Avenue Total of Both Approaches =

449 (357) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Not Met



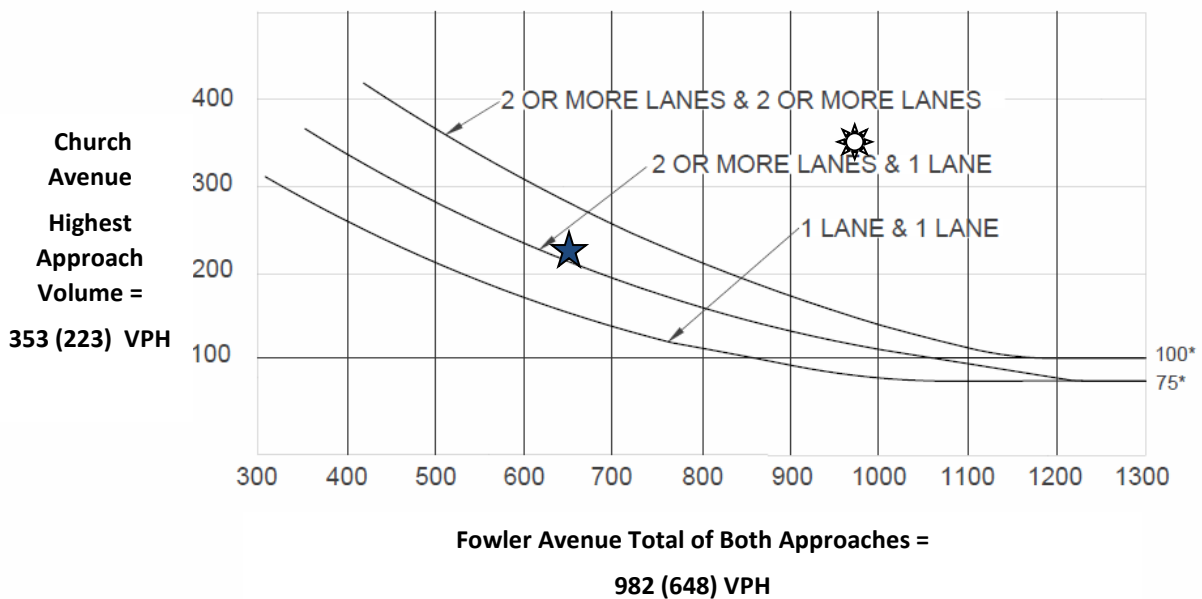
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions
6. Fowler Avenue / Church Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014



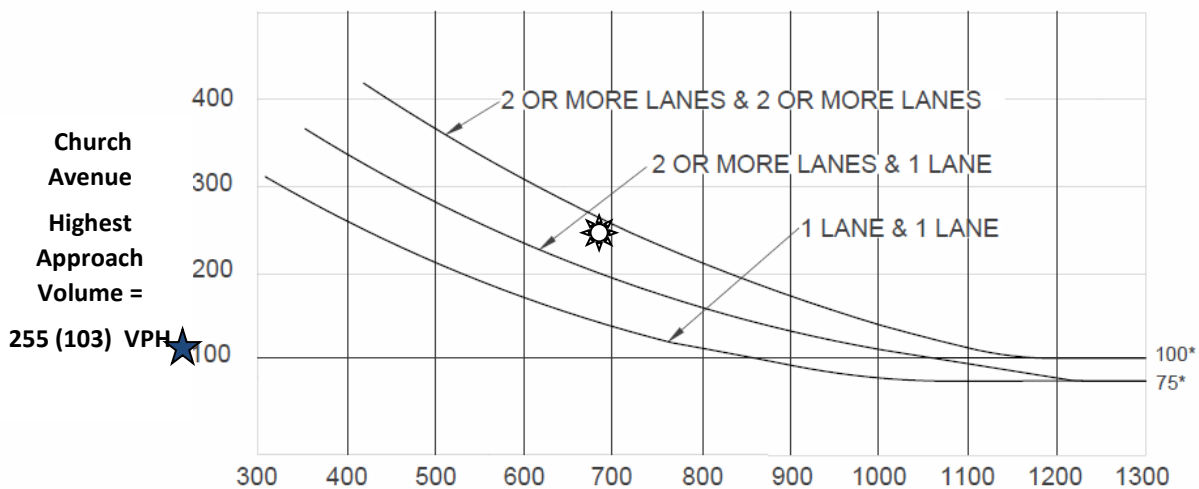
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Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions
7. Armstrong Avenue / Church Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

