

TRAFFIC CIRCULATION ANALYSIS
TTLIC REDLANDS TEXAS ST, LLC
SINGLE-FAMILY RESIDENTIAL DEVELOPMENT
PROJECT (TENTATIVE TRACT MAP NO. 20520)
Redlands, California
January 9, 2023

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LLG Ref. 2-22-4587-1



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1.0 INTRODUCTION

This traffic circulation analysis addresses the potential circulation needs associated with the proposed single-family residential community to be developed by TTLc Redlands Texas St, LLC (hereinafter referred to as Project), located in the City of Redlands, California. The Project site is located along the east side of Texas Street, approximately 500 feet north of Domestic Avenue. The proposed Project includes the development of 35 single-family residential dwelling units.

This traffic report documents the findings and recommendations of a traffic circulation analysis conducted by Linscott, Law & Greenspan Engineers (LLG) to determine the potential circulation effects and Project-related improvements associated with the proposed Project. The traffic analysis estimates the trip generation potential of the proposed project and evaluates the operating conditions at two (2) key study intersections within the project vicinity, both without and with the proposed project. Where necessary, intersection improvements/mitigation measures are identified.

This traffic report satisfies City of Redlands criteria and is consistent with the requirements and procedures outlined in the most current *Congestion Management Program for San Bernardino County*. The Scope of Work for the traffic study was developed in collaboration with City staff and is provided in *Appendix A*.

The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak hour traffic information has been collected at two (2) key study locations on a “typical” weekday for use in the preparation of intersection level of service calculations. A “typical” weekday constitutes a Tuesday, Wednesday or Thursday and refers to a non-holiday condition when local schools are in session. This traffic report analyzes existing weekday AM peak hour and PM peak hour traffic conditions upon completion of the proposed Project.

This analysis evaluates the potential traffic circulation impacts associated with the proposed Project, which includes a level of service (LOS) analysis based on City of Redlands Measure U. It should be noted that transportation impacts associated with new development under CEQA no longer includes LOS analyses and is now based on vehicle miles traveled (VMT) analyses. Measure U became effective December 12, 1997 and is an initiative ordinance of the people of Redlands establishing principles of managed development.

1.1 Study Area

The two (2) key study intersections selected for evaluation were determined primarily through application of San Bernardino County CMP criteria and in coordination with City of Redlands staff. The intersections listed below provide local access to the study area and define the extent of the boundaries for this traffic analysis. The jurisdictions where the study intersections are located are identified as well.

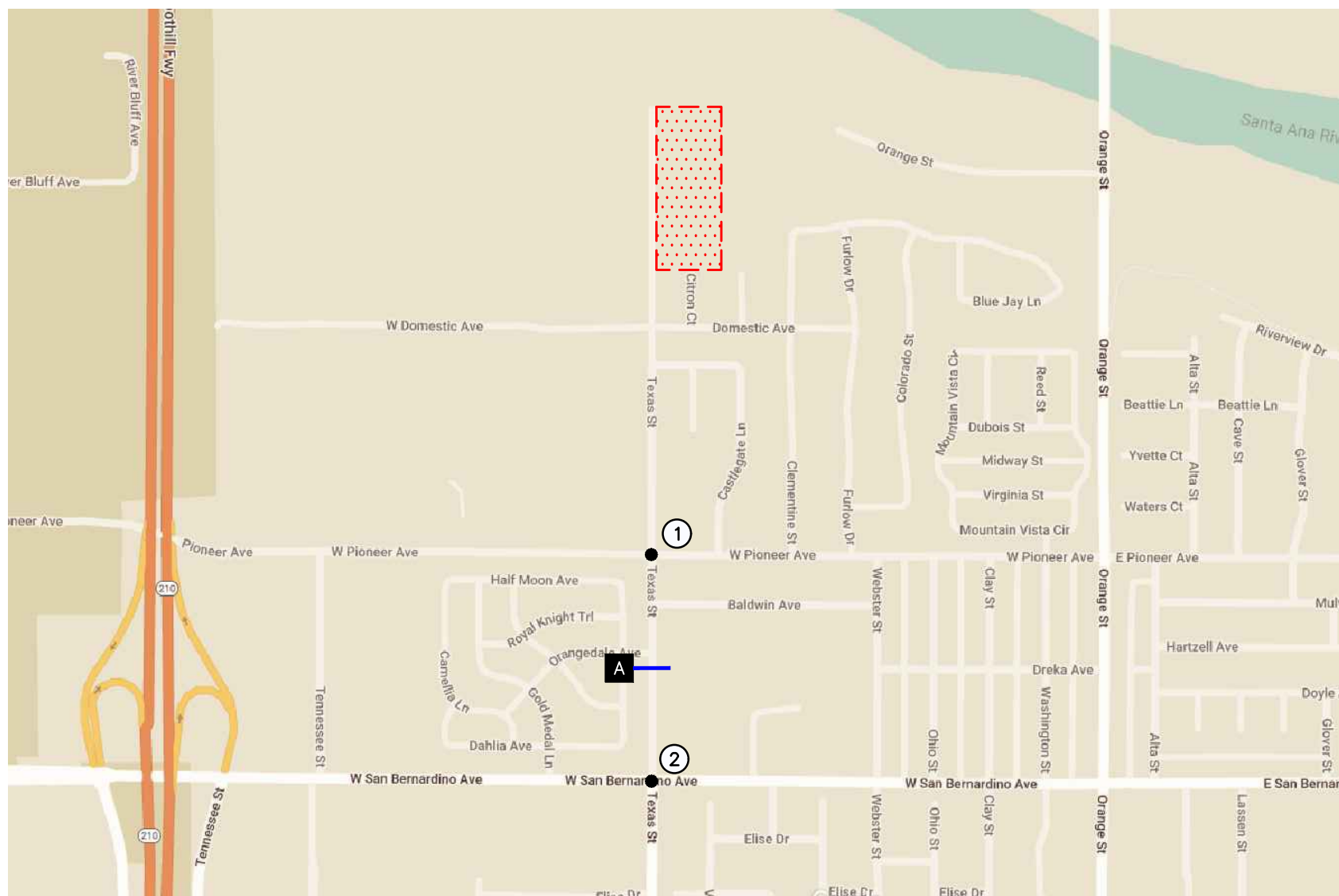
Study Intersections

1. Texas Street at Pioneer Avenue (City of Redlands)
2. Texas Street at San Bernardino Avenue (City of Redlands)

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the project and depicts the study locations and surrounding street system. The Level of Service (LOS) investigations at these key locations were used to evaluate the potential circulation effects associated with the proposed project. When necessary, this report recommends intersection improvements that may be required to restore/maintain an acceptable Level of Service and/or offset the circulation effects of the project.

Included in this Traffic Analysis are:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- AM and PM peak hour analyses for existing conditions,
- AM and PM peak hour analyses for existing with Project conditions,
- Area Traffic Improvements, and
- Site Access and Circulation Evaluation,



SOURCE: GOOGLE

KEY

-  = STUDY INTERSECTION
-  = STUDY ROADWAY SEGMENT
-  = PROJECT SITE

FIGURE 1-1

VICINITY MAP

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS

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2.0 PROJECT DESCRIPTION

The subject property is located along the east side of Texas Street, approximately 500 feet north of Domestic Avenue in the City of Redlands, California. The proposed Project site is a 14,69±-acre rectangular-shaped vacant parcel of land that is zoned Agricultural District – 1 and designated as Very Low Density Residential in the City’s General Plan. The proposed Project includes the development of 35 single-family residential dwelling units.

Figure 2-1 presents the existing aerial photograph of the Project site. *Figure 2-2* presents the proposed Project site plan prepared by Huitt-Zollars.

2.1 Site Access

Access to the Project site is proposed to be provided via three (3) cul-de-sacs (Street A, Street B and Street C) that would intersect with Texas Street, with a 4th cul-de-sac located at the northerly terminus of Texas Street. Streets A, B and C will be constructed to the City’s local residential street standard with a paved width of 36-feet within a right-of-way of 60-feet. Texas Street will be constructed to ultimate half-section width per the City’s residential collector standards (20-feet paved with 32-foot right-of-way), with an additional 14-feet of pavement.



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SOURCE: GOOGLE

KEY

 = PROJECT SITE

FIGURE 2-1

EXISTING SITE AERIAL

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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SOURCE: HUITT-ZOLLARS

FIGURE 2-2

PROPOSED SITE PLAN

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3.0 EXISTING CONDITIONS

3.1 Existing Street System

Regional access to the project site is provided via the San Bernardino (I-10) Freeway. The I-10 Freeway, located south of the project site, is a major highway, which extends through San Bernardino County and links Redlands with the neighboring communities. The principal local network of streets serving the project includes Texas Street, Pioneer Avenue, and San Bernardino Avenue. The following discussion provides a brief synopsis of these key area streets.

Texas Street is a two-lane divided roadway north of Pioneer Avenue, a three-lane divided roadway between Pioneer Avenue and San Bernardino Avenue, and a two-lane undivided roadway south of San Bernardino Avenue, oriented in the north-south direction. On-street parking is generally not permitted north of San Bernardino Avenue, but is permitted south of San Bernardino Avenue within the vicinity of the Project. The posted speed limit on Texas Street is 30 miles per hour (mph) between Pioneer Avenue and San Bernardino Avenue, and 40 mph north of Pioneer Avenue and south of San Bernardino Avenue. A traffic signal controls the study intersections of Texas Street at Pioneer Avenue and San Bernardino Avenue.

Pioneer Avenue is a two-lane, undivided roadway, oriented in the east-west direction. On-street parking is generally not permitted within the vicinity of the Project. The posted speed limit on Pioneer Avenue is 35 mph.

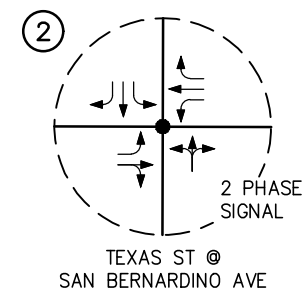
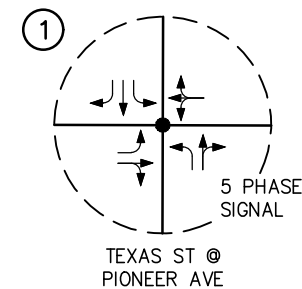
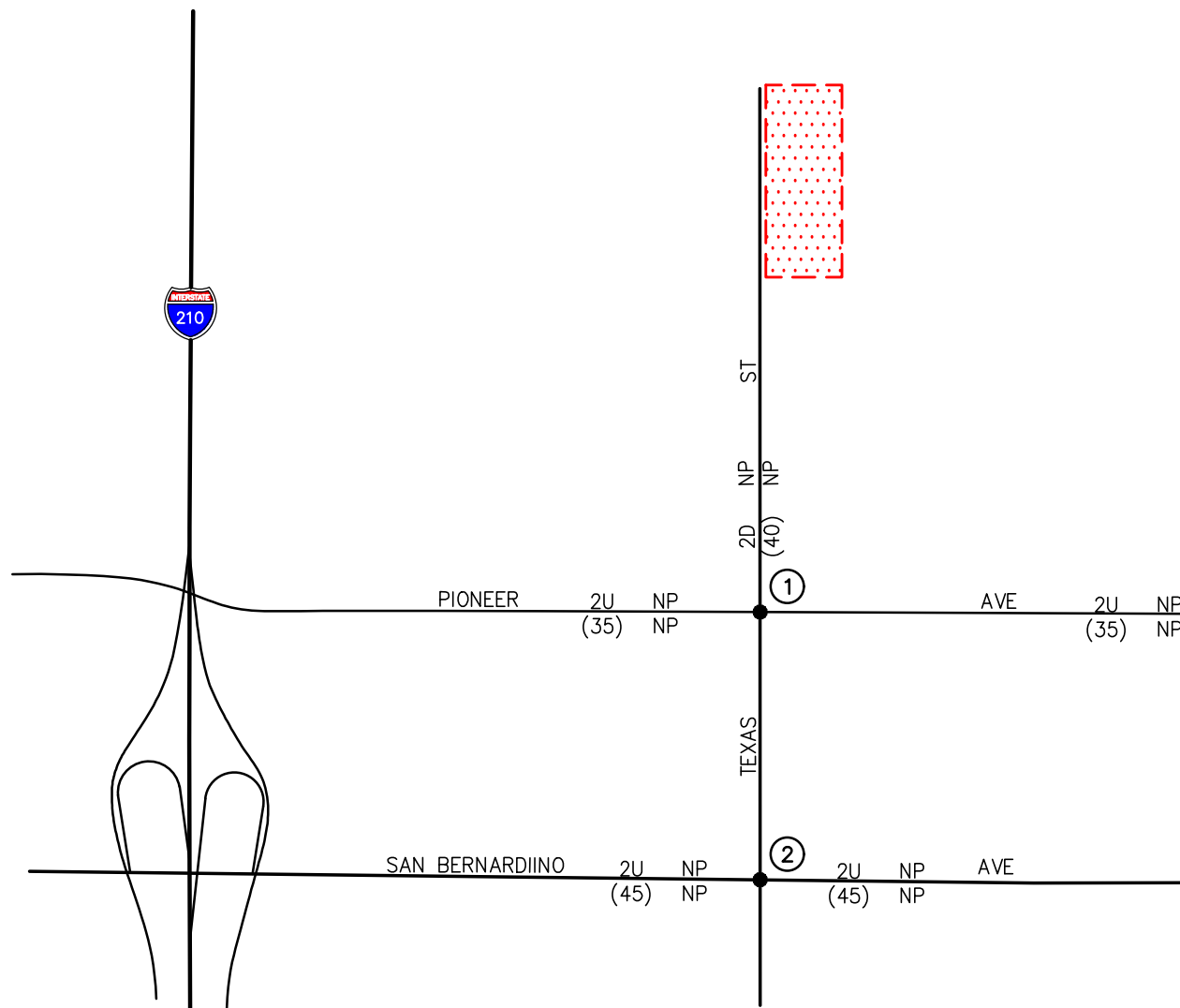
San Bernardino Avenue is a two-lane, undivided roadway, oriented in the east-west direction. On-street parking is generally not permitted within the vicinity of the Project. The posted speed limit on San Bernardino Avenue is 45 mph.

Figure 3-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This figure identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area study intersections.

3.2 Existing Traffic Volumes

Two (2) key study intersections have been identified as the locations at which to evaluate existing traffic operating conditions. Some portion of potential project-related traffic will pass through each of these intersections, and their analysis will reveal the expected circulation effects of the project. These key study intersections were selected for evaluation based on discussions with City of Redlands Development Services Department staff.

Existing AM and PM peak hour traffic volumes for the key study intersections evaluated in this report were obtained from manual morning and evening peak hour turning movement counts conducted by Counts Unlimited, Inc. in September 2022. *Figures 3-2* and *3-3* illustrate the existing AM and PM peak hour traffic volumes at the key study intersections evaluated in this report, respectively. *Appendix B* contains the detailed peak hour count sheets for the key intersections evaluated in this report.



- KEY**
- ← = APPROACH LANE ASSIGNMENT
 - = TRAFFIC SIGNAL, ▼ = STOP SIGN
 - P = PARKING, NP = NO PARKING
 - U = UNDIVIDED, D = DIVIDED
 - 2 = NUMBER OF TRAVEL LANES
 - (XX) = POSTED SPEED LIMIT (MPH)
 - [Red Hatched Box] = PROJECT SITE

FIGURE 3-1

**EXISTING ROADWAY CONDITIONS
AND INTERSECTION CONTROLS**

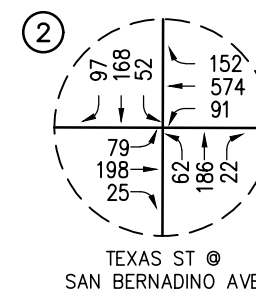
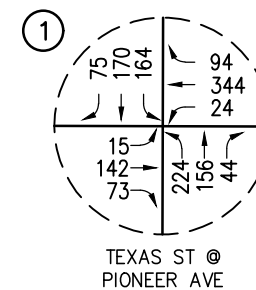
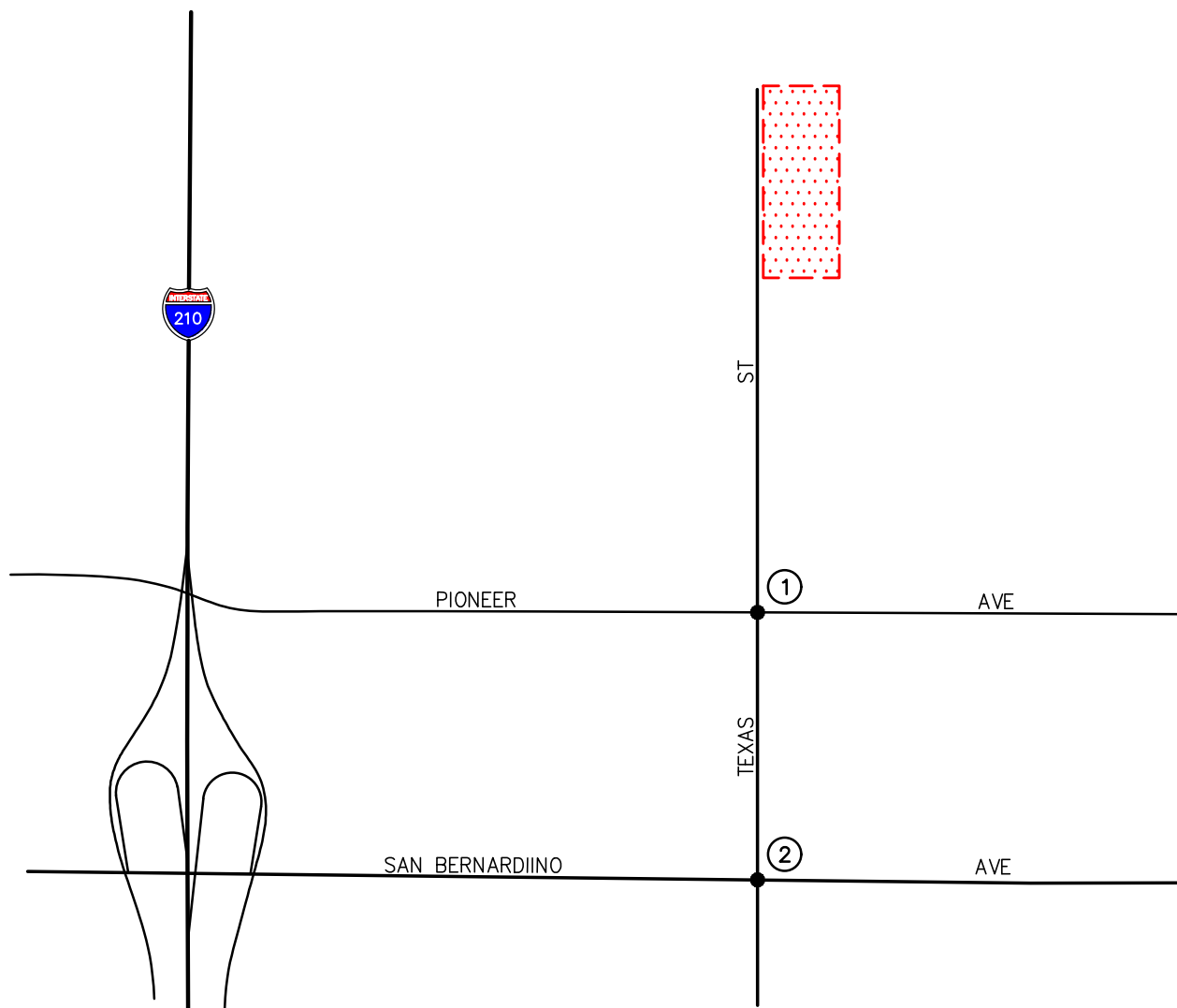
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KEY



= STUDY INTERSECTION



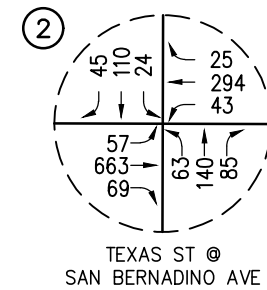
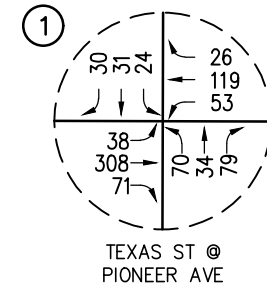
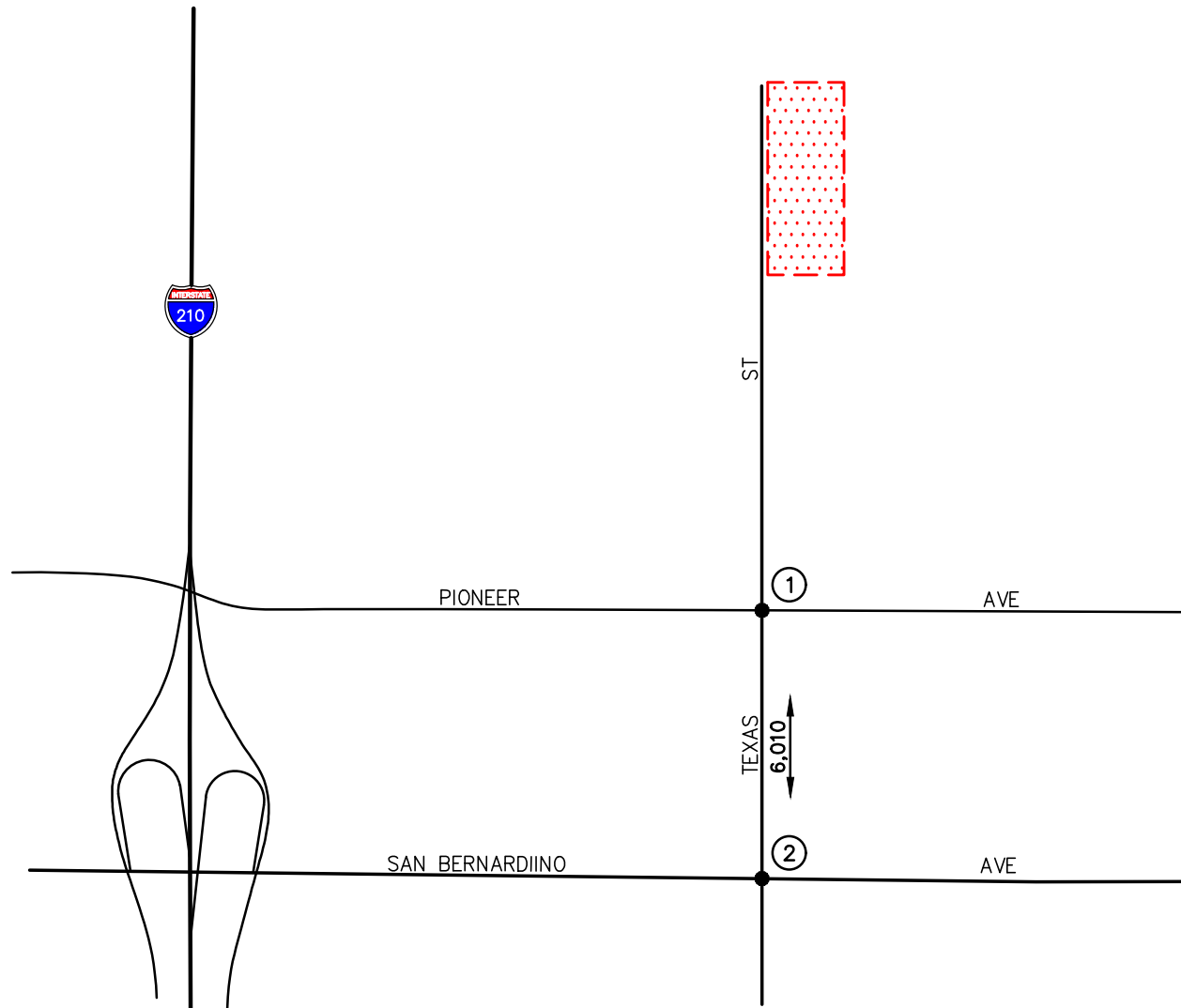
= PROJECT SITE

FIGURE 3-2

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

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KEY

- ① = STUDY INTERSECTION
- XX,XXX = DAILY TRAFFIC VOLUMES
- = PROJECT SITE

FIGURE 3-3

EXISTING PM PEAK HOUR AND DAILY TRAFFIC VOLUMES

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS

3.3 Existing Intersection Conditions

In conformance with City of Redlands and San Bernardino County CMP requirements, existing Weekday AM and Weekday PM peak hour operating conditions for the two (2) key study intersections were evaluated using the methodology outlined in *Chapter 19 of the Highway Capacity Manual 6 (HCM 6)* for signalized intersections.