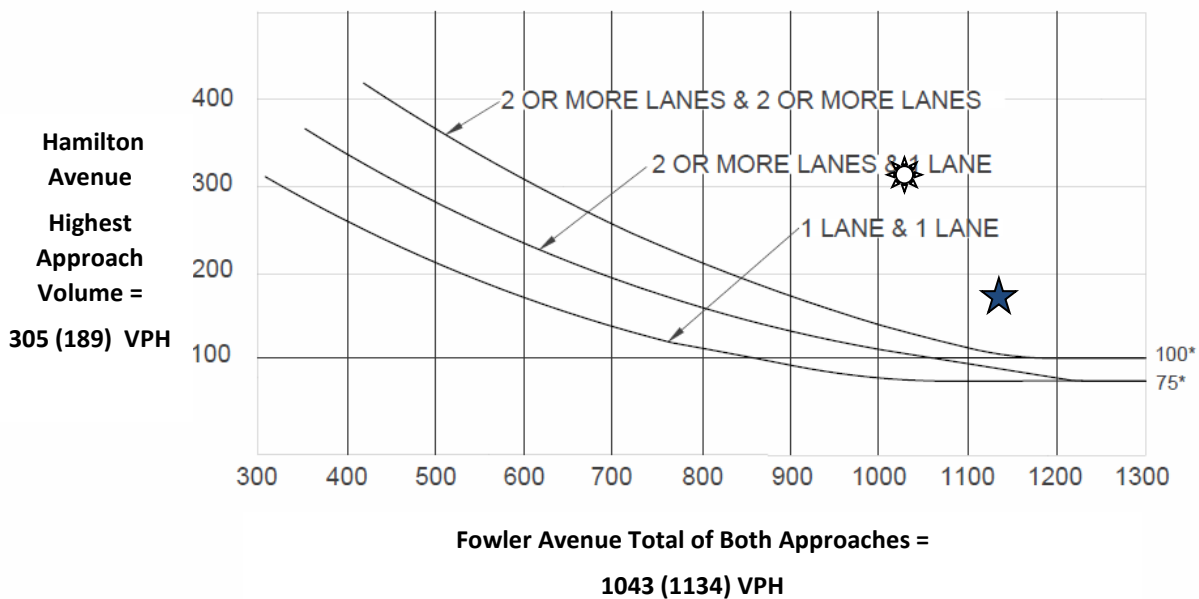
Warrant 3: Peak Hour (Rural)

Existing plus Project Traffic Conditions

1. Fowler Avenue / Hamilton Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



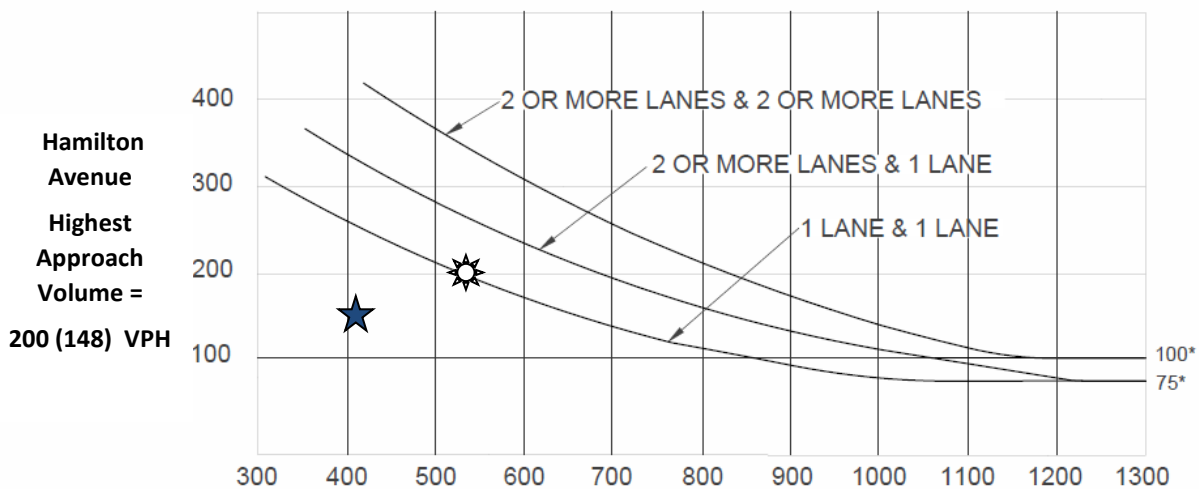
PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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Warrant 3: Peak Hour (Rural)

Existing plus Project Traffic Conditions
2. Armstrong Avenue / Hamilton Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Not Met



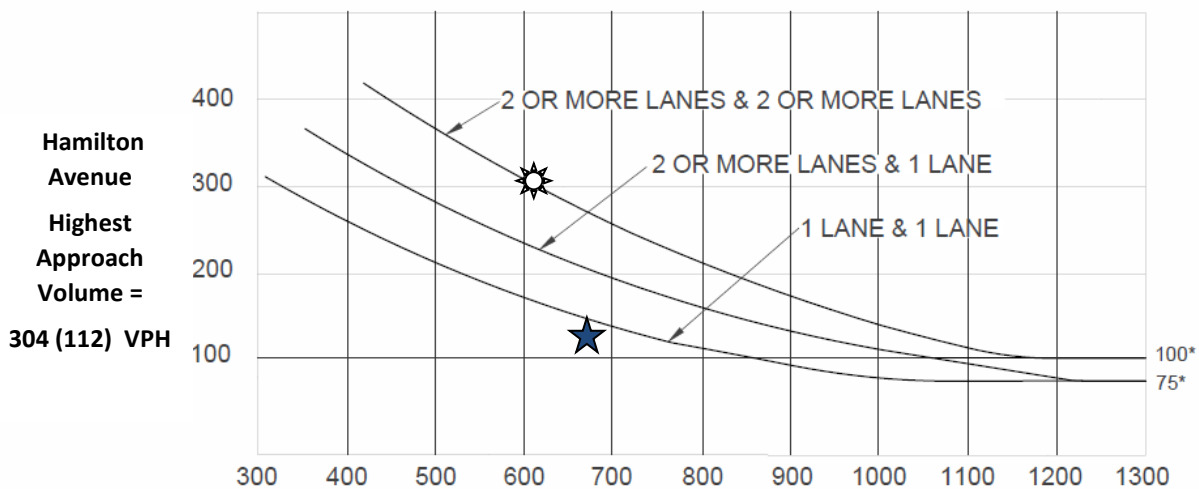
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014

Warrant 3: Peak Hour (Rural)

Existing plus Project Traffic Conditions
3. Temperance Avenue / Hamilton Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



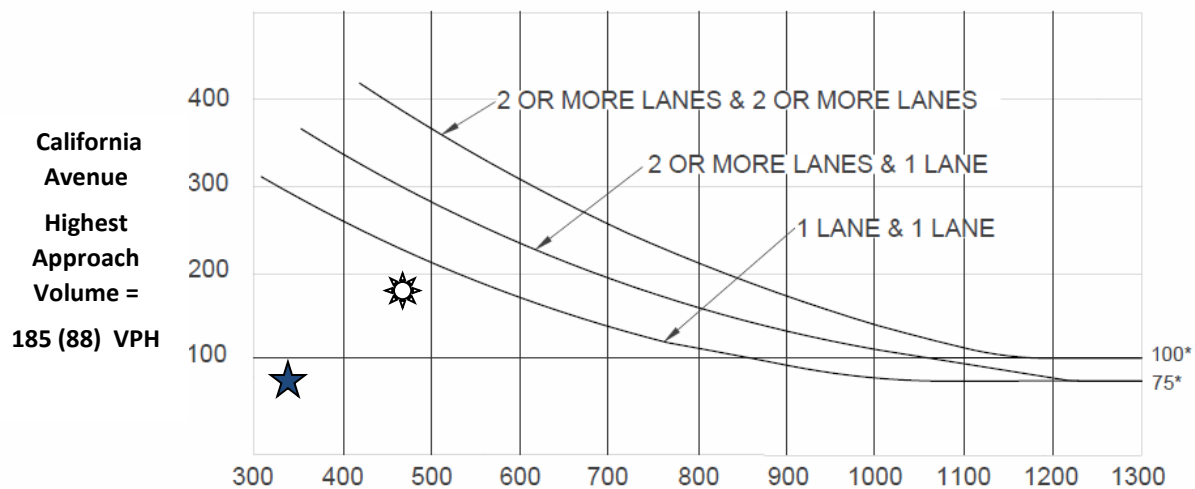
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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November 7, 2014

Warrant 3: Peak Hour (Rural)

Existing plus Project Traffic Conditions
4. Armstrong Avenue / California Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Armstrong Avenue Total of Both Approaches =
471 (344) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

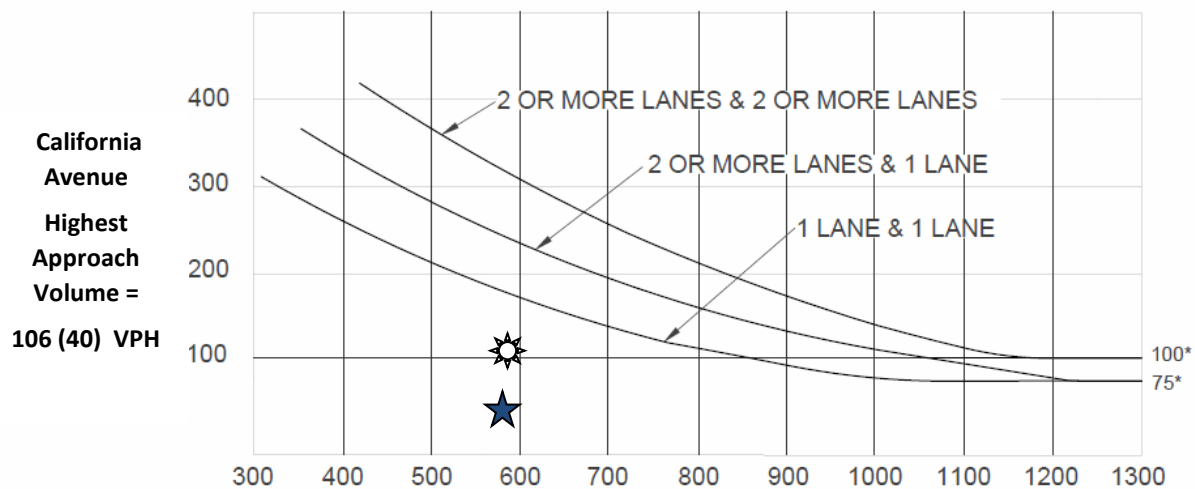
-  AM Peak Hour – Signal Warrant is Not Met
-  PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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November 7, 2014

Warrant 3: Peak Hour (Rural)

Existing plus Project Traffic Conditions
5. Temperance Avenue / California Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Temperance Avenue Total of Both Approaches =
585 (581) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Not Met



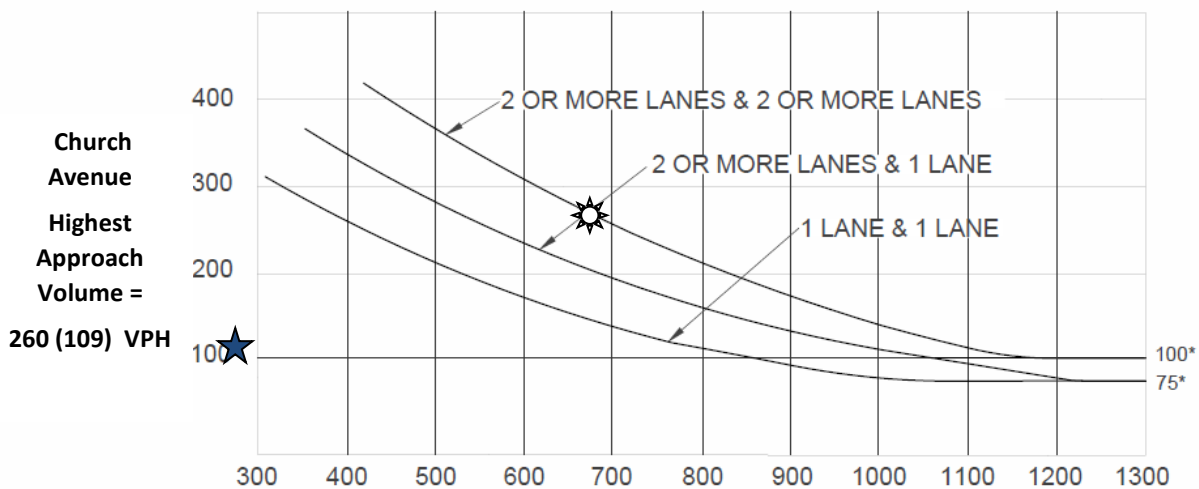
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014