3.3.1 Highway Capacity Manual (HCM) Method of Analysis (Signalized Intersections)

Based on the HCM operations method of analysis, level of service for signalized intersections and approaches is defined in terms of control delay, which is a measure of the increase in travel time due to traffic signal control, driver discomfort, and fuel consumption. Control delay includes the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed. LOS criteria for traffic signals are stated in terms of the control delay in seconds per vehicle. The LOS thresholds established for the automobile mode at a signalized intersection are shown in *Table 3-1*.

3.4 Level of Service Criteria

According to the City of Redlands, LOS “C” is the minimum acceptable condition that should be maintained during the peak commute hours at all intersections presently at LOS C or better (General Plan Policy 5.20a). Additionally, City of Redlands General Plan Policy 5.20c states that: Where the current level of service at a location within the City of Redlands is below the LOS C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location.

The City of Redlands General Plan Policy 5.20b states that within a specific area within the northwestern portion of the city, LOS C or better shall be maintained; however, a reduced LOS may be accepted on a case-by-case basis upon approval by a four-fifths (4/5) vote of the total authorized membership of the City Council. It should be noted that the Project site is not located within this area.

TABLE 3-1
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (HCM)¹

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent occurrences.
F	≥ 80.0	Severe congestion This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

¹ Source: *Highway Capacity Manual* 6, Chapter 19: Signalized Intersections.

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic characteristics of the proposed Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations and/or rates to the Project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound Project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of Project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway segments and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the effect of project-related traffic is isolated by comparing operational (LOS) conditions at the selected key intersection using expected future traffic volumes with and without forecast project traffic. If necessary, the need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the 11th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2021]. Specifically, trip rates for ITE Land Use 210: Single Family Detached Housing will be used to forecast the trip generation potential of the proposed Project.

A review of the bottom portion of **Table 5-1** shows that the proposed Project is forecast to generate 330 daily trips (one half arriving, one half departing), with 25 trips (7 inbound, 18 outbound) produced in the AM peak hour and 33 trips (21 inbound, 12 outbound) produced in the PM peak hour on a weekday.

5.2 Project Traffic Distribution and Assignment

The general, directional traffic distribution pattern for the proposed Project is presented in **Figure 5-1**. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- the site's proximity to major traffic carriers (i.e. I-210 Freeway, etc.),
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals
- the traffic-carrying capacity and travel speed available on roadways serving the Project site,
- input from City of Redlands staff, and
- ingress/egress availability at the project site.

The anticipated AM and PM peak hour project volumes associated with the proposed Project are presented in **Figures 5-2** and **5-3**, respectively. The traffic volume assignments presented in **Figures 5-2** and **5-3** reflect the traffic distribution characteristics shown in **Figure 5-1** and the traffic generation forecast presented in **Table 5-1**.

5.3 Existing With Project Traffic Conditions

The Existing Plus Project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared to assess the potential effects of Project-related traffic on the circulation system as it currently exists. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to accommodate the traffic circulation effects of the Project, if any.

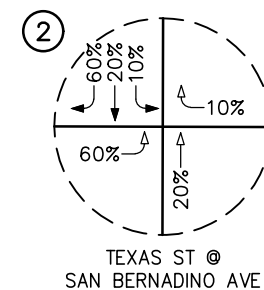
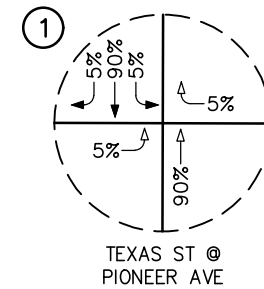
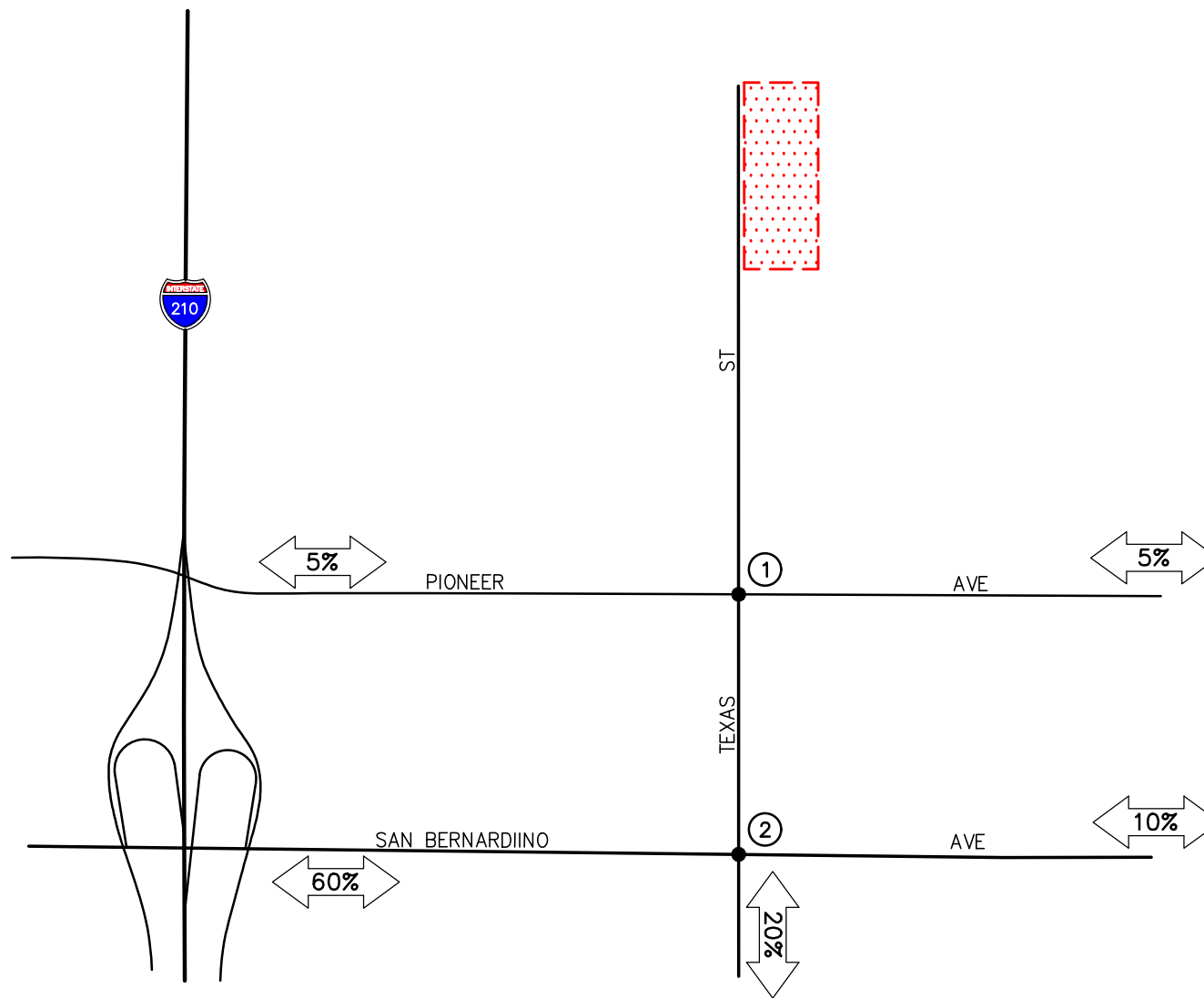
Figures 5-4 and **5-5** present projected AM and PM peak hour traffic volumes at the two (2) key study intersections with the addition of the trips generated by the proposed Project to existing peak hour traffic volumes.

TABLE 5-1
PROJECT TRIP GENERATION FORECAST

Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Trip Rates:</u>							
▪ 210: Single Family Detached Housing (TE/DU)	9.43	26%	74%	0.70	63%	37%	0.94
<u>Project Trip Generation:</u>							
▪ TTLC Redlands Texas – TTM No. 20520 (35 DU)	330	7	18	25	21	12	33
Total Project Trip Generation	330	7	18	25	21	12	33

Notes:

- TE/DU = Trip Ends per Dwelling Unit



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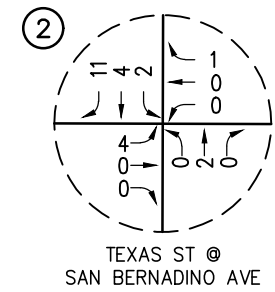
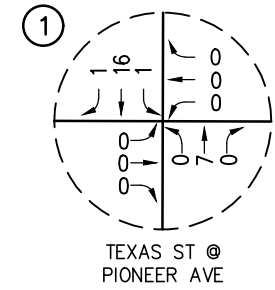
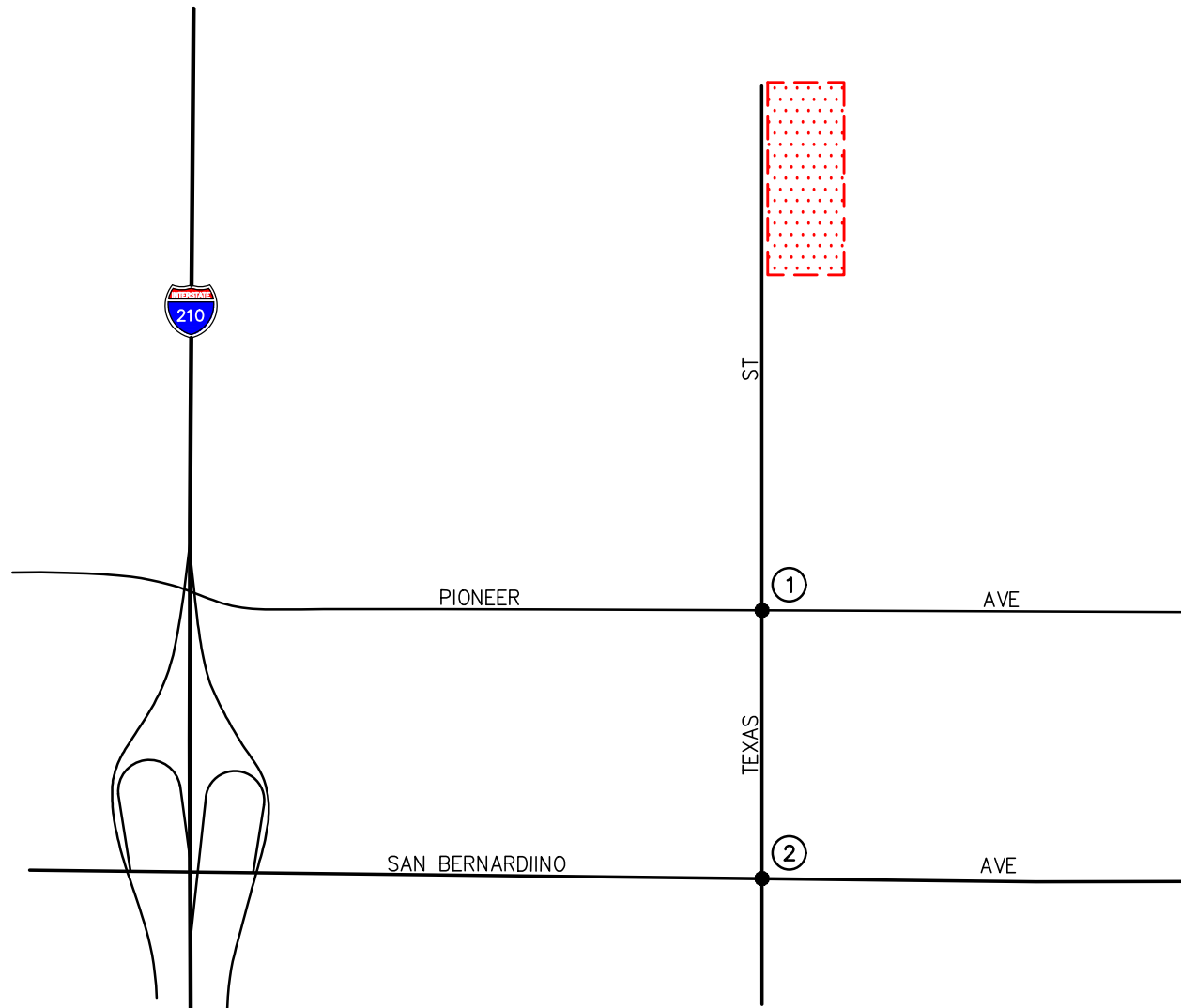
KEY

- ① = STUDY INTERSECTION
- ← = INBOUND PERCENTAGE
- = OUTBOUND PERCENTAGE
- [Red Hatched Box] = PROJECT SITE

FIGURE 5-1

PROJECT TRAFFIC DISTRIBUTION PATTERN

TTLC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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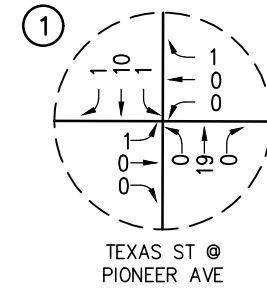
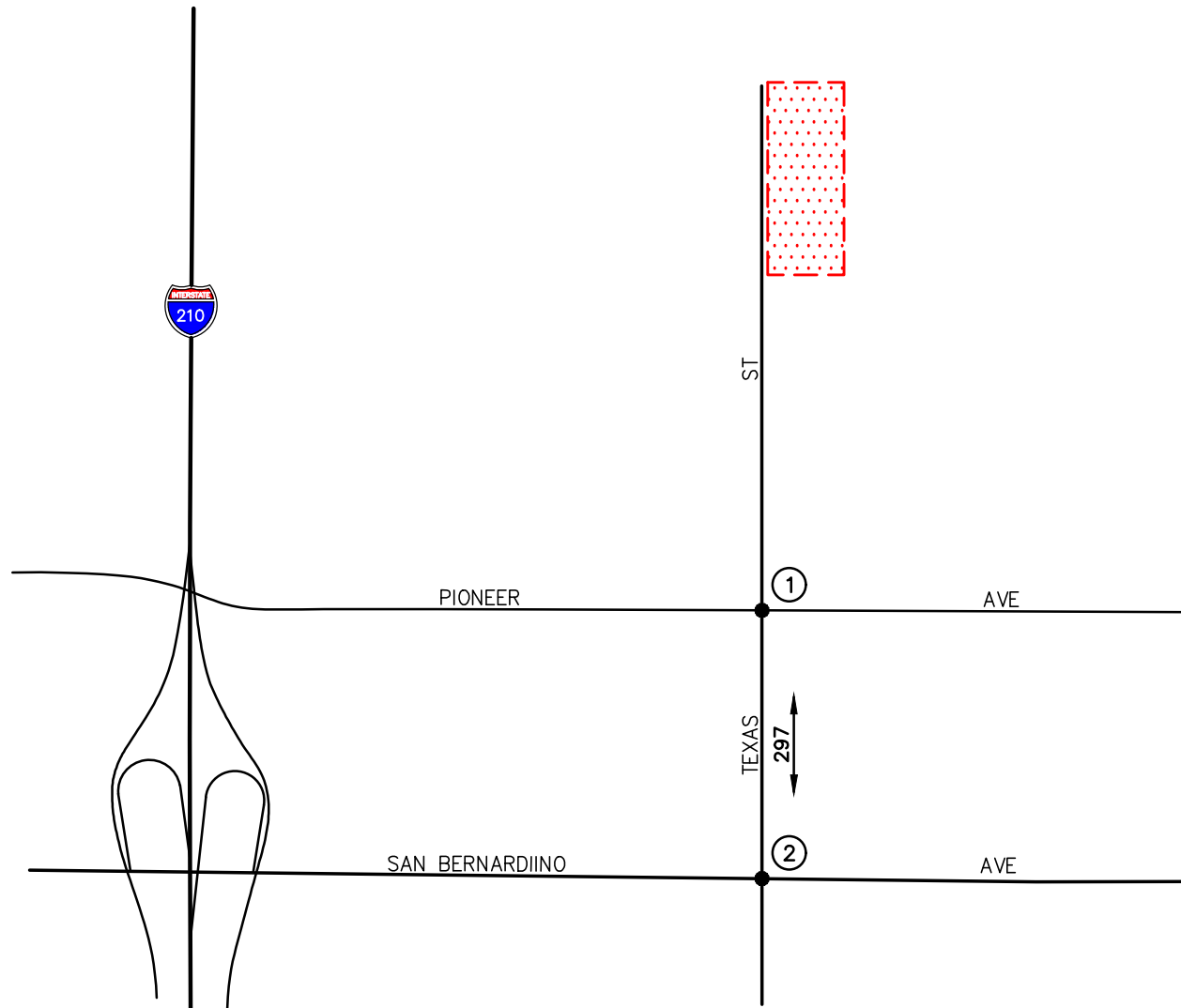
① = STUDY INTERSECTION

▨ = PROJECT SITE

FIGURE 5-2

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

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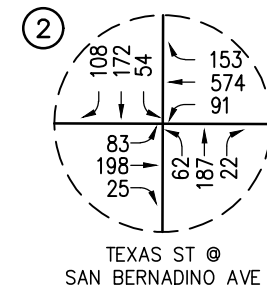
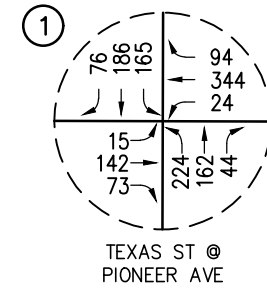
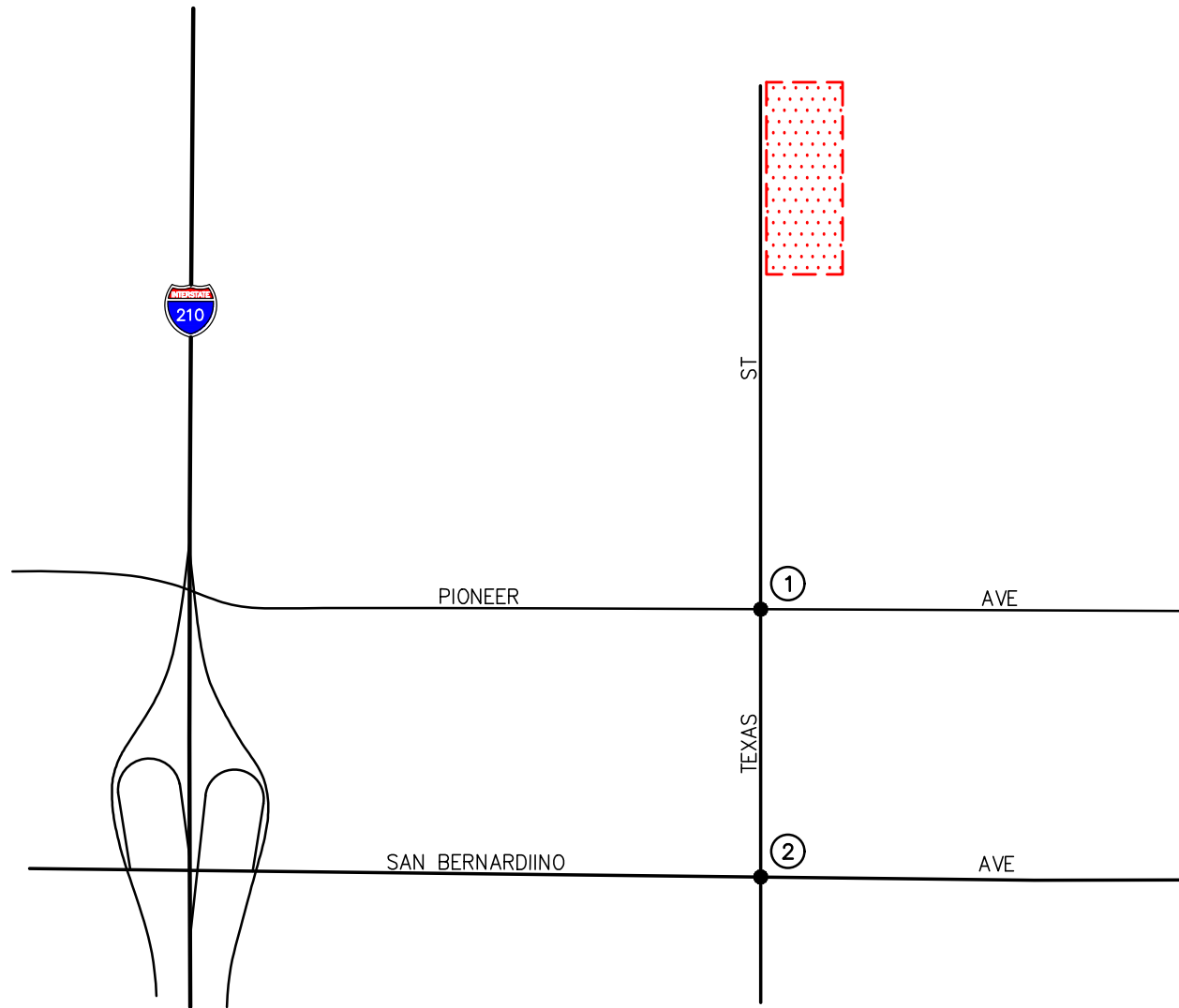
KEY

- # = STUDY INTERSECTION
- XX,XXX = DAILY TRAFFIC VOLUMES
- [Red Dotted Rectangle] = PROJECT SITE

FIGURE 5-3

PM PEAK HOUR AND DAILY PROJECT TRAFFIC VOLUMES

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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NO SCALE

KEY



= STUDY INTERSECTION

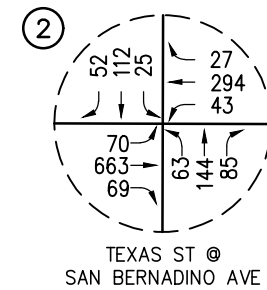
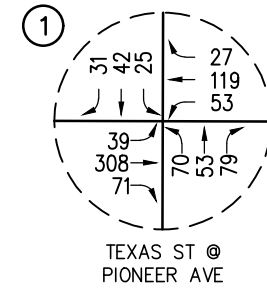
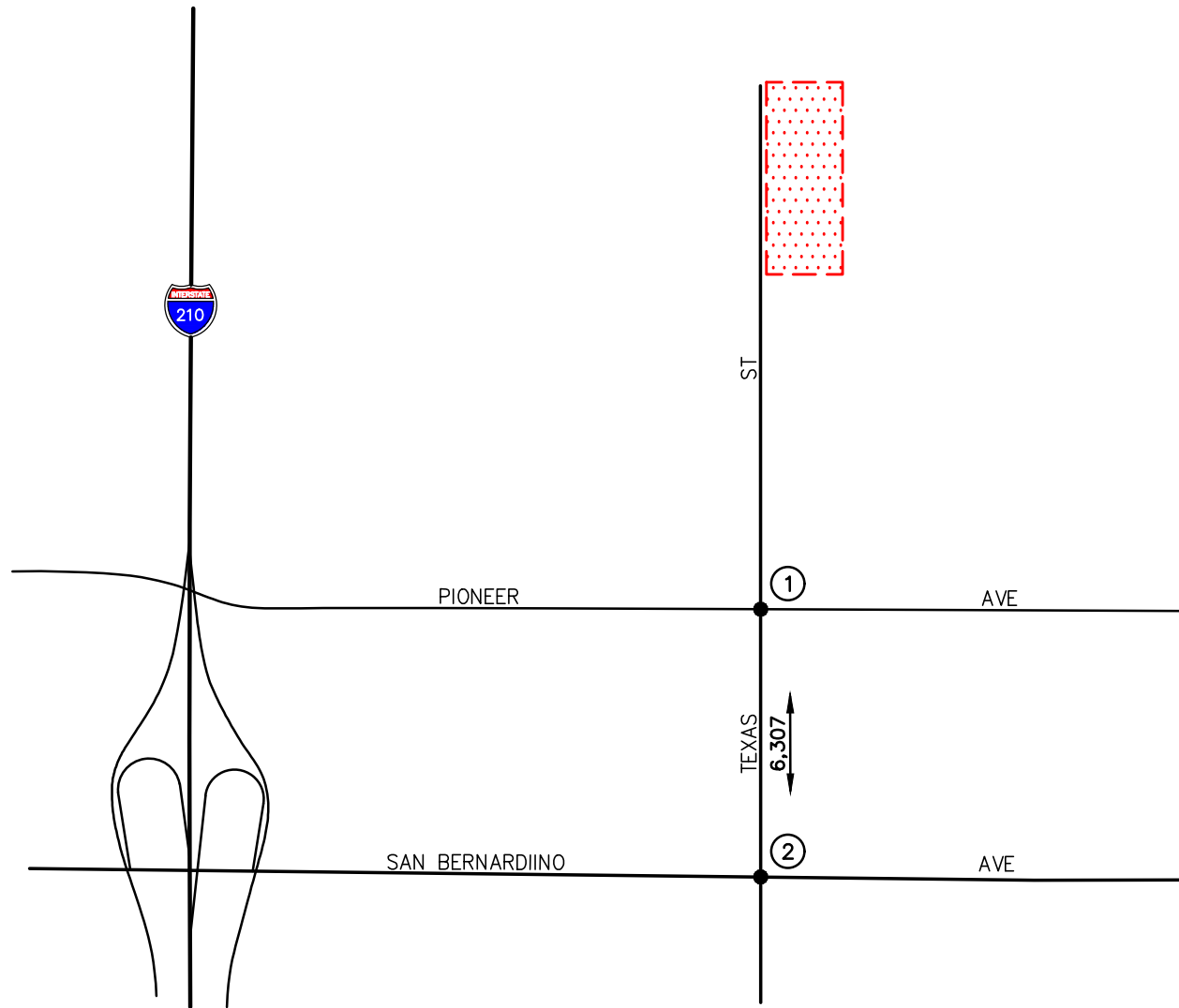


= PROJECT SITE

FIGURE 5-4

EXISTING WITH PROJECT AM PEAK
HOUR TRAFFIC VOLUMES

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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GREENSPAN

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NO SCALE

KEY

- ① = STUDY INTERSECTION
- XX,XXX = DAILY TRAFFIC VOLUMES
- = PROJECT SITE

FIGURE 5-5

EXISTING WITH PROJECT PM PEAK
HOUR AND DAILY TRAFFIC VOLUMES
TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS

6.0 TRAFFIC CIRCULATION ANALYSIS METHODOLOGY

The potential circulation effects of the added peak hour project traffic volumes generated by the Project have been evaluated based on the analysis of existing operating conditions at two (2) key study intersections. Operating conditions at the key study intersections were evaluated during the AM and PM peak hours for existing traffic conditions without, then with the proposed Project.

The previously discussed capacity analysis procedures were utilized to investigate the service level characteristics at each study intersection. The significance of the potential circulation effects of the project at each key intersection was then evaluated using the LOS standards and criteria defined in this report.

6.1 Level of Service Criteria and Thresholds

Per City of Redlands General Plan Policy 5.20a, LOS “C” is the minimum acceptable condition that should be maintained during the peak commute hours at all intersections presently at LOS C or better. Additionally, City of Redlands General Plan Policy 5.20c states that: Where the current level of service at a location within the City of Redlands is below the LOS C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location.

6.2 Traffic Analysis Scenarios

The following scenarios are those for which volume/capacity calculations have been performed at the two (2) key intersections:

1. Existing Traffic Conditions;
2. Existing With Project Traffic Conditions;
3. Scenario (2) with Mitigation, if necessary;

7.0 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

7.1 Existing With Project Traffic Conditions

Table 7-1 summarizes the peak hour level of service results at the two (2) key study intersections for Existing With Project traffic conditions. The first column (1) of HCM/LOS values in *Table 7-1* presents a summary of existing AM and PM peak hour traffic conditions. The second column (2) lists Existing With Project traffic conditions. The third column (3) indicates whether the traffic associated with the Project will exceed the LOS standards and criteria defined in this report. The fourth column (4) indicates the anticipated level of service with planned and/or recommended improvements, where needed.

7.1.1 Existing Traffic Conditions

Review of column (1) of *Table 7-1* indicates that the two (2) key study intersections currently operate at acceptable LOS C during the AM and PM peak hours.

7.1.2 Existing With Project Traffic Conditions

Review of columns (2) and (3) of *Table 7-1* indicates that the two (2) key study intersections will continue to operate at acceptable LOS C during the AM and PM peak hours with the addition of traffic associated with the proposed Project. As such, improvements at the study intersections are not needed based on the LOS standards and criteria specified in this report.

Appendix C presents the HCM/LOS calculations for the key study intersections.

TABLE 7-1
EXISTING WITH PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Study Intersection	Minimum Acceptable LOS	Time Period	(1) Existing Traffic Conditions		(2) Existing With Project Traffic Conditions		(3) Exceed LOS Criteria	(4) Existing With Project With Mitigation	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
1. Texas Street at Pioneer Avenue	C	AM	34.6	C	34.8	C	No	--	--
		PM	31.4	C	31.7	C	No	--	--
2. Texas Street at San Bernardino Avenue	C	AM	21.6	C	21.7	C	No	--	--
		PM	24.3	C	24.4	C	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Table 3-1* for the LOS definitions

8.0 AREA-WIDE TRAFFIC IMPROVEMENTS

The results of the intersection capacity analysis for the proposed Project concludes that the Project will not generate a significant number of new trips requiring intersection improvements to accommodate project traffic.

8.1 Existing With Project Recommended Improvements

The results of the intersection capacity analysis presented previously in *Table 7-1* concludes that the proposed Project will not require intersection improvements at either of the two (2) study intersections.

8.2 City of Redlands Development Impact Fee (DIF) Program

Pursuant to the requirements of the City of Redlands, Development Impact Fees will be required of the Project. The DIF is applied to pay a portion of the costs identified for public facilities, including transportation-related improvements. The current fee schedule as of April 2019 is summarized in *Table 8-1*. The Development Impact Fee is based on the size of all new developments, with the cost per unit or cost per square-foot of development determined based on the type of development (i.e. single family, commercial, industrial, etc.).

Review of *Table 8-1* indicates that the City's Development Impact Fee rate for single-family residential land uses range from \$30.11 per dwelling unit to \$3,959.94 per dwelling unit. Subject to confirmation by City staff, the proposed Project's Development Impact Fee (i.e. 35 dwelling units) totals \$270,568.20.

TABLE 8-1
CITY OF REDLANDS DEVELOPMENT IMPACT FEE SUMMARY²

Land Use Category	Fee per Single Family Dwelling Unit	Project Fee	% of Total Fees
Open Space and Parks	\$3,959.94	\$138,597.90	51.22%
Libraries	\$264.58	\$9,260.30	3.42%
Storm Drain Facilities	\$700.00	\$24,500.00	9.06%
Public Facilities	\$686.45	\$24,025.75	8.88%
Fire Protection Facilities	\$577.08	\$20,197.80	7.46%
Police Facilities	\$30.11	\$1,053.85	0.39%
Transportation System Improvements	\$1,512.36	\$52,932.60	19.57%
Total	\$7,730.52	\$270,568.20	100.00%

² Source: City of Redlands, *Resolution No. 7951*, dated April 2, 2019.

9.0 SITE ACCESS AND INTERNAL CIRCULATION EVALUATION

9.1 Circulation Evaluation

Access to the Project site is proposed to be provided via three (3) cul-de-sacs (Street A, Street B and Street C) along Texas Street, with a 4th cul-de-sac located at the northerly terminus of Texas Street. Access for small service/delivery trucks (i.e. UPS, FedEx, and trash trucks) and fire trucks for the Project site have been evaluated. Our evaluation of the circulation shown on the Project site plan was performed using the *Turning Vehicle Templates*, developed by Jack E. Leisch & Associates and *AutoTURN for AutoCAD* computer software that simulates turning maneuvers for various types of vehicles.

Figures 9-1 and **9-2** illustrates the turning movements required of a small delivery truck (SU-30) and fire truck, respectively, as it circulates throughout the project site. Overall, the turning maneuvers for both SU-30 and fire truck are considered adequate.

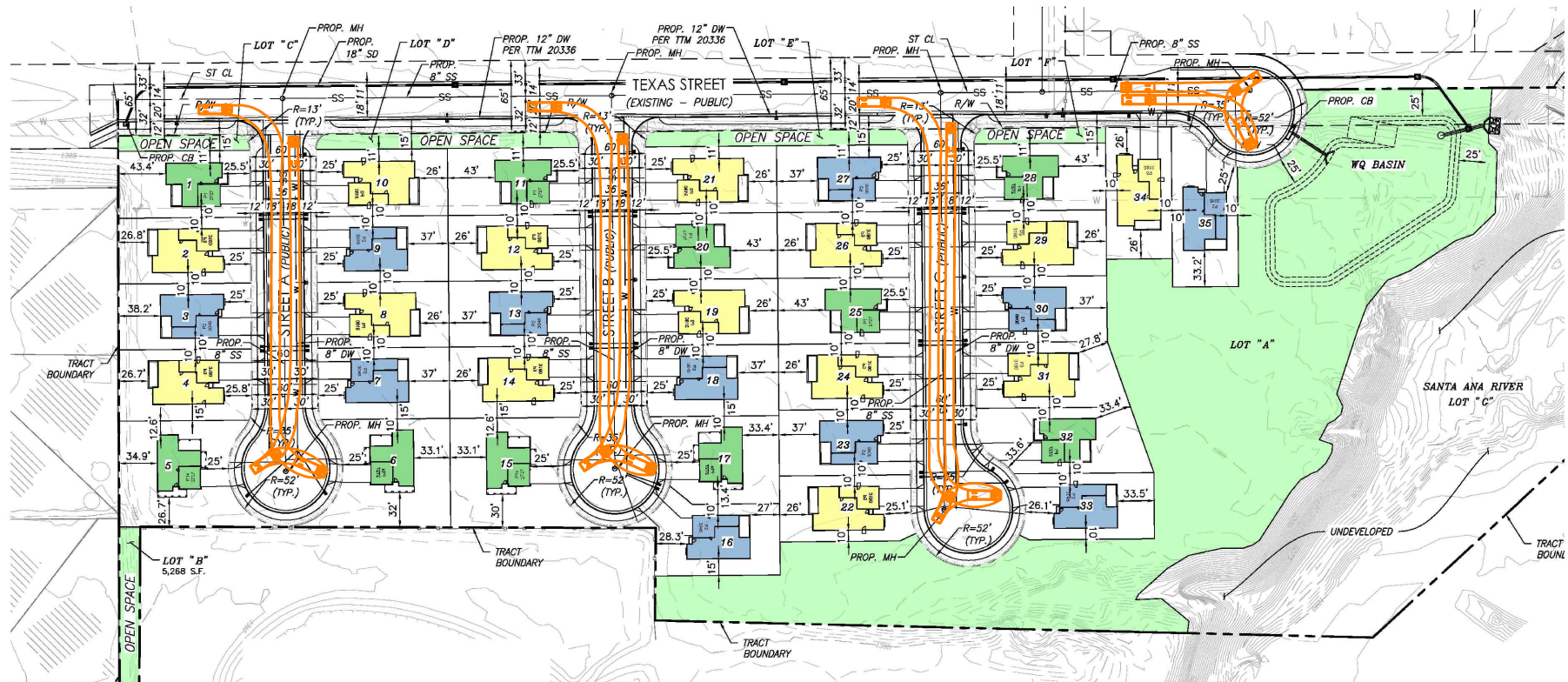
9.2 Sight Distance Evaluation

At intersections and/or project driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross all lanes of through traffic, cross the near lanes and turn left, or turn right, without requiring through traffic to radically alter their speed. A sight distance evaluation has been performed for the three (3) cul-de-sacs (Street A, Street B and Street C) along Texas Street.

The Sight Distance Evaluation prepared for the project driveways are based on the criteria and procedures set forth by the California Department of Transportation (Caltrans) in the State's *Highway Design Manual (HDM)*. Corner sight distance was utilized for the evaluation. Corner sight distance is defined in the Caltrans HDM to be the distance required by the driver of a vehicle, traveling at a given speed, to maneuver their vehicle and avoid an object without radically altering their speed. Line of sight for corner sight distance is to be determined from a 3½ foot height at the location of the driver of a vehicle on a minor road to a 4¼ foot object height in the center of the approaching lane of the major road.

Based on the criteria set forth in Table 405.1A of the Caltrans HDM and a prima facie speed limit of 25 mph along Texas Street, north of Domestic Avenue, a corner sight distance of 276 feet is required for vehicles approaching from the right and a corner sight distance of 239 feet is required for vehicles approaching from the left.

Figure 9-3 presents the results of the sight distance evaluation at the three (3) cul-de-sacs (Street A, Street B and Street C) along Texas Street based on the application of the corner sight distance criteria. The figures illustrate the limited use areas. As shown, the sight lines at the proposed Project driveways are expected to be adequate as long as obstructions within the sight triangles are minimized.



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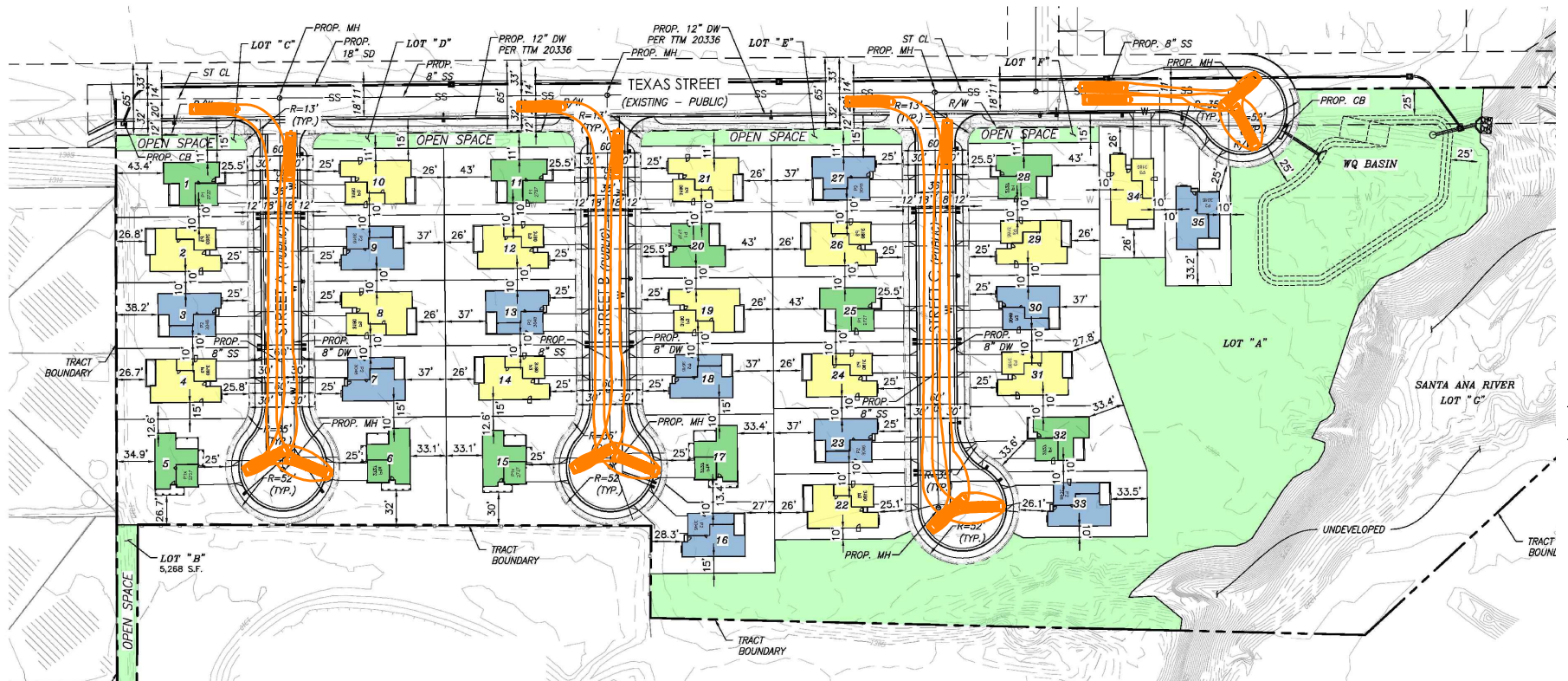


NO SCALE

SOURCE: HUITT-ZOLLARS

FIGURE 9-1

SU-30 TRUCK TURNING ANALYSIS
TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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engineers



SOURCE: HUITT-ZOLLARS

FIGURE 9-2

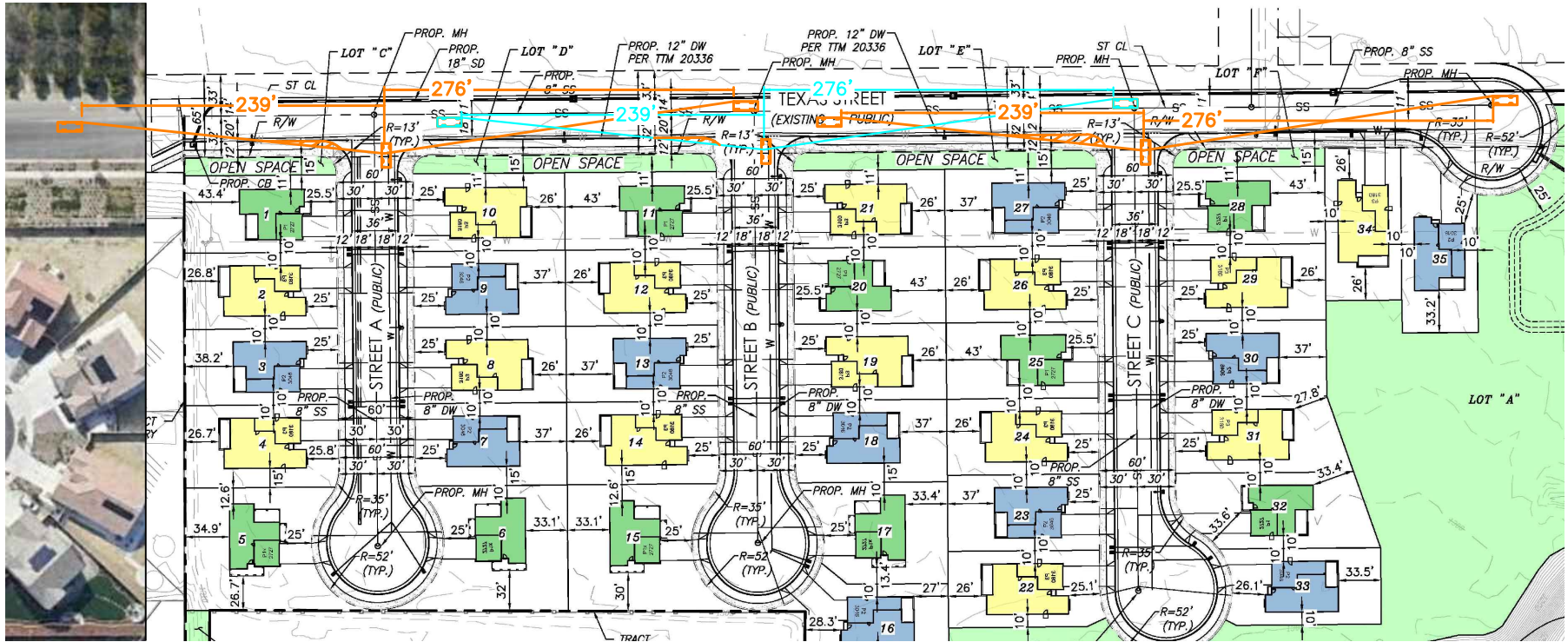
FIRE TRUCK TURNING ANALYSIS
TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS

SIGHT DISTANCE

DESIGN SPEED LIMIT:	25 MPH
REQUIRED CORNER SIGHT DISTANCE LOOKING RIGHT:	276 FEET
REQUIRED CORNER SIGHT DISTANCE LOOKING LEFT:	239 FEET

LEGEND

 PUBLIC RIGHT-OF-WAY LIMITED USE AREA: TO ENSURE ADEQUATE SIGHT DISTANCE, HARDSCAPE AND/OR LANDSCAPE SHALL NOT BE HIGHER THAN 36 INCHES ABOVE THE CURB/SIDEWALK. NO FENCES OR WALLS IN LIMITED USE AREA.



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SOURCE: HUITT-ZOLLARS

FIGURE 9-3

SIGHT DISTANCE ANALYSIS

TTL REDLANDS TEXAS RESIDENTIAL, REDLANDS

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10.0 CITY OF REDLANDS' MEASURE "U" COMPLIANCE

The proposed Project is in compliance with the City of Redlands' Measure "U. The City of Redlands' Measure "U" states:

"The purpose and intent of this initiative measure is to establish comprehensive and inviolable principles of managed development for the City of Redlands that will preserve, enhance and maintain the special quality of life valued by this community. The principles of managed development established by this initiative measure assure that future development within the City of Redlands occurs in a way that promotes the social and economic well-being of the entire community."

More specifically, the proposed Project is in compliance with the following City of Redlands' Measure "U" *"Principals of Managed Development"*:

- Levels of Traffic Service throughout the City Shall Be Maintained, as all of the Project study intersections will operate at acceptable LOS C.
- Collector and Local Street Standards Shall Be Maintained, as the proposed Project will not impact the surrounding Local and Collector roadways.
- Circulation Patterns Shall Protect Residential Neighborhoods from Increased Traffic Congestion, as the proposed Project will distribute traffic directly to the Collector roadways.
- Designated Scenic Highways within the City Shall Be Maintained, as the proposed Project will not distribute traffic onto or impact the Scenic Highways within the City of Redlands.

11.0 SUMMARY OF FINDINGS AND CONCLUSIONS

- ***Project Description*** – The subject property is located along the east side of Texas Street, approximately 500 feet north of Domestic Avenue in the City of Redlands, California. The proposed Project site is a 14,69±-acre rectangular-shaped vacant parcel of land that is zoned Agricultural District – 1 and designated as Very Low Density Residential in the City’s General Plan. The proposed Project includes the development of 35 single-family residential dwelling units. Access to the Project site is proposed to be provided via three (3) cul-de-sacs (Street A, Street B and Street C) that would intersect with Texas Street, with a 4th cul-de-sac located at the northerly terminus of Texas Street.
- ***Study Scope*** – The following two (2) intersections was determined through application of San Bernardino County Congestion Management Program (CMP) criteria and in coordination with City of Redlands staff.

Study Intersections:

1. Texas Street at Pioneer Avenue (City of Redlands)
 2. Texas Street at San Bernardino Avenue (City of Redlands)
- ***Level of Service (LOS) Criteria*** – Per City of Redlands General Plan Policy 5.20a, LOS “C” is the minimum acceptable condition that should be maintained during the peak commute hours at all intersections presently at LOS C or better. Additionally, City of Redlands General Plan Policy 5.20c states that: Where the current level of service at a location within the City of Redlands is below the LOS C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location.
 - ***Project Trip Generation*** – The proposed Project is forecast to generate 330 daily trips (one half arriving, one half departing), with 25 trips (7 inbound, 18 outbound) produced in the AM peak hour and 33 trips (21 inbound, 12 outbound) produced in the PM peak hour on a weekday.
 - ***Existing Traffic Conditions*** – The two (2) key study intersections currently operate at acceptable LOS C during the AM and PM peak hours.
 - ***Existing With Project Traffic Conditions*** – The two (2) key study intersections will continue to operate at acceptable LOS C during the AM and PM peak hours with the addition of traffic associated with the proposed Project. As such, improvements at the study intersections are not needed based on the LOS standards and criteria specified in this report.
 - ***Recommended Existing With Project Intersection Improvements*** – The proposed Project will not require intersection improvements at either of the two (2) study intersections.
 - ***City of Redlands Development Impact Fee Program*** – The City’s Development Impact Fee rate for single-family residential land uses range from \$30.11 per dwelling unit to \$3,959.94 per

dwelling unit. Subject to confirmation by City staff, the proposed Project's Development Impact Fee (i.e. 35 dwelling units) totals \$270,568.20.