Warrant 3: Peak Hour (Rural)

Existing plus Project Traffic Conditions
7. Armstrong Avenue / Church Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

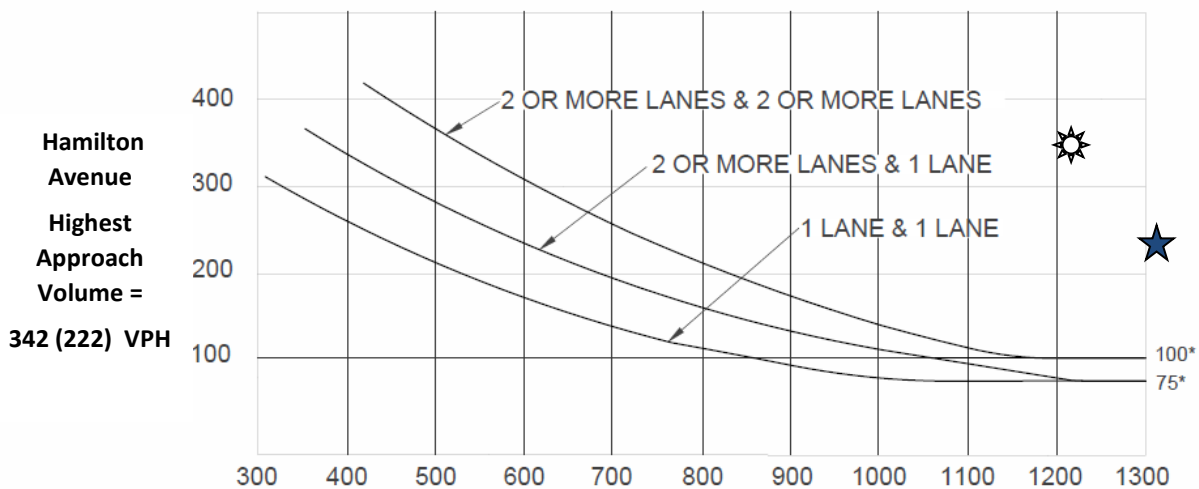
Warrant 3: Peak Hour (Rural)

Near Term plus Project Traffic Conditions

1. Fowler Avenue / Hamilton Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Fowler Avenue Total of Both Approaches =

1218 (1334) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014

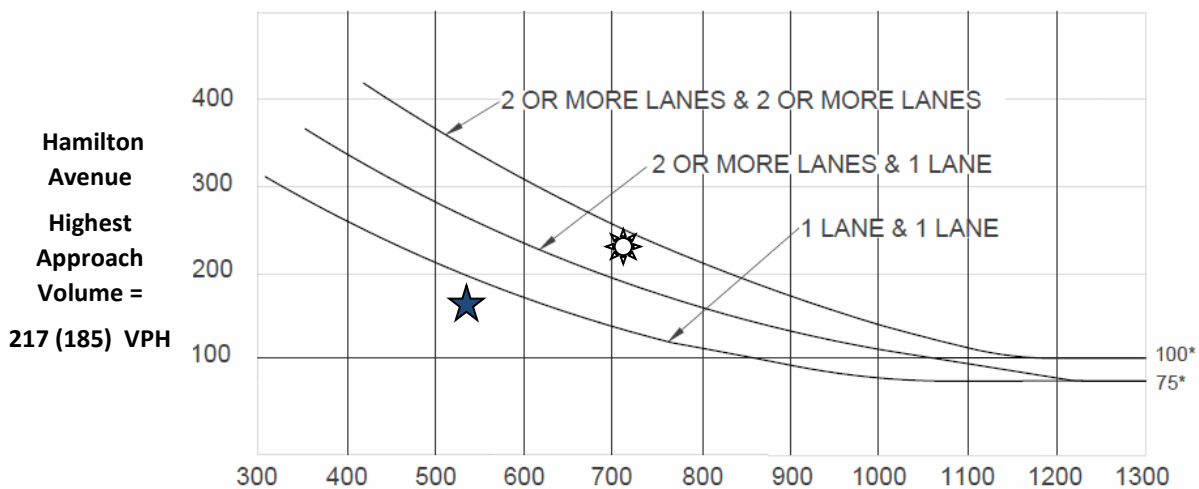
Warrant 3: Peak Hour (Rural)