- ***Site Access and Internal Circulation Evaluation*** – The turning movements required of a small delivery truck (SU-30) and fire truck as it circulates through the site are considered adequate. Additionally, the sight lines at the proposed Project driveways are expected to be adequate.
- ***Redlands' Measure "U"*** – The proposed Project is in compliance with the City of Redlands' Measure "U which states: *"The purpose and intent of this initiative measure is to establish comprehensive and inviolable principles of managed development for the City of Redlands that will preserve, enhance and maintain the special quality of life valued by this community. The principles of managed development established by this initiative measure assure that future development within the City of Redlands occurs in a way that promotes the social and economic well-being of the entire community."*

APPENDIX A

TRAFFIC STUDY SCOPE OF WORK

MEMORANDUM

LINSCOTT
LAW &
GREENSPAN

engineers

To: Don Young
City of Redlands Public Works Department

Date: September 2, 2022

From: Richard E. Barretto, P.E., Principal
Linscott, Law & Greenspan, Engineers

LLG Ref: 2.22.4589.1

Subject: ***Traffic Impact Analysis and VMT Assessment Scope of Work***
TTLIC Redlands Texas, LLC Single-Family Residential Development Project
(Tentative Tract Map No. 20520)
Redlands, California

Engineers & Planners
Traffic
Transportation
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San Diego
Woodland Hills

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following Traffic Impact Analysis Scope of Work (SOW) associated with a proposed residential community to be developed by TTLIC Redlands Texas (herein referred to as the "Project") located in the City of Redlands. The work plan summarized below is proposed for the preparation of a Traffic Impact Analysis and VMT assessment as required by Measure U and in compliance with the *City of Redlands CEQA Assessment VMT Analysis Guidelines*.

The work program provided herein is based on our prior work experience within the City of Redlands, our understanding of the Project, as well as our discussion of Tuesday, August 30, 2022. The traffic analysis will satisfy the traffic impact requirements of the City of Redlands, will include a full description of Measure U and will be consistent with the requirements of the most current *Congestion Management Program (CMP) for San Bernardino County*.

Traffic Impact Analysis (TIA) Scope of Work

A. Project Description and Location: The subject property is located along the east side of Texas Street, approximately 500 feet north of Domestic Avenue in the City of Redlands, California. The proposed Project site is a 14,69±-acre rectangular-shaped vacant parcel of land that is zoned Agricultural District – 1 and designated as Very Low Density Residential in the City's General Plan. **Figure 1** presents a Vicinity Map, which illustrates the general location of the subject property and depicts the study locations and surrounding street system. **Figure 2** presents the existing aerial photograph of the Project site.

The proposed Project includes the development of 35 single-family residential dwelling units. Access to the Project site is proposed to be provided via three (3) cul-de-sacs (Street A, Street B and Street C) that would intersect with Texas Street, with a 4th cul-de-sac located at the northerly terminus of Texas Street. Streets A, B and C will be constructed to the City's local residential street standard with a paved width of 36-feet within a right-of-way of 60-feet. Texas Street will be constructed to ultimate half-section width per the City's residential

Philip M. Linscott, PE (1924-2000)
Jack M. Greenspan, PE (Ret.)
William A. Law, PE (Ret.)
Paul W. Wilkinson, PE
John P. Keating, PE
David S. Shender, PE
John A. Boorman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE

An LG2WB Company Founded 1966

collector standards (20-feet paved with 32-foot right-of-way), with an additional 14-feet of pavement. **Figure 3** presents the proposed Project site plan prepared by Huitt-Zollars.

- B. Project Trip Generation Forecast:** The trip generation potential of the proposed Project will be estimated using trip rates contained in the 11th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE), [Washington, D.C., 2021]. As shown in the upper portion of **Table 1**, ITE Land Use 210: Single Family Detached Housing will be used to forecast the trip generation potential of the proposed 35-unit residential development.

A review of the bottom portion of *Table 1* shows that the proposed Project is forecast to generate 330 daily trips (one half arriving, one half departing), with 25 trips (7 inbound, 18 outbound) produced in the AM peak hour and 33 trips (21 inbound, 12 outbound) produced in the PM peak hour on a weekday.

In consideration of *Section 2; 1A.60 PRINCIPLE SIX* of Measure U, which would apply to the Project analysis, Measure U does not explicitly identify the trip threshold for determining the requirement for when a level of service (LOS) analysis is necessary and/or which roadways and intersections should be included in such analyses for development Projects. However, historically the threshold for determining the need to perform LOS analyses for the purposes of Measure U compliance and identifying which intersections and roadways to analyze was based on a 50 peak hour trip threshold, as determined from the *County of San Bernardino CMP Traffic Impact Analysis Guidelines* traditionally used by the City for preparation of traffic studies within its jurisdiction.

As a result, subject to review and confirmation by City staff, and based on the Daily, AM peak hour, and PM peak hour trip generation potential of the proposed Project (i.e. < 50 peak hour trips) and Measure U thresholds for significance, the proposed Project is not likely to adversely impact the surrounding transportation system. Regardless, an LOS analysis will be prepared to address the Measure U requirements.

- C. Study Area:** Subject to the direction and requirements of the City, the following study intersections listed below are locations that will be evaluated to assess the LOS impact of the proposed Project in compliance with Measure U. The two (2) intersections listed below were selected based on Project location:

1. Pioneer Avenue Street at Texas Street
2. San Bernardino Avenue at Texas Street

Traffic data collection effort for the key study locations will be completed during the weekday AM peak period and PM peak period in September 2022 to establish baseline (existing) traffic volume conditions.

- D. *Existing plus Project Traffic:*** Existing plus Project traffic volumes will be developed by assigning Project traffic to existing traffic volumes at the study intersections based on the Project trip generation applied to the Project traffic distribution pattern. **Figure 4** presents the Project's anticipated trip distribution pattern.
- E. *Traffic Impact Analysis Scenarios:*** The following scenarios are those for which Weekday AM peak hour and PM peak hour Delay and corresponding LOS calculations will be performed at the key intersections for Existing plus Project conditions as required by Measure U:
1. Existing Traffic Conditions,
 2. Existing With Project Traffic Conditions,
 3. Scenario (2) with Recommended Improvements, if any,

The Level of Service (LOS) calculations will be based on Highway Capacity Manual (HCM) method of analysis for signalized intersections and unsignalized intersections. In addition CMP guidelines will be followed for HCM default values, costs, analysis, etc.

- F. *Site Access and Internal Circulation:*** Evaluate site access of the Project and internal circulation. Ensure that all access locations will provide safe egress and ingress including adequate sight distance in all directions.
- G. *Traffic Impact Analysis:*** Prepare a traffic impact analysis report that details all of the above-mentioned items, the analysis, findings and conclusions. The report will be suitably documented with tabular, graphic and appendix materials.

VMT (SB 743) Assessment Scope of Work

- A. *VMT Screening:*** Review Project's development totals and review the *City of Redlands CEQA Assessment VMT Analysis Guidelines*, with a focus to Project Screening, to confirm if the Project screens-out of a Project-level assessment is needed (i.e. TPA, Low VMT and/or Low Project type screening).
- B. *VMT Memorandum:*** Prepare a separate VMT Assessment Memorandum indicating what criteria is satisfied and how the proposed Project will screen out from a full VMT analysis, based on the California Governor's Office of Planning and Research (OPR) guidelines and *City of Redlands CEQA Assessment VMT Analysis Guidelines*.

* * * * *

We appreciate the opportunity to provide this Traffic Impact Analysis and VMT Scope of Work. Should you have any questions, please call us at (949) 825-6175. Thank You.

Approved by:

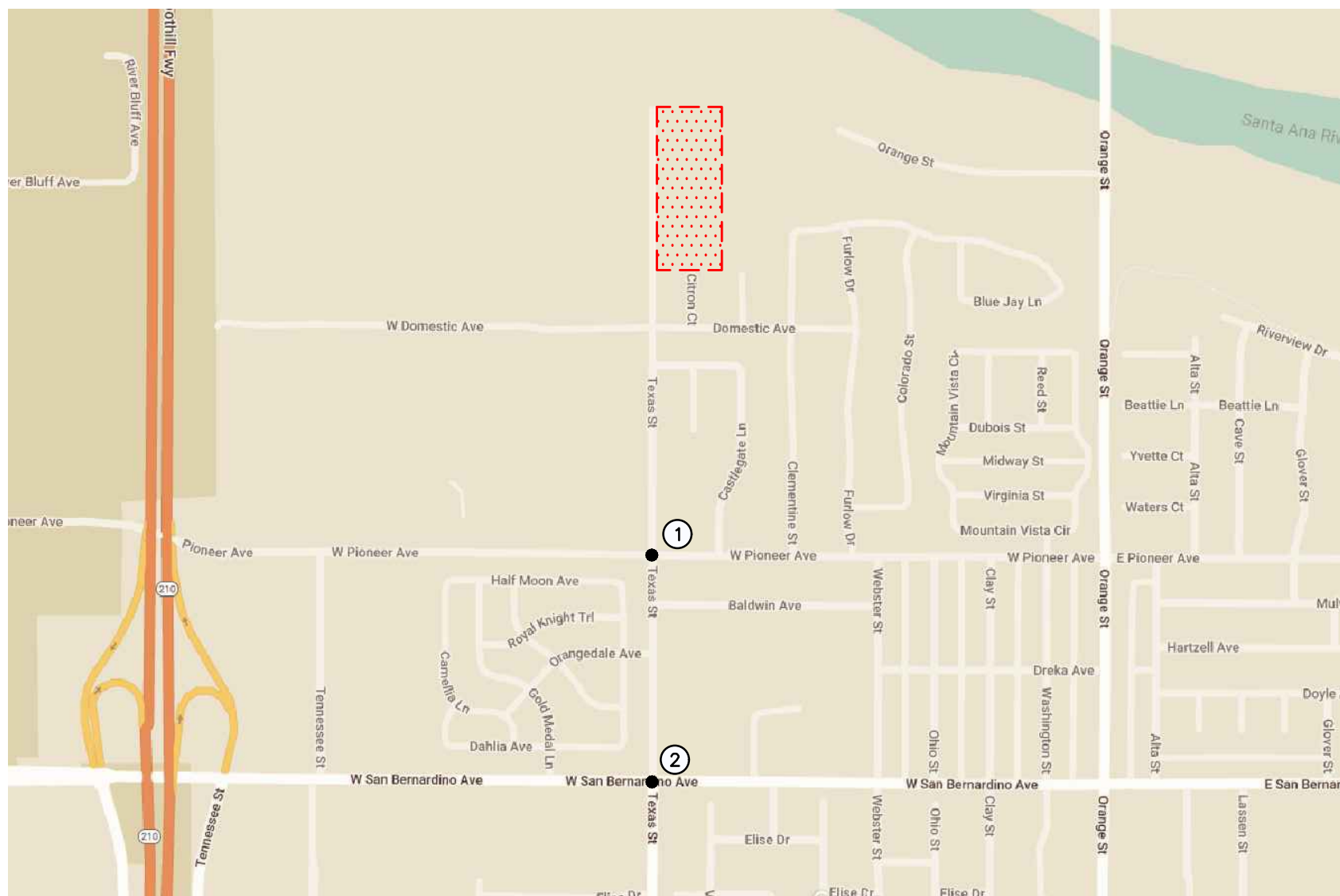
City of Redlands, Public Works Department

Date

Attachment

Cc: Sean Reilly, City of Redlands, Planning Department
Jaren Nuzman, TK Consulting, Inc.
Brett Little, Urban Advisory & Building Group, LLC

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SOURCE: GOOGLE

KEY

 = PROJECT SITE

FIGURE 1

VICINITY MAP

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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SOURCE: GOOGLE

KEY

 = PROJECT SITE

FIGURE 2

EXISTING SITE AERIAL
TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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SOURCE: HUITT-ZOLLARS

FIGURE 3

PROPOSED SITE PLAN

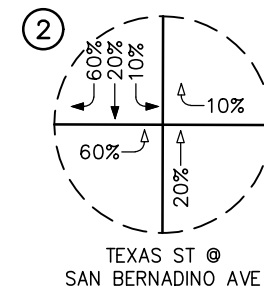
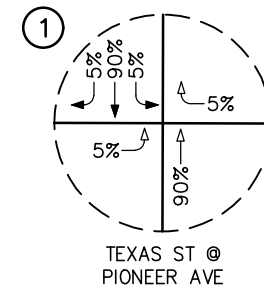
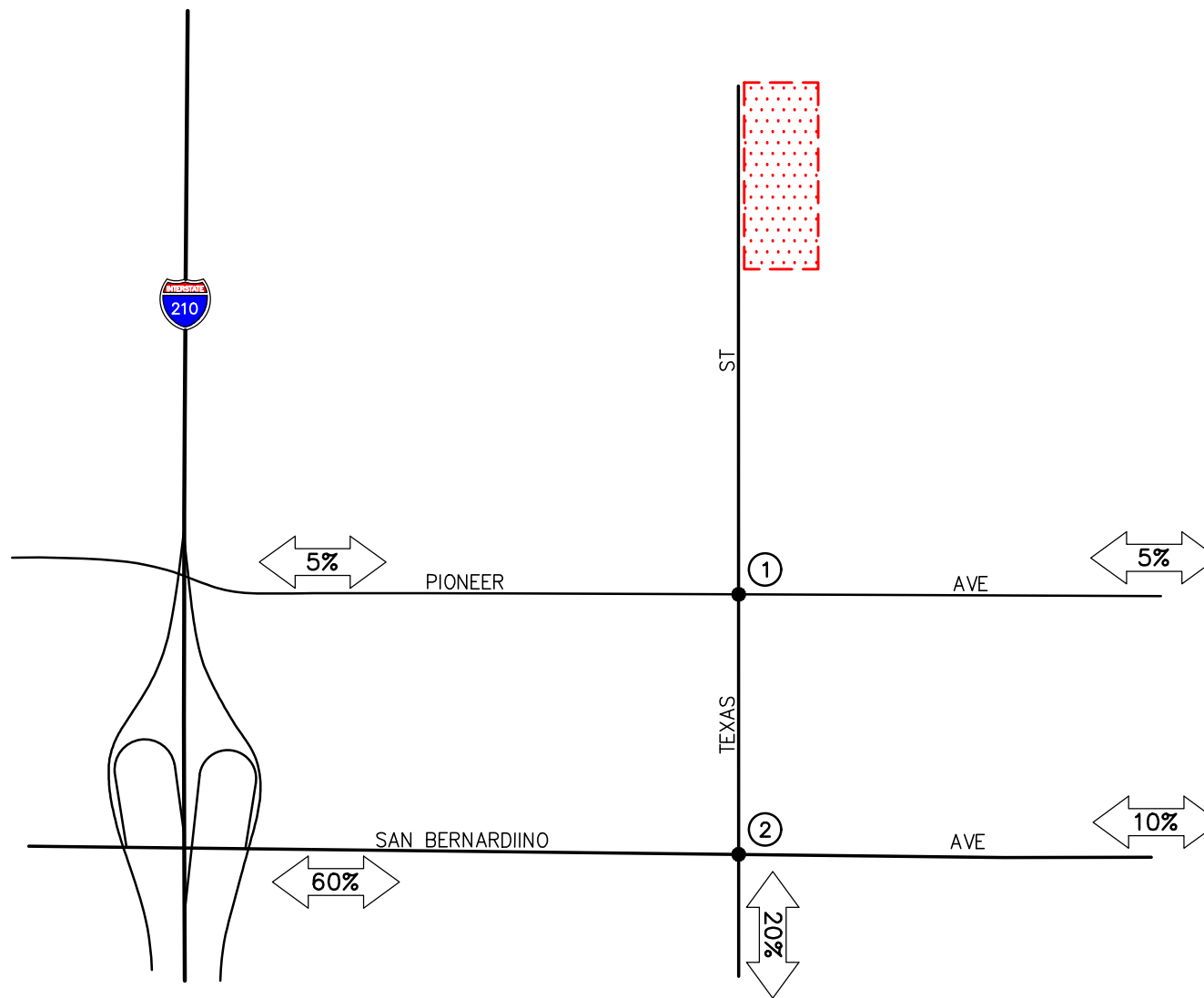
TLC REDLANDS TEXAS RESIDENTIAL, REDLANDS

LINSCOTT
LAW &
GREENSPAN

engineers



NO SCALE



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LINSCOTT
LAW &
GREENSPAN



NO SCALE

engineers

KEY

- ① = STUDY INTERSECTION
- ← = INBOUND PERCENTAGE
- = OUTBOUND PERCENTAGE
- = PROJECT SITE

FIGURE 4

PROJECT TRIP DISTRIBUTION PATTERN
TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS

TABLE 1
PROJECT TRAFFIC GENERATION RATES AND FORECAST¹

Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Trip Rates:</u>							
▪ 210: Single Family Detached Housing (TE/DU)	9.43	26%	74%	0.70	63%	37%	0.94
<u>Project Trip Generation:</u>							
▪ TTLC Redlands Texas -TTM No.20520 (35 DU)	330	7	18	25	21	12	33
Total Project Trip Generation	330	7	18	25	21	12	33

¹ Source: *Trip Generation*, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021).

APPENDIX B

EXISTING TRAFFIC COUNT DATA

APPENDIX B-1

INTERSECTION COUNTS

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio AM
Site Code : 05722809
Start Date : 9/21/2022
Page No : 1

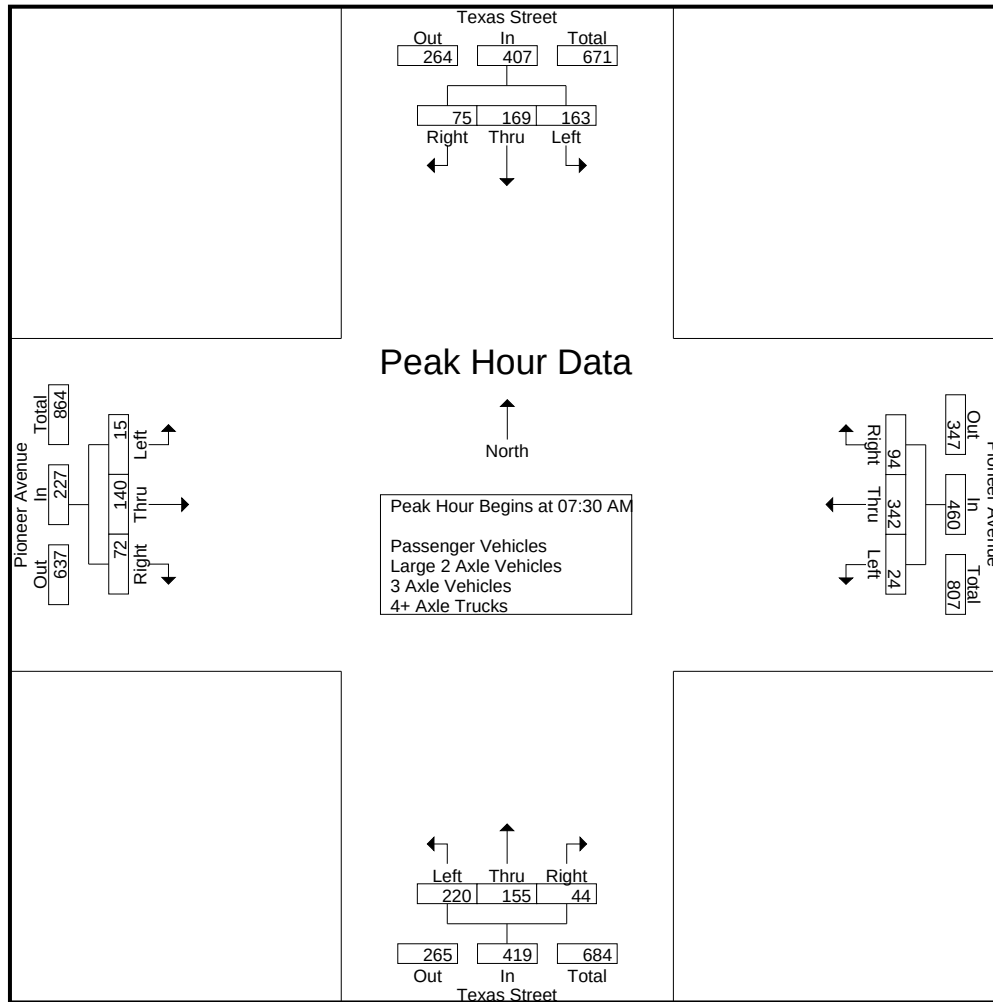
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	9	9	18	16	30	3	49	7	1	7	15	7	3	5	15	97
07:15 AM	7	19	3	29	11	64	11	86	26	9	4	39	3	23	19	45	199
07:30 AM	17	24	14	55	12	76	14	102	18	16	5	39	1	23	8	32	228
07:45 AM	24	23	13	60	4	79	32	115	43	29	11	83	1	30	15	46	304
Total	48	75	39	162	43	249	60	352	94	55	27	176	12	79	47	138	828
08:00 AM	48	45	19	112	5	97	27	129	81	39	20	140	6	43	22	71	452
08:15 AM	74	77	29	180	3	90	21	114	78	71	8	157	7	44	27	78	529
08:30 AM	17	35	8	60	5	28	3	36	14	10	10	34	7	29	26	62	192
08:45 AM	0	5	4	9	10	20	1	31	7	6	8	21	3	13	4	20	81
Total	139	162	60	361	23	235	52	310	180	126	46	352	23	129	79	231	1254
Grand Total	187	237	99	523	66	484	112	662	274	181	73	528	35	208	126	369	2082
Apprch %	35.8	45.3	18.9		10	73.1	16.9		51.9	34.3	13.8		9.5	56.4	34.1		
Total %	9	11.4	4.8	25.1	3.2	23.2	5.4	31.8	13.2	8.7	3.5	25.4	1.7	10	6.1	17.7	
Passenger Vehicles	185	235	99	519	65	481	112	658	271	179	73	523	35	206	124	365	2065
% Passenger Vehicles	98.9	99.2	100	99.2	98.5	99.4	100	99.4	98.9	98.9	100	99.1	100	99	98.4	98.9	99.2
Large 2 Axle Vehicles	2	2	0	4	1	0	0	1	0	2	0	2	0	1	1	2	9
% Large 2 Axle Vehicles	1.1	0.8	0	0.8	1.5	0	0	0.2	0	1.1	0	0.4	0	0.5	0.8	0.5	0.4
3 Axle Vehicles	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
% 3 Axle Vehicles	0	0	0	0	0	0.6	0	0.5	0	0	0	0	0	0.5	0	0.3	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	4
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	1.1	0	0	0.6	0	0	0.8	0.3	0.2

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	17	24	14	55	12	76	14	102	18	16	5	39	1	23	8	32	228
07:45 AM	24	23	13	60	4	79	32	115	43	29	11	83	1	30	15	46	304
08:00 AM	48	45	19	112	5	97	27	129	81	39	20	140	6	43	22	71	452
08:15 AM	74	77	29	180	3	90	21	114	78	71	8	157	7	44	27	78	529
Total Volume	163	169	75	407	24	342	94	460	220	155	44	419	15	140	72	227	1513
% App. Total	40	41.5	18.4		5.2	74.3	20.4		52.5	37	10.5		6.6	61.7	31.7		
PHF	.551	.549	.647	.565	.500	.881	.734	.891	.679	.546	.550	.667	.536	.795	.667	.728	.715