Near Term plus Project Traffic Conditions

2. Armstrong Avenue / Hamilton Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Armstrong Total of Both Approaches =

716 (524) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



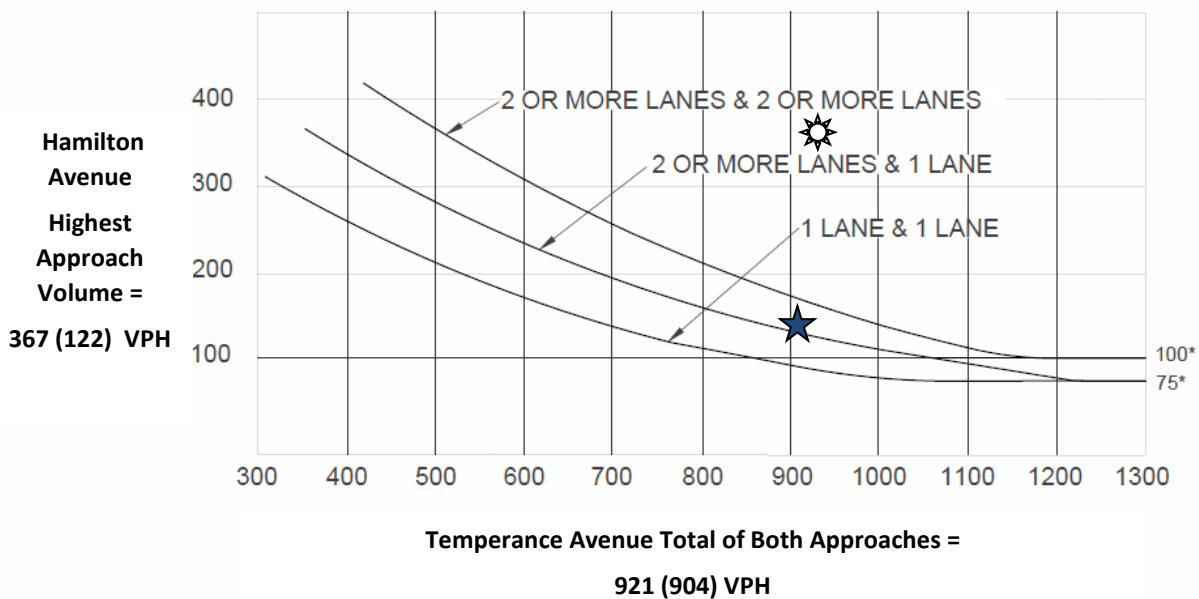
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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Warrant 3: Peak Hour (Rural)

Near Term plus Project Traffic Conditions
3. Temperance Avenue / Hamilton Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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November 7, 2014

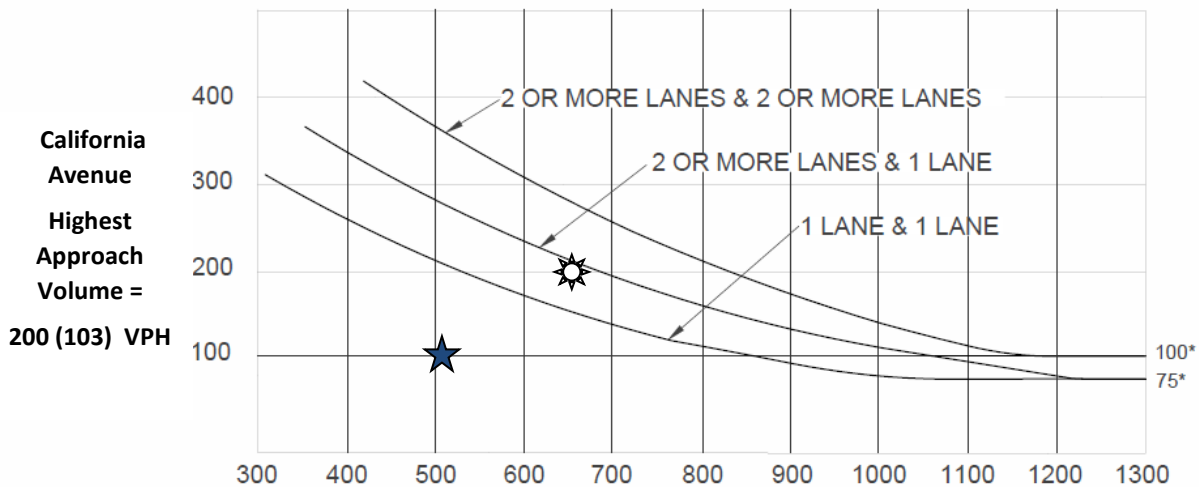
Warrant 3: Peak Hour (Rural)

Near Term plus Project Traffic Conditions

4. Armstrong Avenue / California Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Not Met



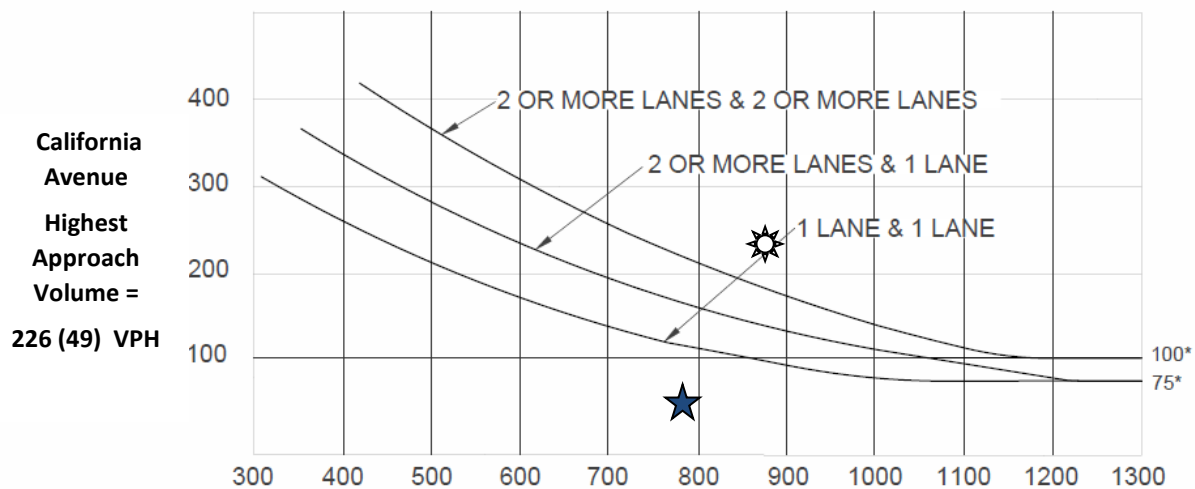
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014

Warrant 3: Peak Hour (Rural)

Near Term plus Project Traffic Conditions
5. Temperance Avenue / California Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Temperance Avenue Total of Both Approaches =

886 (785) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



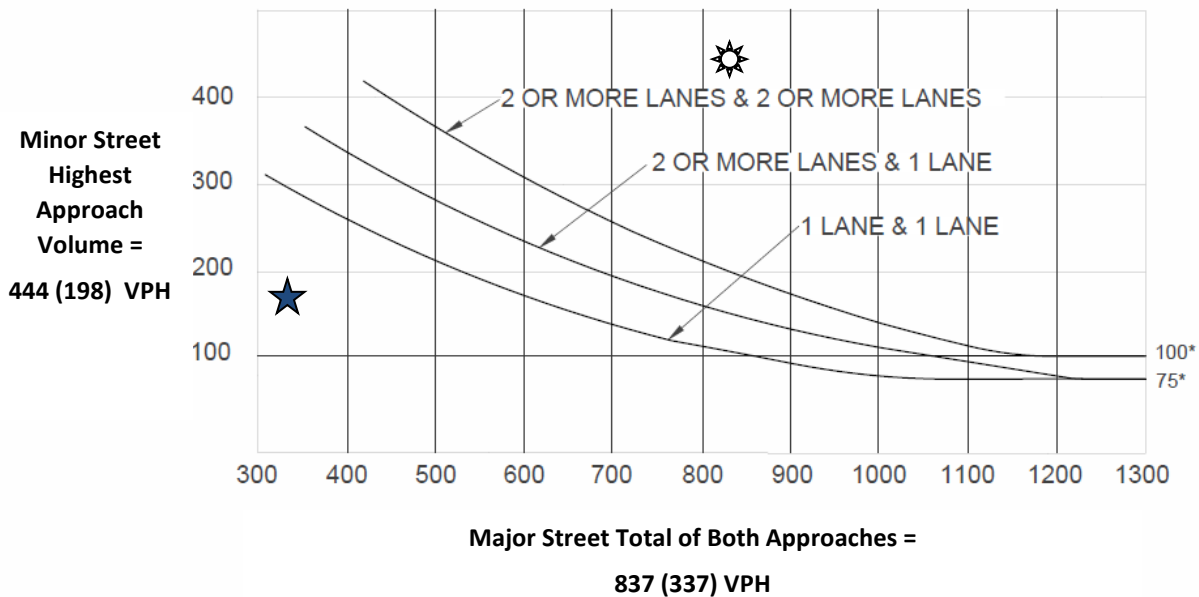
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014

Warrant 3: Peak Hour (Rural)

Near Term plus Project Traffic Conditions
7. Armstrong Avenue / Church Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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Part 4: Highway Traffic Signals
November 7, 2014

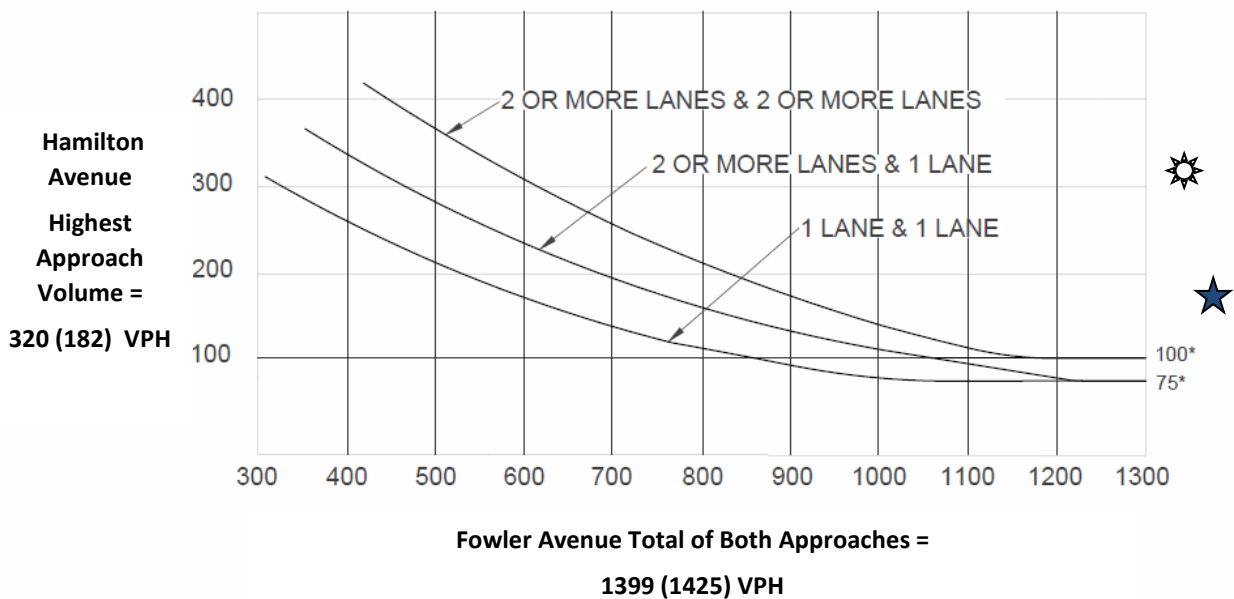
Warrant 3: Peak Hour (Rural)