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:30 AM				07:45 AM			
+0 mins.	24	23	13	60	12	76	14	102	18	16	5	39	1	30	15	46
+15 mins.	48	45	19	112	4	79	32	115	43	29	11	83	6	43	22	71
+30 mins.	74	77	29	180	5	97	27	129	81	39	20	140	7	44	27	78
+45 mins.	17	35	8	60	3	90	21	114	78	71	8	157	7	29	26	62
Total Volume	163	180	69	412	24	342	94	460	220	155	44	419	21	146	90	257
% App. Total	39.6	43.7	16.7		5.2	74.3	20.4		52.5	37	10.5		8.2	56.8	35	
PHF	.551	.584	.595	.572	.500	.881	.734	.891	.679	.546	.550	.667	.750	.830	.833	.824

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio AM
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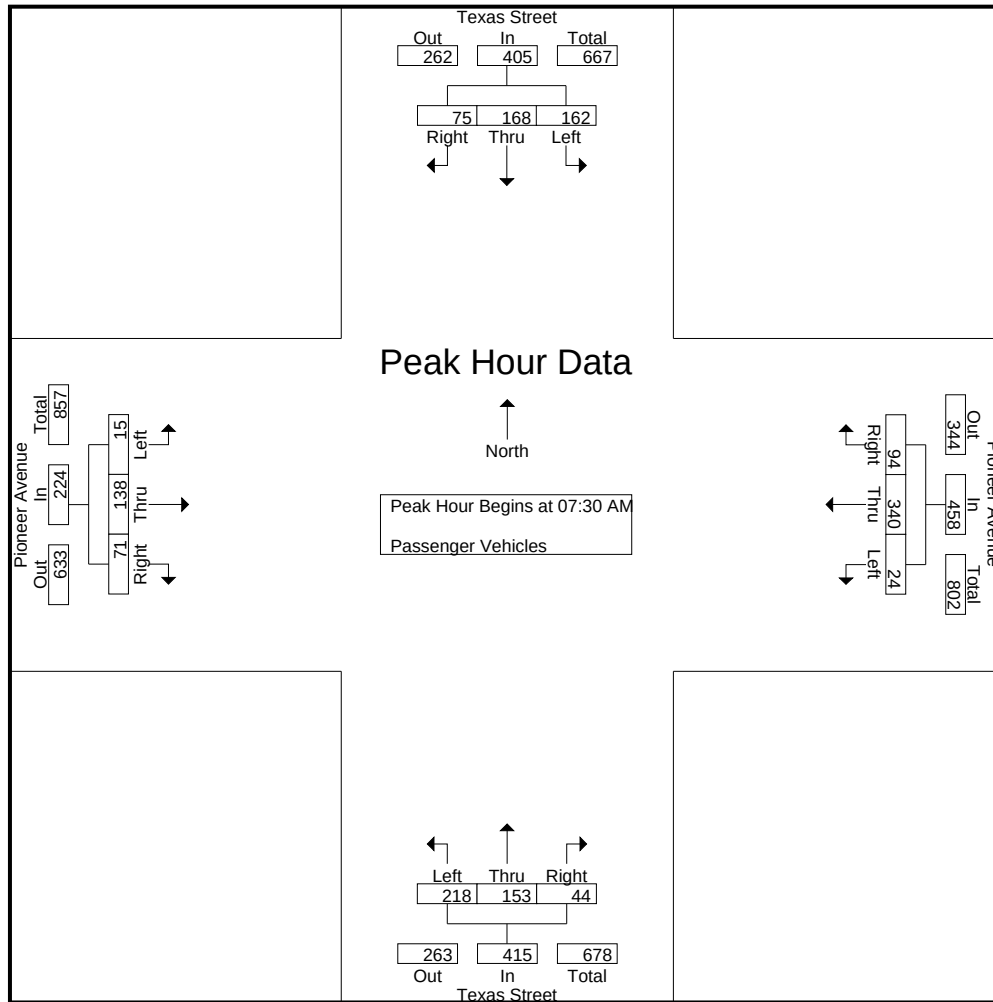
Groups Printed- Passenger Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	9	9	18	15	29	3	47	7	1	7	15	7	3	5	15	95
07:15 AM	7	19	3	29	11	64	11	86	26	9	4	39	3	23	18	44	198
07:30 AM	17	24	14	55	12	76	14	102	17	15	5	37	1	21	7	29	223
07:45 AM	24	23	13	60	4	78	32	114	42	29	11	82	1	30	15	46	302
Total	48	75	39	162	42	247	60	349	92	54	27	173	12	77	45	134	818
08:00 AM	48	45	19	112	5	96	27	128	81	39	20	140	6	43	22	71	451
08:15 AM	73	76	29	178	3	90	21	114	78	70	8	156	7	44	27	78	526
08:30 AM	16	34	8	58	5	28	3	36	14	10	10	34	7	29	26	62	190
08:45 AM	0	5	4	9	10	20	1	31	6	6	8	20	3	13	4	20	80
Total	137	160	60	357	23	234	52	309	179	125	46	350	23	129	79	231	1247
Grand Total	185	235	99	519	65	481	112	658	271	179	73	523	35	206	124	365	2065
Apprch %	35.6	45.3	19.1		9.9	73.1	17		51.8	34.2	14		9.6	56.4	34		
Total %	9	11.4	4.8	25.1	3.1	23.3	5.4	31.9	13.1	8.7	3.5	25.3	1.7	10	6	17.7	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	17	24	14	55	12	76	14	102	17	15	5	37	1	21	7	29	223
07:45 AM	24	23	13	60	4	78	32	114	42	29	11	82	1	30	15	46	302
08:00 AM	48	45	19	112	5	96	27	128	81	39	20	140	6	43	22	71	451
08:15 AM	73	76	29	178	3	90	21	114	78	70	8	156	7	44	27	78	526
Total Volume	162	168	75	405	24	340	94	458	218	153	44	415	15	138	71	224	1502
% App. Total	40	41.5	18.5		5.2	74.2	20.5		52.5	36.9	10.6		6.7	61.6	31.7		
PHF	.555	.553	.647	.569	.500	.885	.734	.895	.673	.546	.550	.665	.536	.784	.657	.718	.714

City of Redlands
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Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	17	24	14	55	12	76	14	102	17	15	5	37	1	21	7	29
+15 mins.	24	23	13	60	4	78	32	114	42	29	11	82	1	30	15	46
+30 mins.	48	45	19	112	5	96	27	128	81	39	20	140	6	43	22	71
+45 mins.	73	76	29	178	3	90	21	114	78	70	8	156	7	44	27	78
Total Volume	162	168	75	405	24	340	94	458	218	153	44	415	15	138	71	224
% App. Total	40	41.5	18.5		5.2	74.2	20.5		52.5	36.9	10.6		6.7	61.6	31.7	
PHF	.555	.553	.647	.569	.500	.885	.734	.895	.673	.546	.550	.665	.536	.784	.657	.718

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio AM
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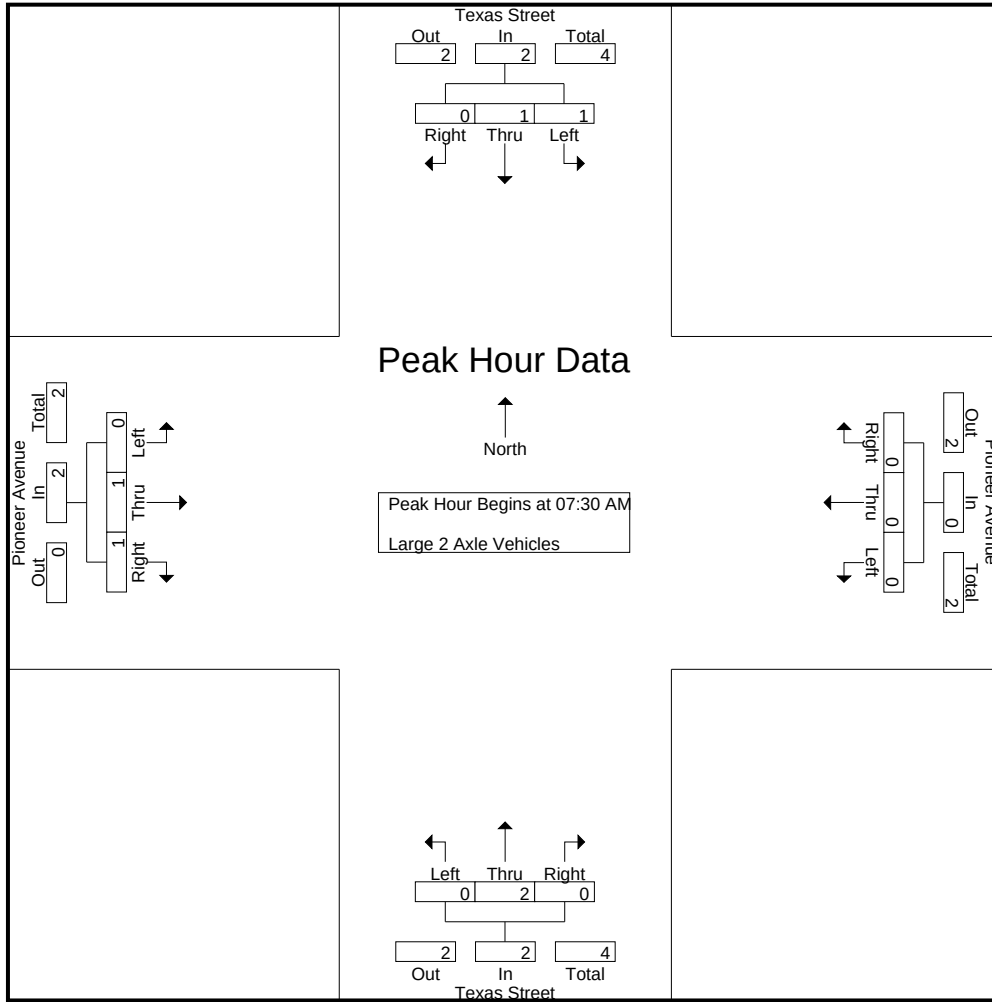
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	1	0	1	0	1	1	2	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:30 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Grand Total	2	2	0	4	1	0	0	1	0	2	0	2	0	1	1	2	9
Apprch %	50	50	0		100	0	0		0	100	0		0	50	50		
Total %	22.2	22.2	0	44.4	11.1	0	0	11.1	0	22.2	0	22.2	0	11.1	11.1	22.2	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total Volume	1	1	0	2	0	0	0	0	0	2	0	2	0	1	1	2	6
% App. Total	50	50	0		0	0	0		0	100	0		0	50	50		
PHF	.250	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.250	.250	.500

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	1	1	0	2	0	0	0	0	0	2	0	2	0	1	1	2
% App. Total	50	50	0		0	0	0		0	100	0		0	50	50	
PHF	.250	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.250	.250

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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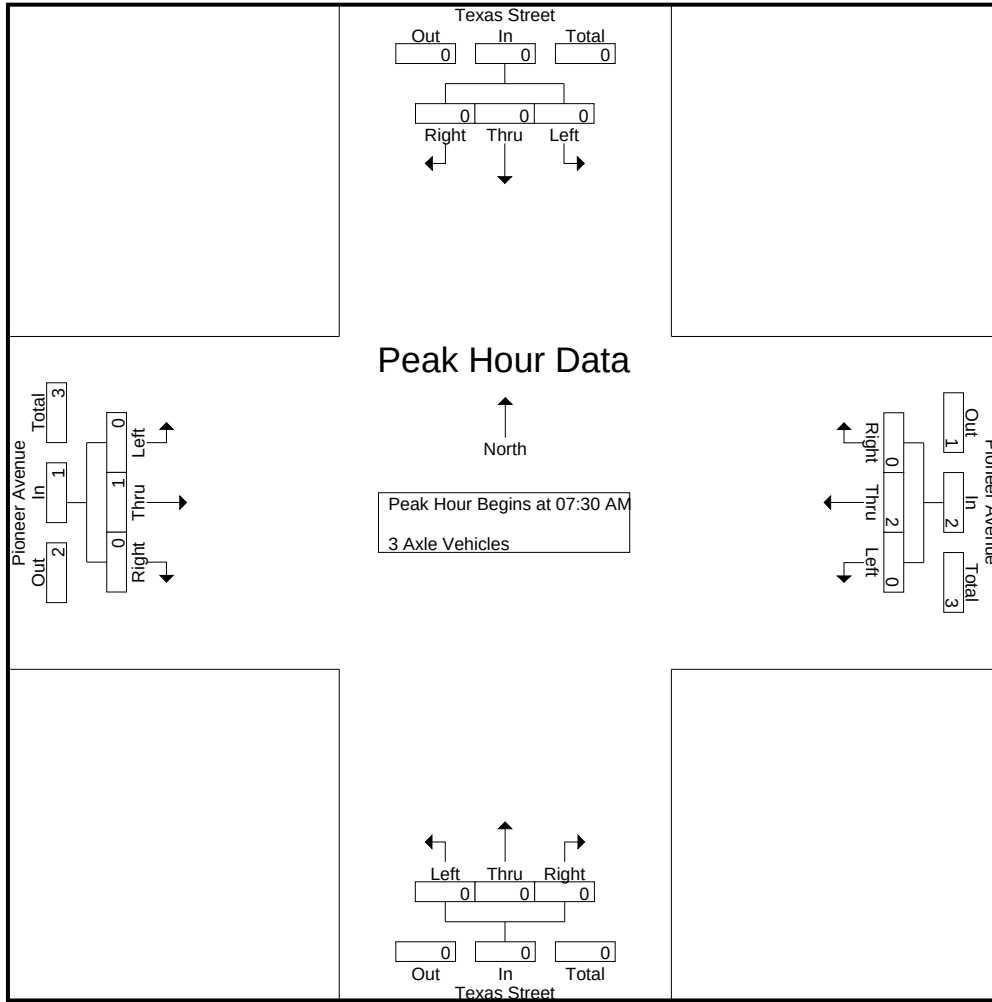
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	75	0	75	0	0	0	0	0	25	0	25	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.750

City of Redlands
N/S: Texas Street
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Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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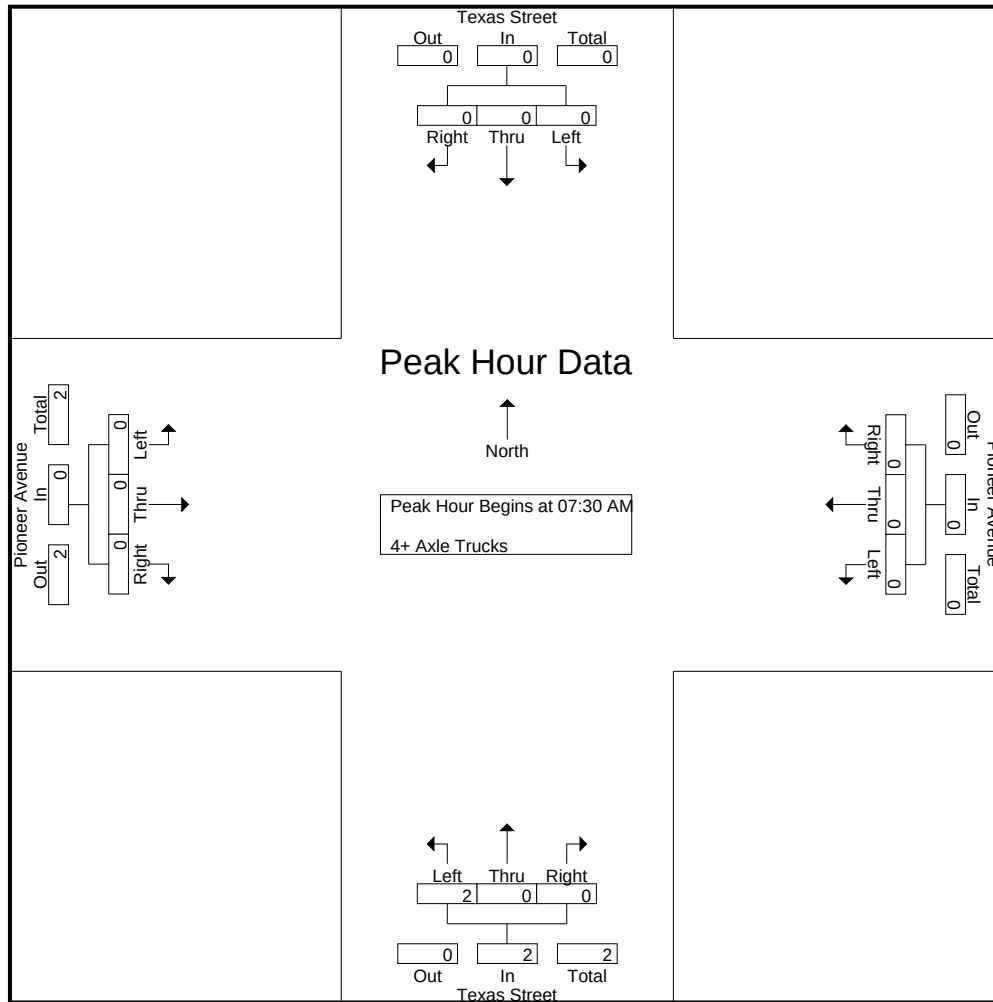
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	4
Apprch %	0	0	0		0	0	0		100	0	0		0	0	100		
Total %	0	0	0	0	0	0	0	0	75	0	0	75	0	0	25	25	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		100	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.500

City of Redlands
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Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000

City of Redlands
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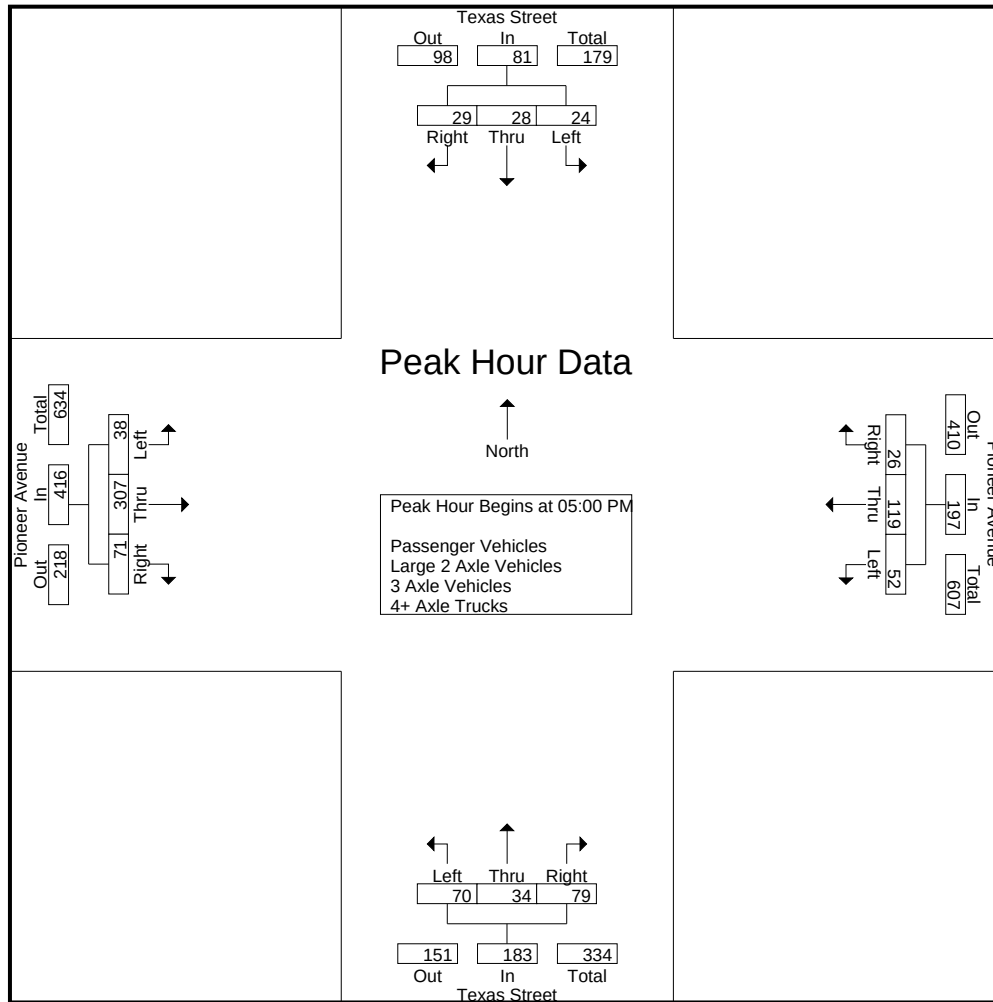
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	11	6	12	29	6	22	0	28	13	14	17	44	9	65	19	93	194
04:15 PM	2	4	2	8	12	27	2	41	10	8	25	43	4	52	22	78	170
04:30 PM	4	9	5	18	8	12	0	20	8	6	18	32	9	61	14	84	154
04:45 PM	2	4	3	9	16	22	2	40	11	8	17	36	8	62	15	85	170
Total	19	23	22	64	42	83	4	129	42	36	77	155	30	240	70	340	688
05:00 PM	1	7	5	13	11	20	6	37	12	6	19	37	10	72	12	94	181
05:15 PM	8	11	7	26	14	35	14	63	9	15	19	43	15	82	18	115	247
05:30 PM	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113	238
05:45 PM	6	4	4	14	16	32	2	50	28	5	20	53	3	69	22	94	211
Total	24	28	29	81	52	119	26	197	70	34	79	183	38	307	71	416	877
Grand Total	43	51	51	145	94	202	30	326	112	70	156	338	68	547	141	756	1565
Apprch %	29.7	35.2	35.2		28.8	62	9.2		33.1	20.7	46.2		9	72.4	18.7		
Total %	2.7	3.3	3.3	9.3	6	12.9	1.9	20.8	7.2	4.5	10	21.6	4.3	35	9	48.3	
Passenger Vehicles	42	45	49	136	93	202	30	325	112	70	156	338	68	546	141	755	1554
% Passenger Vehicles	97.7	88.2	96.1	93.8	98.9	100	100	99.7	100	100	100	100	100	99.8	100	99.9	99.3
Large 2 Axle Vehicles	1	3	2	6	1	0	0	1	0	0	0	0	0	1	0	1	8
% Large 2 Axle Vehicles	2.3	5.9	3.9	4.1	1.1	0	0	0.3	0	0	0	0	0	0.2	0	0.1	0.5
3 Axle Vehicles	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% 3 Axle Vehicles	0	3.9	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	2	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0.1

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	7	5	13	11	20	6	37	12	6	19	37	10	72	12	94	181
05:15 PM	8	11	7	26	14	35	14	63	9	15	19	43	15	82	18	115	247
05:30 PM	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113	238
05:45 PM	6	4	4	14	16	32	2	50	28	5	20	53	3	69	22	94	211
Total Volume	24	28	29	81	52	119	26	197	70	34	79	183	38	307	71	416	877
% App. Total	29.6	34.6	35.8		26.4	60.4	13.2		38.3	18.6	43.2		9.1	73.8	17.1		
PHF	.667	.636	.558	.723	.813	.850	.464	.782	.625	.567	.940	.863	.633	.914	.807	.904	.888

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	1	7	5	13	11	20	6	37	12	6	19	37	10	72	12	94
+15 mins.	8	11	7	26	14	35	14	63	9	15	19	43	15	82	18	115
+30 mins.	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113
+45 mins.	6	4	4	14	16	32	2	50	28	5	20	53	3	69	22	94
Total Volume	24	28	29	81	52	119	26	197	70	34	79	183	38	307	71	416
% App. Total	29.6	34.6	35.8		26.4	60.4	13.2		38.3	18.6	43.2		9.1	73.8	17.1	
PHF	.667	.636	.558	.723	.813	.850	.464	.782	.625	.567	.940	.863	.633	.914	.807	.904

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
Start Date : 9/21/2022
Page No : 1