Cumulative Year 2046 plus Project Traffic Conditions

1. Fowler Avenue / Hamilton Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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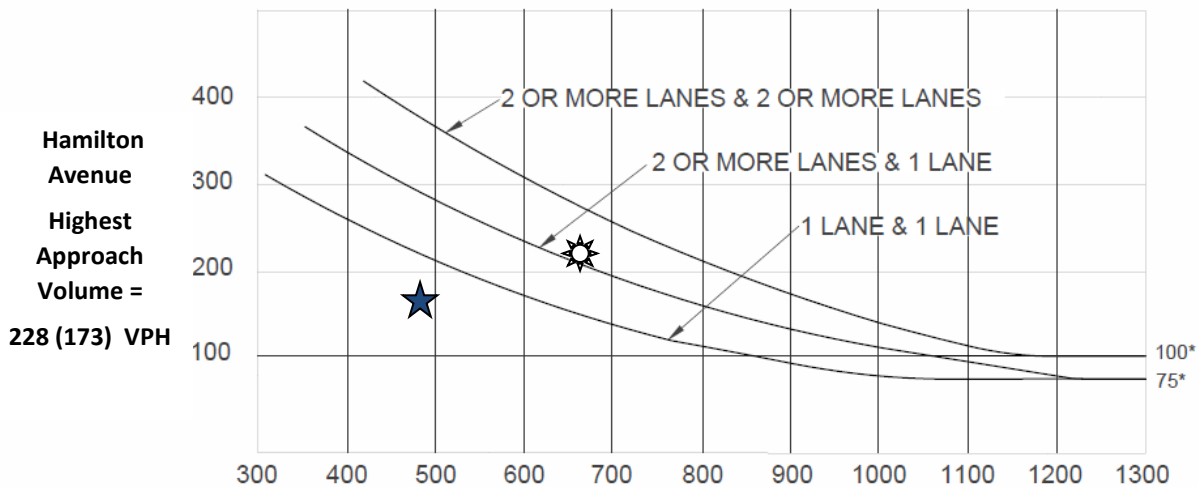
Warrant 3: Peak Hour (Rural)

Cumulative Year 2046 plus Project Traffic Conditions

2. Armstrong Avenue / Hamilton Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Armstrong Avenue Total of Both Approaches =

655 (489) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Not Met

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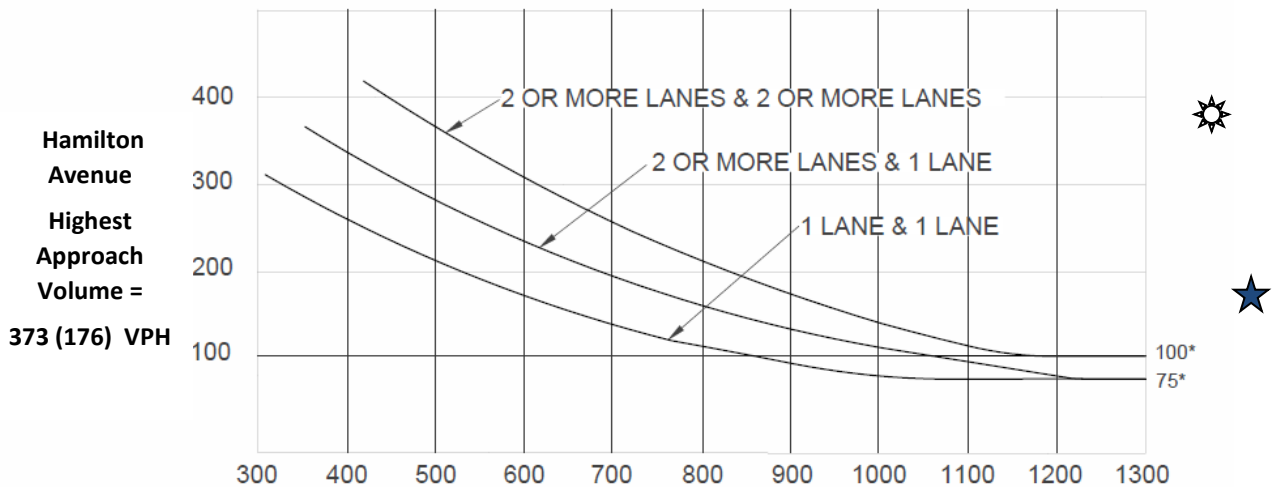
Warrant 3: Peak Hour (Rural)

Cumulative Year 2046 plus Project Traffic Conditions

3. Temperance Avenue / Hamilton Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Temperance Avenue Total of Both Approaches =

2186 (2364) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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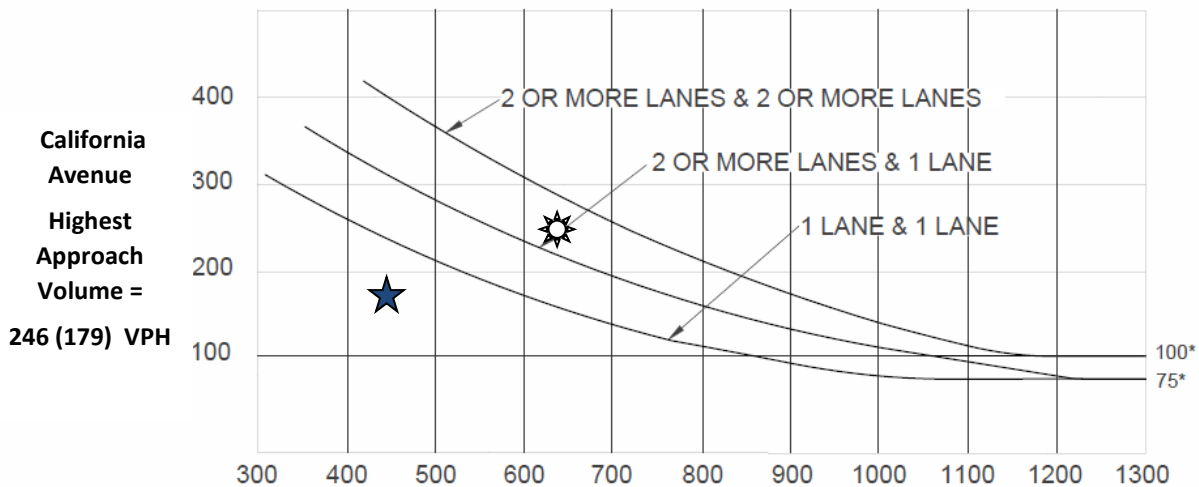
Warrant 3: Peak Hour (Rural)

Cumulative Year 2046 plus Project Traffic Conditions

4. Armstrong Avenue / California Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Armstrong Avenue Total of Both Approaches =

627 (448) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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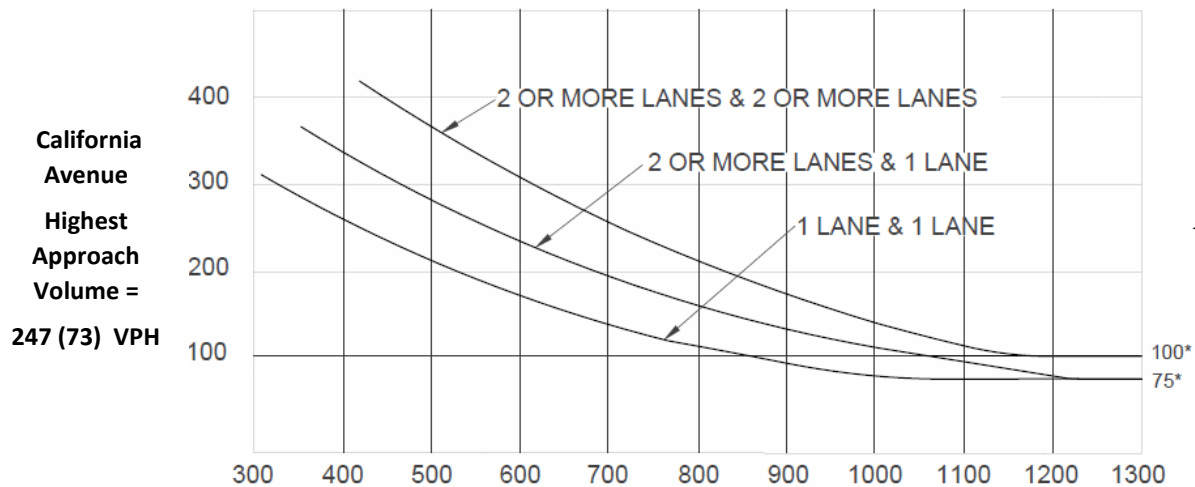
Warrant 3: Peak Hour (Rural)

Cumulative Year 2046 plus Project Traffic Conditions

5. Temperance Avenue / California Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Temperance Avenue Total of Both Approaches =

2051 (2187) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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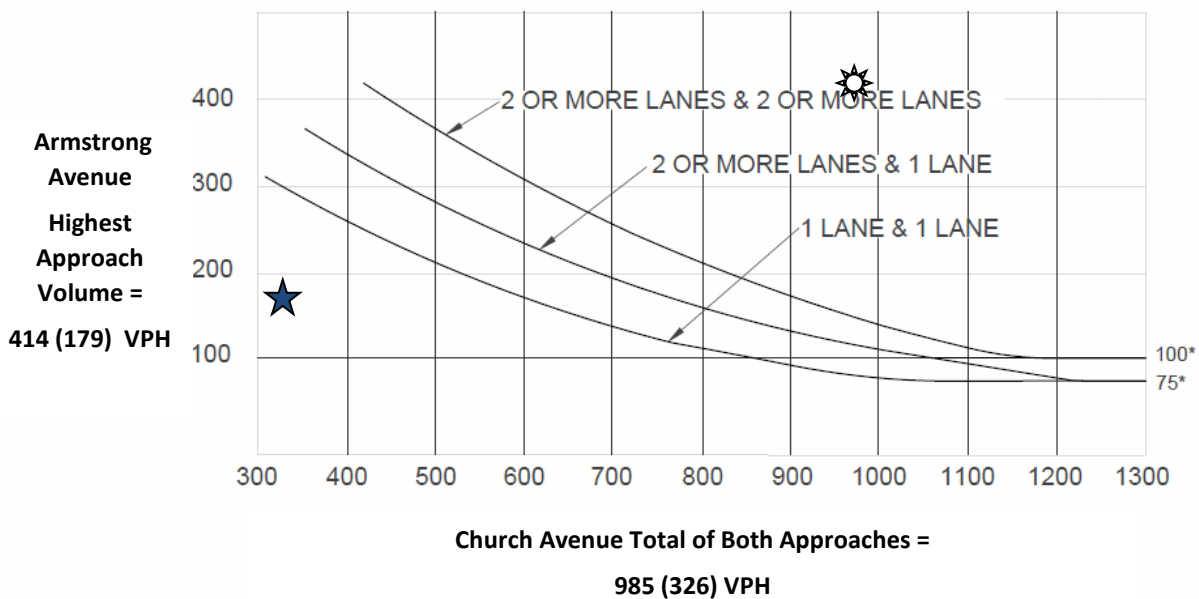
Warrant 3: Peak Hour (Rural)

Cumulative Year 2046 plus Project Traffic Conditions

7. Armstrong Avenue / Church Avenue

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Not Met

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