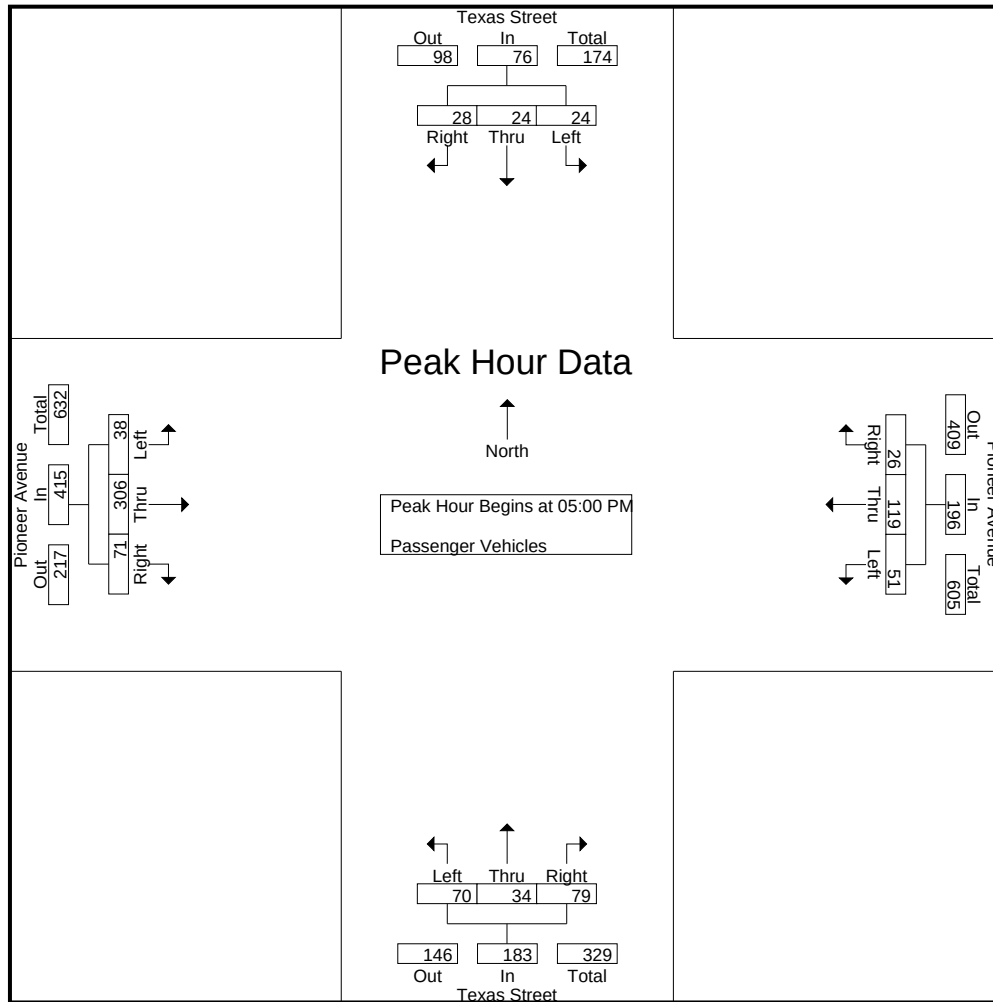
Groups Printed- Passenger Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	11	5	11	27	6	22	0	28	13	14	17	44	9	65	19	93	192
04:15 PM	2	3	2	7	12	27	2	41	10	8	25	43	4	52	22	78	169
04:30 PM	3	9	5	17	8	12	0	20	8	6	18	32	9	61	14	84	153
04:45 PM	2	4	3	9	16	22	2	40	11	8	17	36	8	62	15	85	170
Total	18	21	21	60	42	83	4	129	42	36	77	155	30	240	70	340	684
05:00 PM	1	6	4	11	11	20	6	37	12	6	19	37	10	71	12	93	178
05:15 PM	8	9	7	24	14	35	14	63	9	15	19	43	15	82	18	115	245
05:30 PM	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113	238
05:45 PM	6	3	4	13	15	32	2	49	28	5	20	53	3	69	22	94	209
Total	24	24	28	76	51	119	26	196	70	34	79	183	38	306	71	415	870
Grand Total	42	45	49	136	93	202	30	325	112	70	156	338	68	546	141	755	1554
Apprch %	30.9	33.1	36		28.6	62.2	9.2		33.1	20.7	46.2		9	72.3	18.7		
Total %	2.7	2.9	3.2	8.8	6	13	1.9	20.9	7.2	4.5	10	21.8	4.4	35.1	9.1	48.6	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	6	4	11	11	20	6	37	12	6	19	37	10	71	12	93	178
05:15 PM	8	9	7	24	14	35	14	63	9	15	19	43	15	82	18	115	245
05:30 PM	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113	238
05:45 PM	6	3	4	13	15	32	2	49	28	5	20	53	3	69	22	94	209
Total Volume	24	24	28	76	51	119	26	196	70	34	79	183	38	306	71	415	870
% App. Total	31.6	31.6	36.8		26	60.7	13.3		38.3	18.6	43.2		9.2	73.7	17.1		
PHF	.667	.667	.538	.679	.850	.850	.464	.778	.625	.567	.940	.863	.633	.911	.807	.902	.888

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	1	6	4	11	11	20	6	37	12	6	19	37	10	71	12	93
+15 mins.	8	9	7	24	14	35	14	63	9	15	19	43	15	82	18	115
+30 mins.	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113
+45 mins.	6	3	4	13	15	32	2	49	28	5	20	53	3	69	22	94
Total Volume	24	24	28	76	51	119	26	196	70	34	79	183	38	306	71	415
% App. Total	31.6	31.6	36.8		26	60.7	13.3		38.3	18.6	43.2		9.2	73.7	17.1	
PHF	.667	.667	.538	.679	.850	.850	.464	.778	.625	.567	.940	.863	.633	.911	.807	.902

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
Start Date : 9/21/2022
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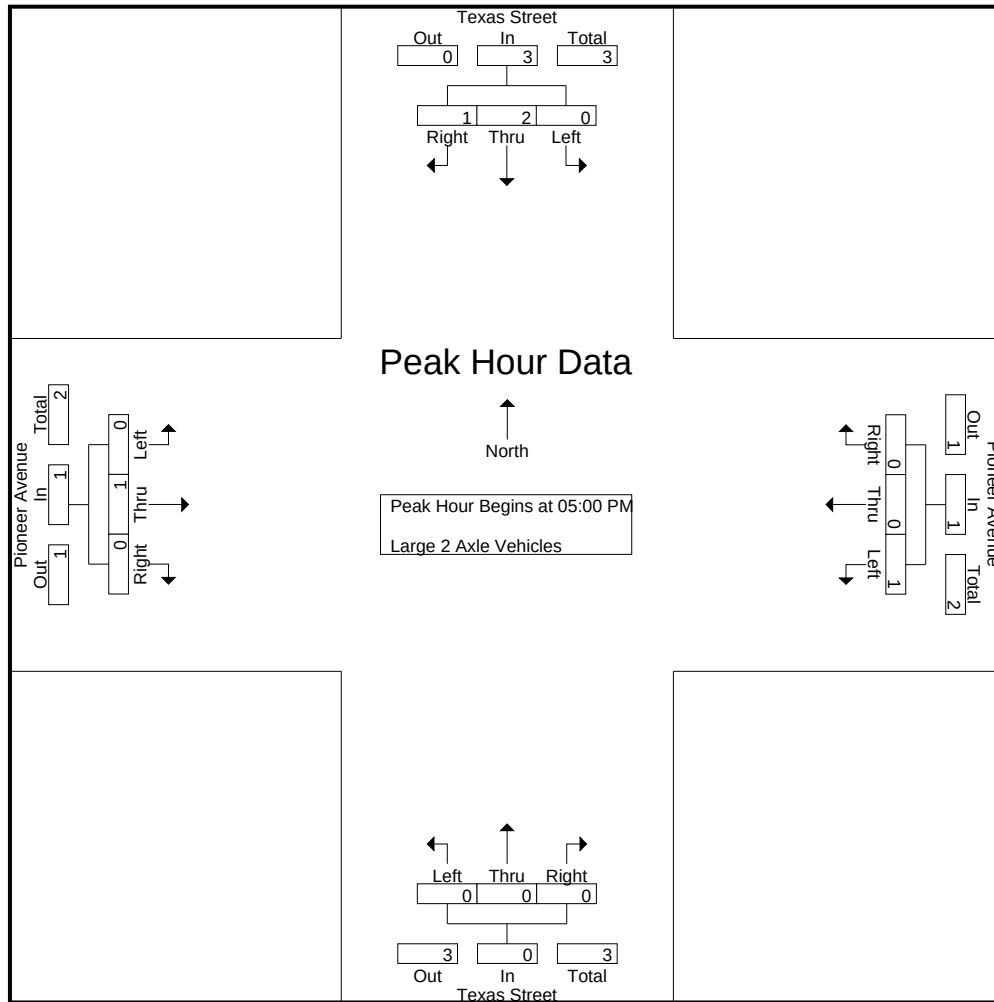
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	2	1	3	1	0	0	1	0	0	0	0	0	1	0	1	5
Grand Total	1	3	2	6	1	0	0	1	0	0	0	0	0	1	0	1	8
Apprch %	16.7	50	33.3		100	0	0		0	0	0		0	100	0		
Total %	12.5	37.5	25	75	12.5	0	0	12.5	0	0	0	0	0	12.5	0	12.5	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	2	1	3	1	0	0	1	0	0	0	0	0	1	0	1	5
% App. Total	0	66.7	33.3		100	0	0		0	0	0		0	100	0		
PHF	.000	.250	.250	.375	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.625

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	2	1	3	1	0	0	1	0	0	0	0	0	1	0	1
% App. Total	0	66.7	33.3		100	0	0		0	0	0		0	100	0	
PHF	.000	.250	.250	.375	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
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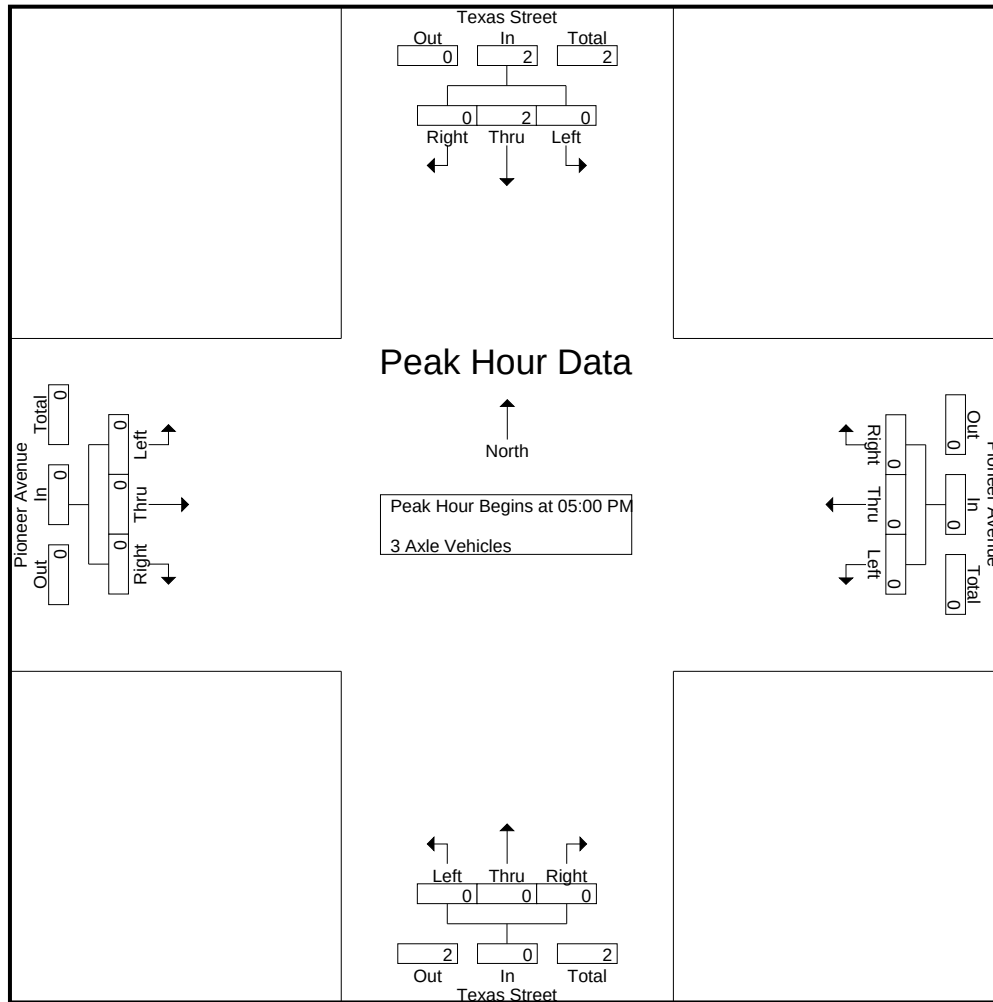
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	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
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	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
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
Start Date : 9/21/2022
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
Start Date : 9/21/2022
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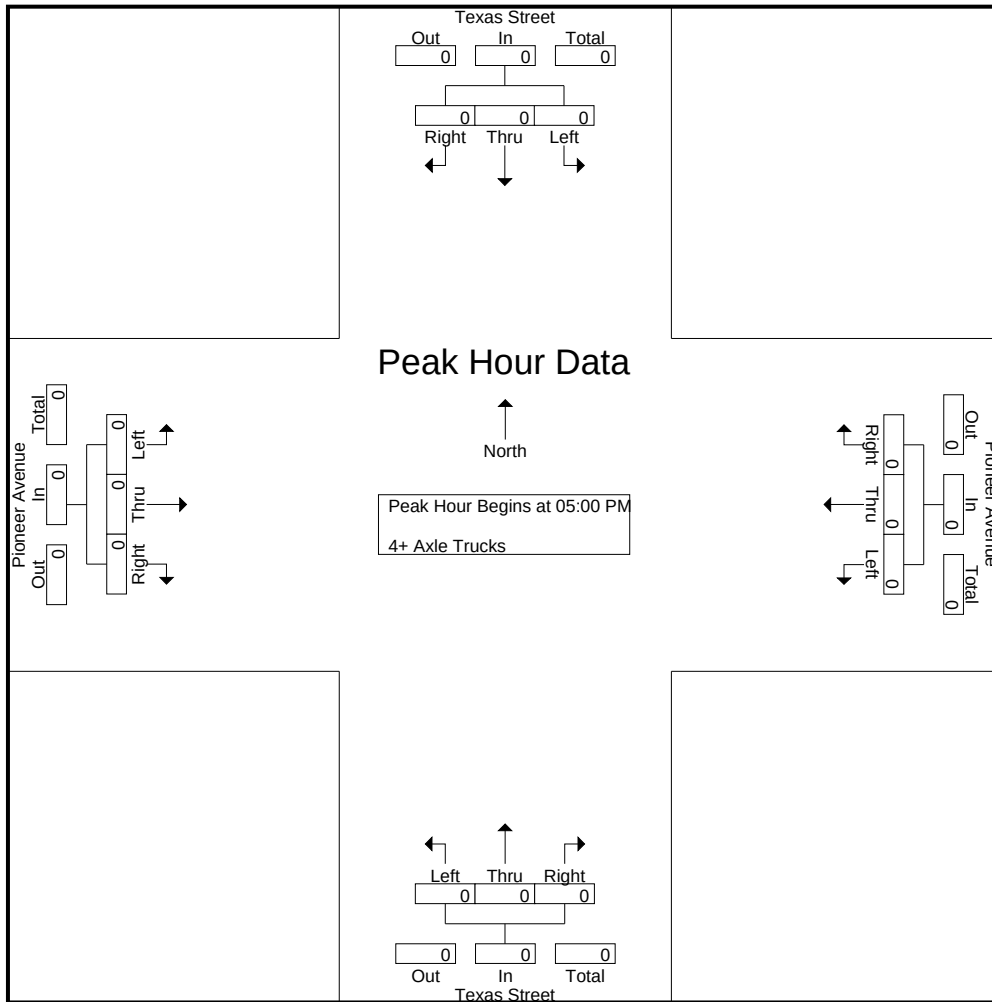
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	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
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 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
05:15 PM	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
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
Start Date : 9/21/2022
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
Site Code : 05722809
Start Date : 9/21/2022
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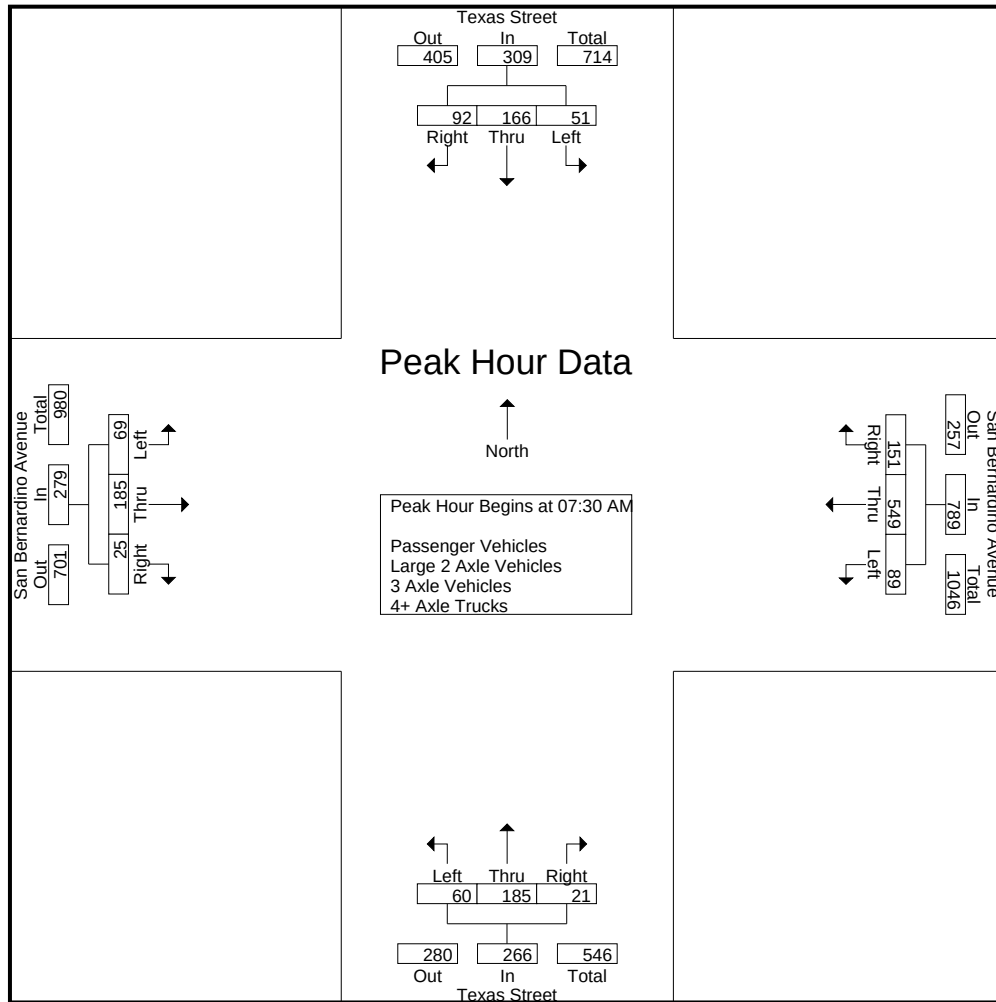
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	18	20	41	10	143	2	155	19	14	6	39	8	39	4	51	286
07:15 AM	4	32	22	58	10	150	14	174	20	25	5	50	12	64	7	83	365
07:30 AM	6	29	18	53	29	155	11	195	15	24	5	44	17	51	10	78	370
07:45 AM	7	26	18	51	26	132	33	191	20	40	6	66	18	33	2	53	361
Total	20	105	78	203	75	580	60	715	74	103	22	199	55	187	23	265	1382
08:00 AM	16	45	24	85	14	134	54	202	16	67	3	86	13	48	5	66	439
08:15 AM	22	66	32	120	20	128	53	201	9	54	7	70	21	53	8	82	473
08:30 AM	17	39	17	73	10	106	8	124	16	19	14	49	11	73	9	93	339
08:45 AM	2	13	14	29	9	81	5	95	10	8	7	25	16	56	6	78	227
Total	57	163	87	307	53	449	120	622	51	148	31	230	61	230	28	319	1478
Grand Total	77	268	165	510	128	1029	180	1337	125	251	53	429	116	417	51	584	2860
Apprch %	15.1	52.5	32.4		9.6	77	13.5		29.1	58.5	12.4		19.9	71.4	8.7		
Total %	2.7	9.4	5.8	17.8	4.5	36	6.3	46.7	4.4	8.8	1.9	15	4.1	14.6	1.8	20.4	
Passenger Vehicles	75	263	159	497	124	999	177	1300	120	246	52	418	101	379	51	531	2746
% Passenger Vehicles	97.4	98.1	96.4	97.5	96.9	97.1	98.3	97.2	96	98	98.1	97.4	87.1	90.9	100	90.9	96
Large 2 Axle Vehicles	2	5	1	8	4	16	3	23	5	5	1	11	8	25	0	33	75
% Large 2 Axle Vehicles	2.6	1.9	0.6	1.6	3.1	1.6	1.7	1.7	4	2	1.9	2.6	6.9	6	0	5.7	2.6
3 Axle Vehicles	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	0	5	5	0	12	0	12	0	0	0	0	7	13	0	20	37
% 4+ Axle Trucks	0	0	3	1	0	1.2	0	0.9	0	0	0	0	6	3.1	0	3.4	1.3

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	6	29	18	53	29	155	11	195	15	24	5	44	17	51	10	78	370
07:45 AM	7	26	18	51	26	132	33	191	20	40	6	66	18	33	2	53	361
08:00 AM	16	45	24	85	14	134	54	202	16	67	3	86	13	48	5	66	439
08:15 AM	22	66	32	120	20	128	53	201	9	54	7	70	21	53	8	82	473
Total Volume	51	166	92	309	89	549	151	789	60	185	21	266	69	185	25	279	1643
% App. Total	16.5	53.7	29.8		11.3	69.6	19.1		22.6	69.5	7.9		24.7	66.3	9		
PHF	.580	.629	.719	.644	.767	.885	.699	.976	.750	.690	.750	.773	.821	.873	.625	.851	.868

City of Redlands
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E/W: San Bernardino Avenue
Weather: Clear

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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:45 AM				08:00 AM			
+0 mins.	7	26	18	51	29	155	11	195	20	40	6	66	13	48	5	66
+15 mins.	16	45	24	85	26	132	33	191	16	67	3	86	21	53	8	82
+30 mins.	22	66	32	120	14	134	54	202	9	54	7	70	11	73	9	93
+45 mins.	17	39	17	73	20	128	53	201	16	19	14	49	16	56	6	78
Total Volume	62	176	91	329	89	549	151	789	61	180	30	271	61	230	28	319
% App. Total	18.8	53.5	27.7		11.3	69.6	19.1		22.5	66.4	11.1		19.1	72.1	8.8	
PHF	.705	.667	.711	.685	.767	.885	.699	.976	.763	.672	.536	.788	.726	.788	.778	.858

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

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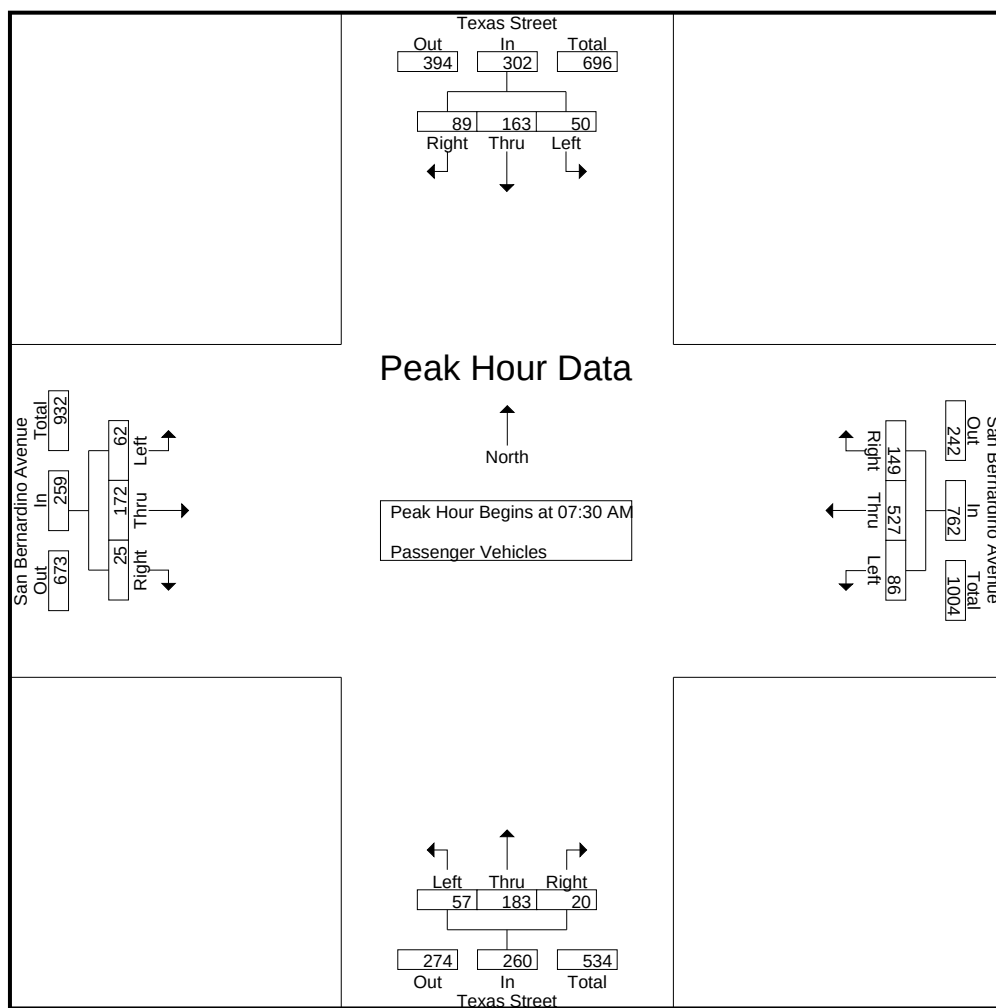
Groups Printed- Passenger Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	17	20	40	9	142	2	153	19	13	6	38	8	35	4	47	278
07:15 AM	4	32	21	57	10	147	14	171	19	23	5	47	11	56	7	74	349
07:30 AM	5	28	18	51	28	148	10	186	15	23	5	43	15	50	10	75	355
07:45 AM	7	26	17	50	26	125	33	184	20	40	6	66	16	29	2	47	347
Total	19	103	76	198	73	562	59	694	73	99	22	194	50	170	23	243	1329
08:00 AM	16	45	23	84	12	130	53	195	14	67	3	84	12	44	5	61	424
08:15 AM	22	64	31	117	20	124	53	197	8	53	6	67	19	49	8	76	457
08:30 AM	16	38	16	70	10	104	8	122	16	19	14	49	9	67	9	85	326
08:45 AM	2	13	13	28	9	79	4	92	9	8	7	24	11	49	6	66	210
Total	56	160	83	299	51	437	118	606	47	147	30	224	51	209	28	288	1417
Grand Total	75	263	159	497	124	999	177	1300	120	246	52	418	101	379	51	531	2746
Apprch %	15.1	52.9	32		9.5	76.8	13.6		28.7	58.9	12.4		19	71.4	9.6		
Total %	2.7	9.6	5.8	18.1	4.5	36.4	6.4	47.3	4.4	9	1.9	15.2	3.7	13.8	1.9	19.3	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	28	18	51	28	148	10	186	15	23	5	43	15	50	10	75	355
07:45 AM	7	26	17	50	26	125	33	184	20	40	6	66	16	29	2	47	347
08:00 AM	16	45	23	84	12	130	53	195	14	67	3	84	12	44	5	61	424
08:15 AM	22	64	31	117	20	124	53	197	8	53	6	67	19	49	8	76	457
Total Volume	50	163	89	302	86	527	149	762	57	183	20	260	62	172	25	259	1583
% App. Total	16.6	54	29.5		11.3	69.2	19.6		21.9	70.4	7.7		23.9	66.4	9.7		
PHF	.568	.637	.718	.645	.768	.890	.703	.967	.713	.683	.833	.774	.816	.860	.625	.852	.866

City of Redlands
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	5	28	18	51	28	148	10	186	15	23	5	43	15	50	10	75
+15 mins.	7	26	17	50	26	125	33	184	20	40	6	66	16	29	2	47
+30 mins.	16	45	23	84	12	130	53	195	14	67	3	84	12	44	5	61
+45 mins.	22	64	31	117	20	124	53	197	8	53	6	67	19	49	8	76
Total Volume	50	163	89	302	86	527	149	762	57	183	20	260	62	172	25	259
% App. Total	16.6	54	29.5		11.3	69.2	19.6		21.9	70.4	7.7		23.9	66.4	9.7	
PHF	.568	.637	.718	.645	.768	.890	.703	.967	.713	.683	.833	.774	.816	.860	.625	.852

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

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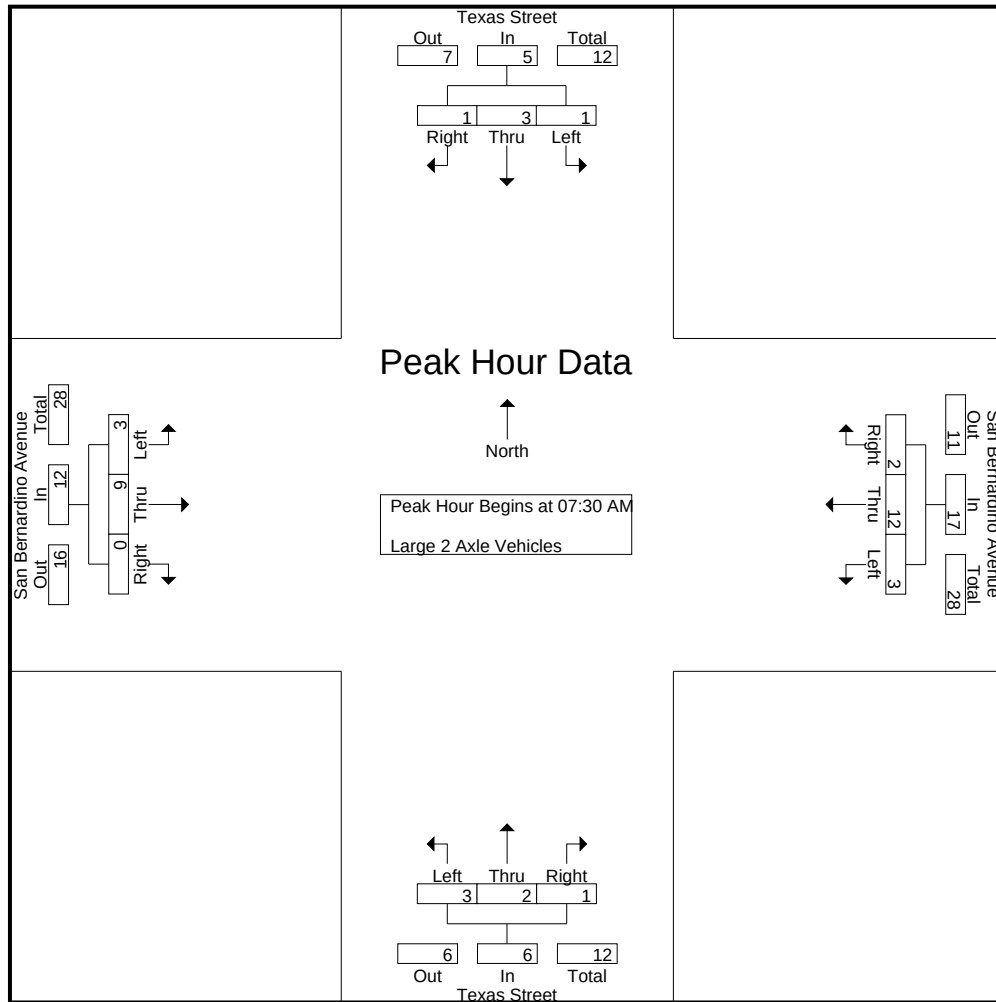
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	1	1	0	2	0	1	0	1	0	3	0	3	7
07:15 AM	0	0	0	0	0	1	0	1	1	2	0	3	1	4	0	5	9
07:30 AM	1	1	0	2	1	3	1	5	0	1	0	1	0	1	0	1	9
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
Total	1	2	0	3	2	8	1	11	1	4	0	5	1	11	0	12	31
08:00 AM	0	0	0	0	2	3	1	6	2	0	0	2	1	3	0	4	12
08:15 AM	0	2	1	3	0	3	0	3	1	1	1	3	2	2	0	4	13
08:30 AM	1	1	0	2	0	1	0	1	0	0	0	0	0	6	0	6	9
08:45 AM	0	0	0	0	0	1	1	2	1	0	0	1	4	3	0	7	10
Total	1	3	1	5	2	8	2	12	4	1	1	6	7	14	0	21	44
Grand Total	2	5	1	8	4	16	3	23	5	5	1	11	8	25	0	33	75
Apprch %	25	62.5	12.5		17.4	69.6	13		45.5	45.5	9.1		24.2	75.8	0		
Total %	2.7	6.7	1.3	10.7	5.3	21.3	4	30.7	6.7	6.7	1.3	14.7	10.7	33.3	0	44	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	1	0	2	1	3	1	5	0	1	0	1	0	1	0	1	9
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
08:00 AM	0	0	0	0	2	3	1	6	2	0	0	2	1	3	0	4	12
08:15 AM	0	2	1	3	0	3	0	3	1	1	1	3	2	2	0	4	13
Total Volume	1	3	1	5	3	12	2	17	3	2	1	6	3	9	0	12	40
% App. Total	20	60	20		17.6	70.6	11.8		50	33.3	16.7		25	75	0		
PHF	.250	.375	.250	.417	.375	1.00	.500	.708	.375	.500	.250	.500	.375	.750	.000	.750	.769

City of Redlands
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E/W: San Bernardino Avenue
Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	1	1	0	2	1	3	1	5	0	1	0	1	0	1	0	1
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3
+30 mins.	0	0	0	0	2	3	1	6	2	0	0	2	1	3	0	4
+45 mins.	0	2	1	3	0	3	0	3	1	1	1	3	2	2	0	4
Total Volume	1	3	1	5	3	12	2	17	3	2	1	6	3	9	0	12
% App. Total	20	60	20		17.6	70.6	11.8		50	33.3	16.7		25	75	0	
PHF	.250	.375	.250	.417	.375	1.000	.500	.708	.375	.500	.250	.500	.375	.750	.000	.750

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

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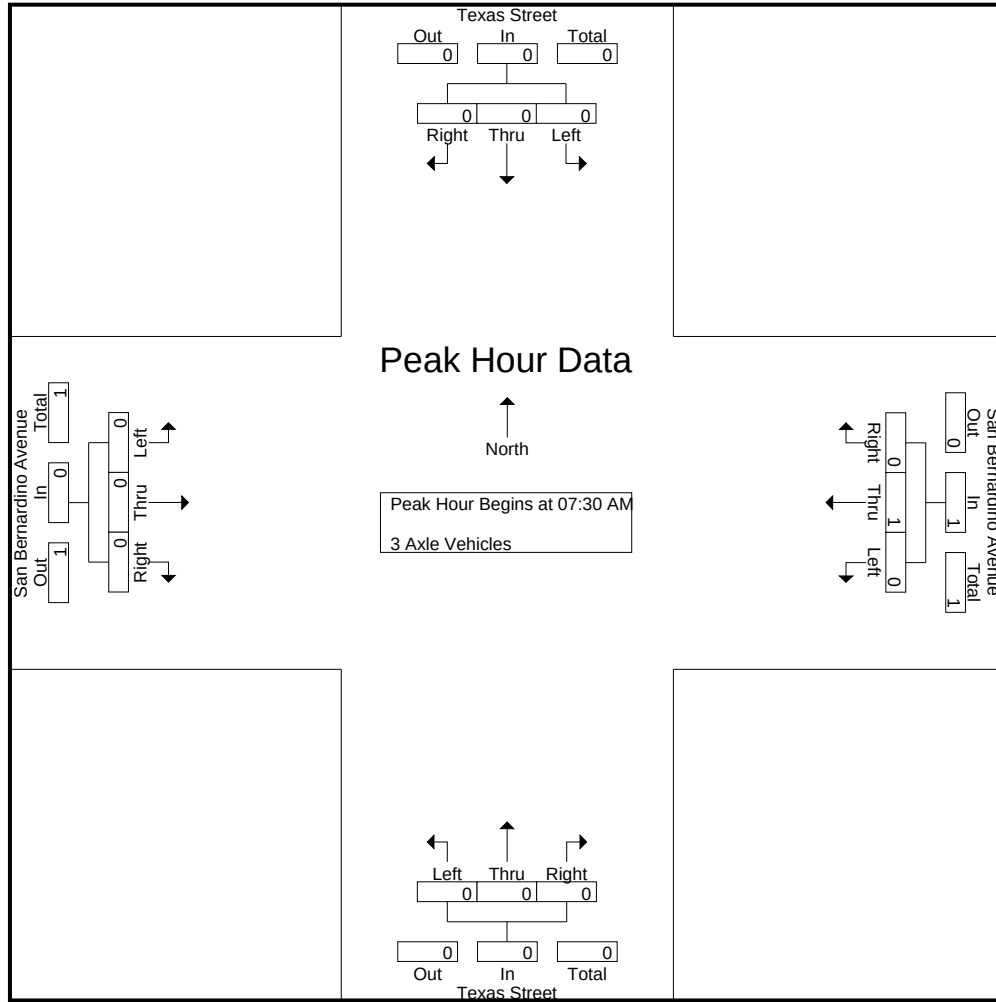
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

City of Redlands
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
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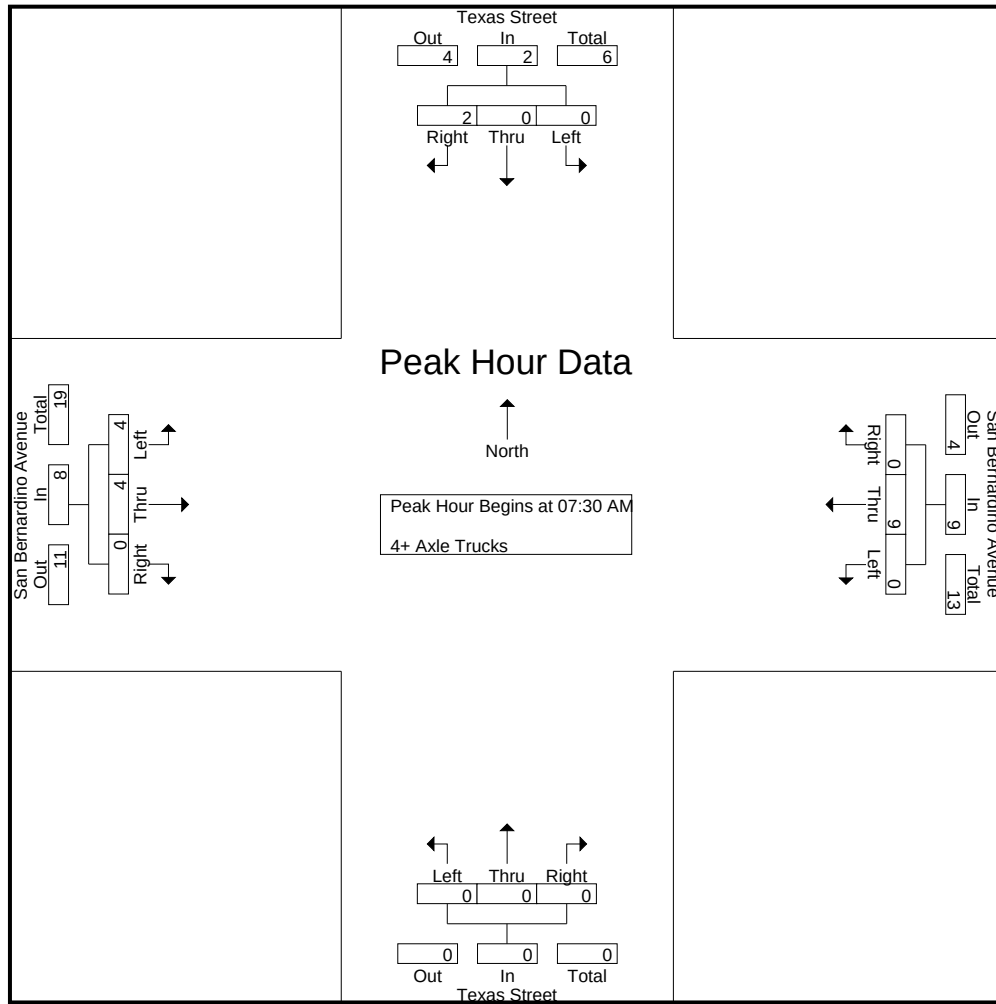
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	4	0	4	6
07:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	2	0	0	2	6
07:45 AM	0	0	1	1	0	4	0	4	0	0	0	0	2	1	0	3	8
Total	0	0	2	2	0	9	0	9	0	0	0	0	4	6	0	10	21
08:00 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	2	0	0	2	4
08:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	1	4	0	5	7
Total	0	0	3	3	0	3	0	3	0	0	0	0	3	7	0	10	16
Grand Total	0	0	5	5	0	12	0	12	0	0	0	0	7	13	0	20	37
Apprch %	0	0	100		0	100	0		0	0	0		35	65	0		
Total %	0	0	13.5	13.5	0	32.4	0	32.4	0	0	0	0	18.9	35.1	0	54.1	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	2	0	0	2	6
07:45 AM	0	0	1	1	0	4	0	4	0	0	0	0	2	1	0	3	8
08:00 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	0	0	2	2	0	9	0	9	0	0	0	0	4	4	0	8	19
% App. Total	0	0	100		0	100	0		0	0	0		50	50	0		
PHF	.000	.000	.500	.500	.000	.563	.000	.563	.000	.000	.000	.000	.500	.500	.000	.667	.594

City of Redlands
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	4	0	4	0	0	0	0	2	0	0	2
+15 mins.	0	0	1	1	0	4	0	4	0	0	0	0	2	1	0	3
+30 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	0	0	2	2	0	9	0	9	0	0	0	0	4	4	0	8
% App. Total	0	0	100		0	100	0		0	0	0		50	50	0	
PHF	.000	.000	.500	.500	.000	.563	.000	.563	.000	.000	.000	.000	.500	.500	.000	.667

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

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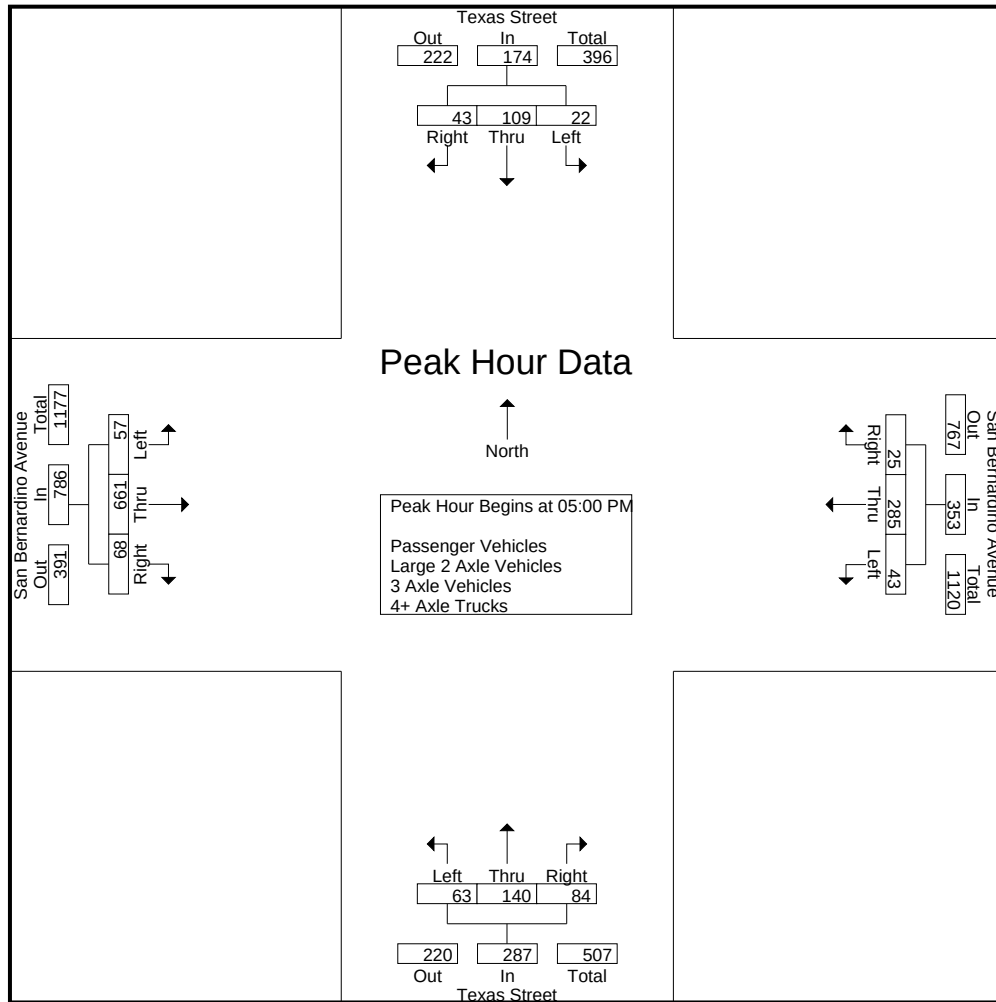
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	24	13	42	9	71	8	88	18	38	16	72	21	135	10	166	368
04:15 PM	7	28	8	43	9	77	2	88	16	26	10	52	18	148	10	176	359
04:30 PM	9	22	9	40	16	75	2	93	23	32	6	61	12	138	16	166	360
04:45 PM	2	30	10	42	14	88	3	105	18	23	22	63	13	158	16	187	397
Total	23	104	40	167	48	311	15	374	75	119	54	248	64	579	52	695	1484
05:00 PM	5	21	12	38	7	67	3	77	14	33	21	68	14	154	16	184	367
05:15 PM	6	30	11	47	8	67	2	77	11	35	27	73	17	155	15	187	384
05:30 PM	5	24	12	41	16	80	8	104	15	37	17	69	8	159	20	187	401
05:45 PM	6	34	8	48	12	71	12	95	23	35	19	77	18	193	17	228	448
Total	22	109	43	174	43	285	25	353	63	140	84	287	57	661	68	786	1600
Grand Total	45	213	83	341	91	596	40	727	138	259	138	535	121	1240	120	1481	3084
Apprch %	13.2	62.5	24.3		12.5	82	5.5		25.8	48.4	25.8		8.2	83.7	8.1		
Total %	1.5	6.9	2.7	11.1	3	19.3	1.3	23.6	4.5	8.4	4.5	17.3	3.9	40.2	3.9	48	
Passenger Vehicles	41	210	77	328	91	576	40	707	137	259	137	533	120	1229	119	1468	3036
% Passenger Vehicles	91.1	98.6	92.8	96.2	100	96.6	100	97.2	99.3	100	99.3	99.6	99.2	99.1	99.2	99.1	98.4
Large 2 Axle Vehicles	2	3	3	8	0	14	0	14	1	0	1	2	0	11	1	12	36
% Large 2 Axle Vehicles	4.4	1.4	3.6	2.3	0	2.3	0	1.9	0.7	0	0.7	0.4	0	0.9	0.8	0.8	1.2
3 Axle Vehicles	2	0	3	5	0	0	0	0	0	0	0	0	1	0	0	1	6
% 3 Axle Vehicles	4.4	0	3.6	1.5	0	0	0	0	0	0	0	0	0.8	0	0	0.1	0.2
4+ Axle Trucks	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	6
% 4+ Axle Trucks	0	0	0	0	0	1	0	0.8	0	0	0	0	0	0	0	0	0.2

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	5	21	12	38	7	67	3	77	14	33	21	68	14	154	16	184	367
05:15 PM	6	30	11	47	8	67	2	77	11	35	27	73	17	155	15	187	384
05:30 PM	5	24	12	41	16	80	8	104	15	37	17	69	8	159	20	187	401
05:45 PM	6	34	8	48	12	71	12	95	23	35	19	77	18	193	17	228	448
Total Volume	22	109	43	174	43	285	25	353	63	140	84	287	57	661	68	786	1600
% App. Total	12.6	62.6	24.7		12.2	80.7	7.1		22	48.8	29.3		7.3	84.1	8.7		
PHF	.917	.801	.896	.906	.672	.891	.521	.849	.685	.946	.778	.932	.792	.856	.850	.862	.893

City of Redlands
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				05:00 PM				05:00 PM			
+0 mins.	5	21	12	38	9	71	8	88	14	33	21	68	14	154	16	184
+15 mins.	6	30	11	47	9	77	2	88	11	35	27	73	17	155	15	187
+30 mins.	5	24	12	41	16	75	2	93	15	37	17	69	8	159	20	187
+45 mins.	6	34	8	48	14	88	3	105	23	35	19	77	18	193	17	228
Total Volume	22	109	43	174	48	311	15	374	63	140	84	287	57	661	68	786
% App. Total	12.6	62.6	24.7		12.8	83.2	4		22	48.8	29.3		7.3	84.1	8.7	
PHF	.917	.801	.896	.906	.750	.884	.469	.890	.685	.946	.778	.932	.792	.856	.850	.862

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B PM
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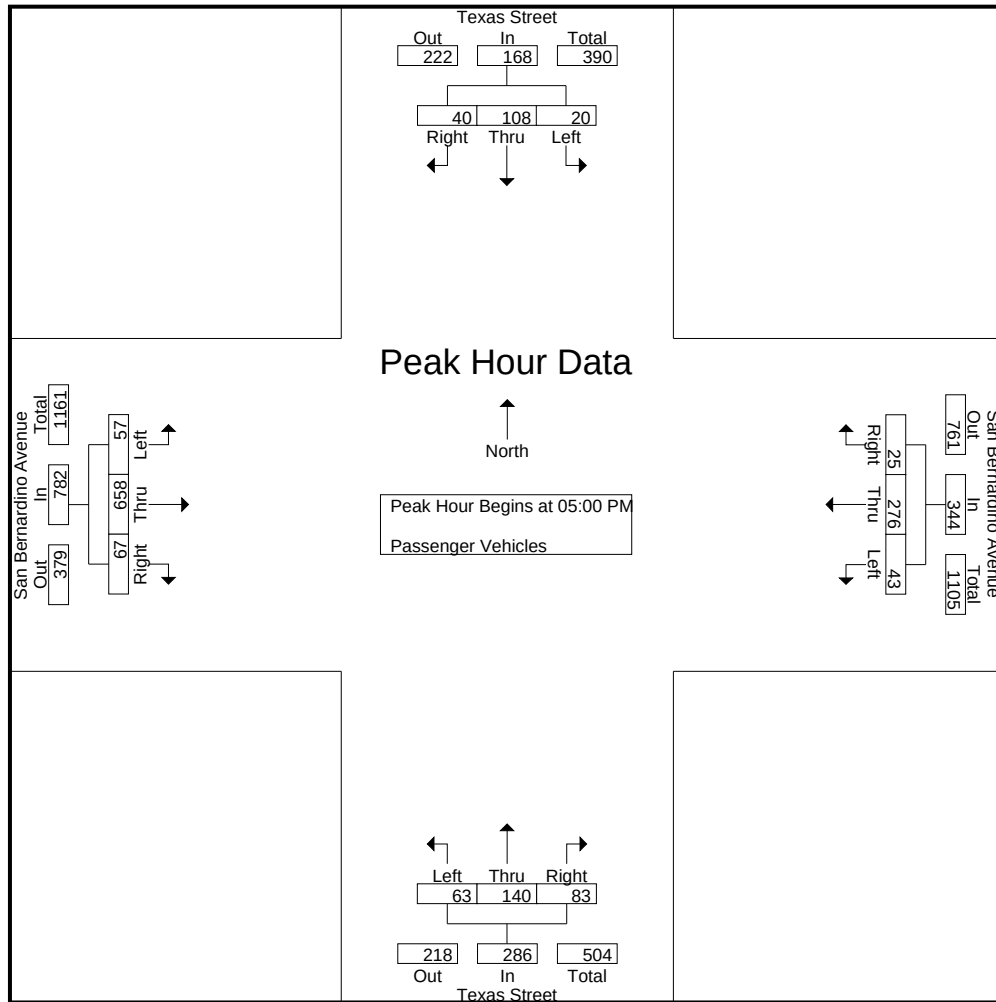
Groups Printed- Passenger Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	24	12	40	9	68	8	85	17	38	16	71	21	135	10	166	362
04:15 PM	6	27	6	39	9	75	2	86	16	26	10	52	17	143	10	170	347
04:30 PM	9	21	9	39	16	74	2	92	23	32	6	61	12	135	16	163	355
04:45 PM	2	30	10	42	14	83	3	100	18	23	22	63	13	158	16	187	392
Total	21	102	37	160	48	300	15	363	74	119	54	247	63	571	52	686	1456
05:00 PM	4	21	12	37	7	66	3	76	14	33	20	67	14	154	16	184	364
05:15 PM	5	30	10	45	8	65	2	75	11	35	27	73	17	155	15	187	380
05:30 PM	5	24	12	41	16	78	8	102	15	37	17	69	8	157	19	184	396
05:45 PM	6	33	6	45	12	67	12	91	23	35	19	77	18	192	17	227	440
Total	20	108	40	168	43	276	25	344	63	140	83	286	57	658	67	782	1580
Grand Total	41	210	77	328	91	576	40	707	137	259	137	533	120	1229	119	1468	3036
Apprch %	12.5	64	23.5		12.9	81.5	5.7		25.7	48.6	25.7		8.2	83.7	8.1		
Total %	1.4	6.9	2.5	10.8	3	19	1.3	23.3	4.5	8.5	4.5	17.6	4	40.5	3.9	48.4	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	21	12	37	7	66	3	76	14	33	20	67	14	154	16	184	364
05:15 PM	5	30	10	45	8	65	2	75	11	35	27	73	17	155	15	187	380
05:30 PM	5	24	12	41	16	78	8	102	15	37	17	69	8	157	19	184	396
05:45 PM	6	33	6	45	12	67	12	91	23	35	19	77	18	192	17	227	440
Total Volume	20	108	40	168	43	276	25	344	63	140	83	286	57	658	67	782	1580
% App. Total	11.9	64.3	23.8		12.5	80.2	7.3		22	49	29		7.3	84.1	8.6		
PHF	.833	.818	.833	.933	.672	.885	.521	.843	.685	.946	.769	.929	.792	.857	.882	.861	.898

City of Redlands
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	4	21	12	37	7	66	3	76	14	33	20	67	14	154	16	184
+15 mins.	5	30	10	45	8	65	2	75	11	35	27	73	17	155	15	187
+30 mins.	5	24	12	41	16	78	8	102	15	37	17	69	8	157	19	184
+45 mins.	6	33	6	45	12	67	12	91	23	35	19	77	18	192	17	227
Total Volume	20	108	40	168	43	276	25	344	63	140	83	286	57	658	67	782
% App. Total	11.9	64.3	23.8		12.5	80.2	7.3		22	49	29		7.3	84.1	8.6	
PHF	.833	.818	.833	.933	.672	.885	.521	.843	.685	.946	.769	.929	.792	.857	.882	.861

City of Redlands
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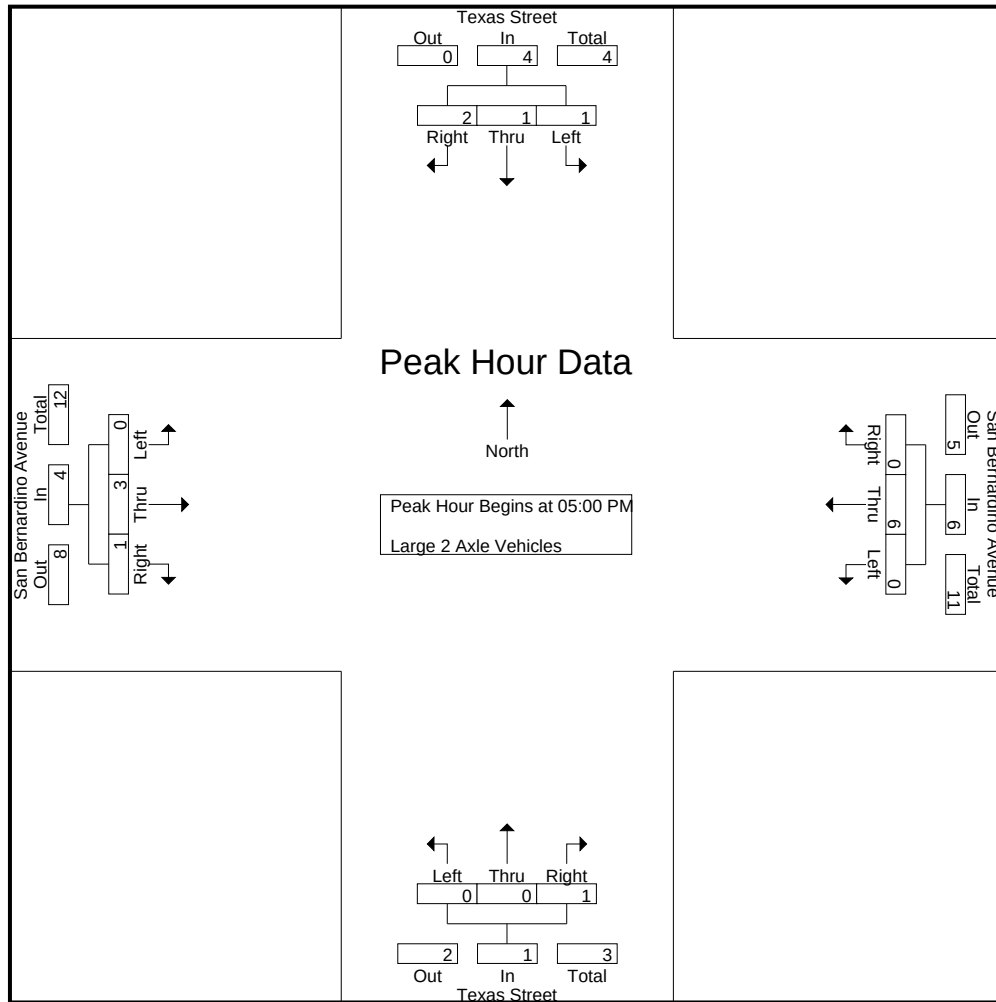
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
04:15 PM	1	1	1	3	0	2	0	2	0	0	0	0	0	5	0	5	10
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	3	0	3	5
04:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
Total	1	2	1	4	0	8	0	8	1	0	0	1	0	8	0	8	21
05:00 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
05:15 PM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
05:45 PM	0	1	1	2	0	2	0	2	0	0	0	0	0	1	0	1	5
Total	1	1	2	4	0	6	0	6	0	0	1	1	0	3	1	4	15
Grand Total	2	3	3	8	0	14	0	14	1	0	1	2	0	11	1	12	36
Apprch %	25	37.5	37.5		0	100	0		50	0	50		0	91.7	8.3		
Total %	5.6	8.3	8.3	22.2	0	38.9	0	38.9	2.8	0	2.8	5.6	0	30.6	2.8	33.3	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 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	1	0	1	0	0	1	1	0	0	0	0	2
05:15 PM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
05:45 PM	0	1	1	2	0	2	0	2	0	0	0	0	0	1	0	1	5
Total Volume	1	1	2	4	0	6	0	6	0	0	1	1	0	3	1	4	15
% App. Total	25	25	50		0	100	0		0	0	100		0	75	25		
PHF	.250	.250	.500	.500	.000	.750	.000	.750	.000	.000	.250	.250	.000	.375	.250	.333	.750

City of Redlands
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0
+15 mins.	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3
+45 mins.	0	1	1	2	0	2	0	2	0	0	0	0	0	1	0	1
Total Volume	1	1	2	4	0	6	0	6	0	0	1	1	0	3	1	4
% App. Total	25	25	50		0	100	0		0	0	100		0	75	25	
PHF	.250	.250	.500	.500	.000	.750	.000	.750	.000	.000	.250	.250	.000	.375	.250	.333

City of Redlands
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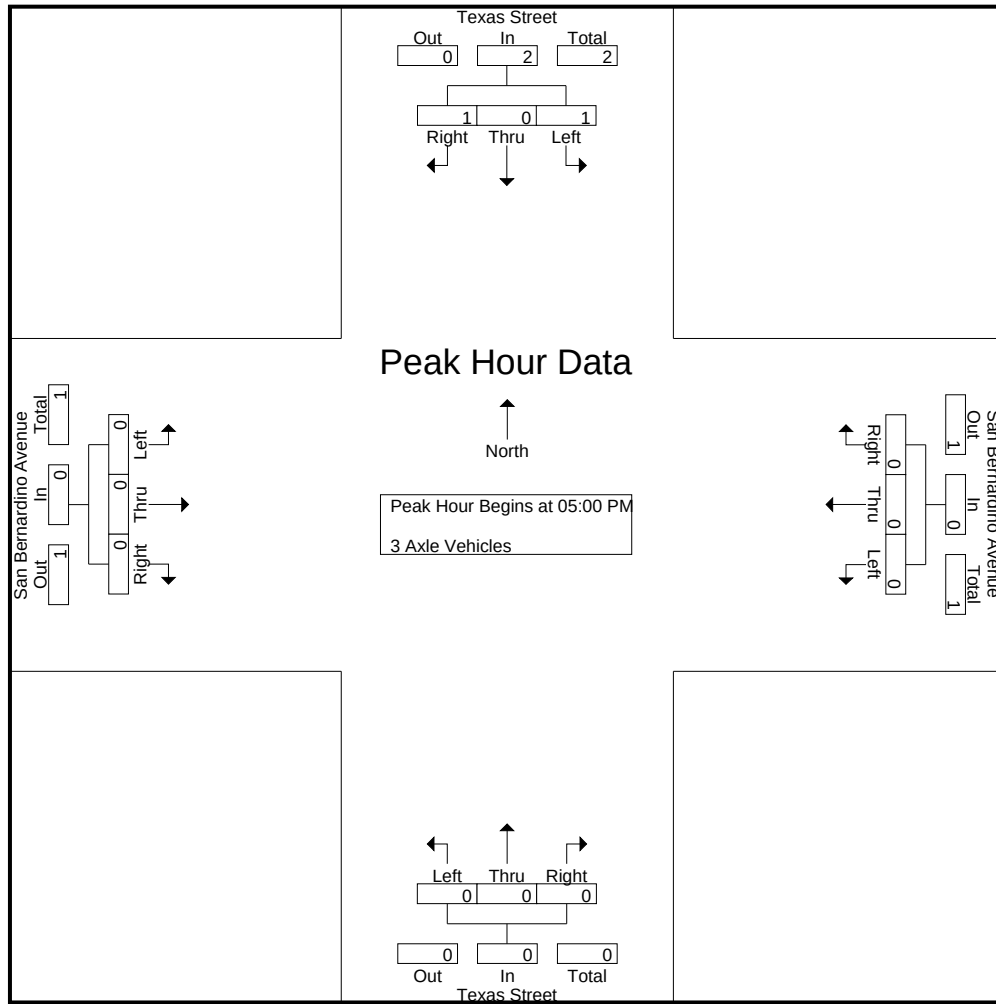
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	2	3	0	0	0	0	0	0	0	0	1	0	0	1	4
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	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
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	2	0	3	5	0	0	0	0	0	0	0	0	1	0	0	1	6
Apprch %	40	0	60		0	0	0		0	0	0		100	0	0		
Total %	33.3	0	50	83.3	0	0	0	0	0	0	0	0	16.7	0	0	16.7	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	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
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	50	0	50		0	0	0		0	0	0		0	0	0		
PHF	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

City of Redlands
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	50	0	50		0	0	0		0	0	0		0	0	0	
PHF	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
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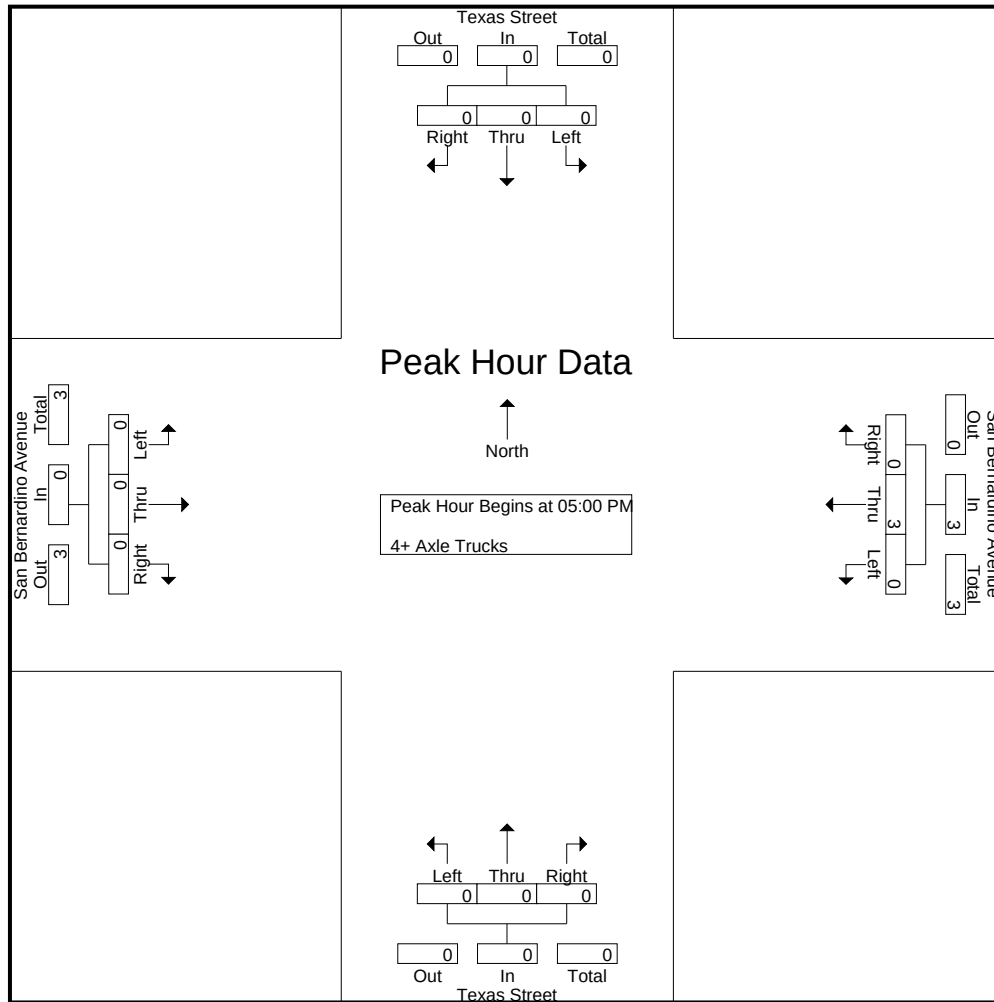
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
05:00 PM	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
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	6
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 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
05:15 PM	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	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000	.375

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B PM
Site Code : 05722809
Start Date : 9/21/2022
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000

APPENDIX B-II

ROADWAY SEGMENT COUNTS

Counts Unlimited, Inc.

Page 1

City of Redlands
Texas Street
B/ Pioneer Avenue - San Bernardino Avenue
24 Hour Directional Classification Count

PO Box 1178
Corona, CA 92878
(951) 268-6268
email: counts@countsunlimited.com

REDTEPISB
Site Code: 057-22809

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Non Trucks	Trucks
09/21/2																
2	0	12	9	0	0	0	0	0	0	0	0	0	0	21	21	0
01:00	0	6	2	0	0	0	0	0	2	0	0	0	0	10	8	2
02:00	0	9	0	0	1	0	0	0	0	0	0	0	0	10	10	0
03:00	0	10	2	1	0	0	0	0	0	0	0	0	0	13	12	1
04:00	0	12	5	1	1	0	0	0	0	0	0	0	0	19	18	1
05:00	1	11	4	0	4	0	0	0	0	0	0	1	0	21	20	1
06:00	1	44	24	0	6	0	0	1	0	0	0	1	0	77	75	2
07:00	1	140	53	2	20	0	0	2	2	1	0	1	0	222	214	8
08:00	1	244	64	4	24	0	0	1	1	1	0	1	0	341	333	8
09:00	0	54	17	0	6	0	0	0	3	0	0	0	0	80	77	3
10:00	0	58	10	1	6	1	0	1	3	0	0	0	0	80	74	6
11:00	1	64	22	2	10	1	0	0	3	1	0	1	0	105	97	8
12 PM	0	74	25	1	8	0	0	2	6	0	0	0	0	116	107	9
13:00	0	80	27	1	10	0	0	2	1	1	0	0	0	122	117	5
14:00	1	149	47	1	12	1	0	1	3	0	0	0	1	216	209	7
15:00	0	220	72	0	20	1	0	1	2	0	0	0	0	316	312	4
16:00	2	137	49	0	9	0	0	0	1	0	0	2	0	200	197	3
17:00	0	176	33	0	12	0	0	1	0	0	0	0	0	222	221	1
18:00	0	122	31	0	3	0	0	0	0	0	0	0	0	156	156	0
19:00	1	106	19	0	5	0	0	0	0	0	0	1	0	132	131	1
20:00	0	100	29	1	11	0	0	0	0	0	0	0	0	141	140	1
21:00	0	105	21	0	3	0	0	0	0	0	0	0	0	129	129	0
22:00	0	47	11	0	2	0	0	0	2	0	0	0	0	62	60	2
23:00	1	26	7	0	2	1	0	0	0	0	0	1	0	38	36	2
Percent	0.4%	70.4%	20.5%	0.5%	6.1%	0.2%	0.0%	0.4%	1.0%	0.1%	0.0%	0.3%	0.0%		97.4%	2.6%
AM Peak	05:00	08:00	08:00	08:00	08:00	10:00		07:00	09:00	07:00		05:00		08:00	08:00	07:00
Vol.	1	244	64	4	24	1		2	3	1		1		341	333	8
PM Peak	16:00	15:00	15:00	12:00	15:00	14:00		12:00	12:00	13:00		16:00	14:00	15:00	15:00	12:00
Vol.	2	220	72	1	20	1		2	6	1		2	1	316	312	9

City of Redlands
Texas Street
B/ Pioneer Avenue - San Bernardino Avenue
24 Hour Directional Classification Count

Counts Unlimited, Inc.

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email: counts@countsunlimited.com

REDTEPISB
Site Code: 057-22809

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Non Trucks	Trucks
09/21/2																
2	0	3	2	0	0	0	0	0	0	0	0	0	0	5	5	0
01:00	0	4	1	0	0	0	0	0	1	0	0	0	0	6	5	1
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4	4	0
03:00	0	5	2	1	1	0	0	0	0	0	0	0	0	9	8	1
04:00	0	16	0	0	2	0	0	0	0	0	0	0	0	18	18	0
05:00	0	28	4	0	3	0	0	0	0	0	0	0	0	35	35	0
06:00	0	57	12	0	4	0	0	1	0	0	0	0	0	74	73	1
07:00	0	168	27	1	6	0	0	0	1	0	0	0	0	203	201	2
08:00	2	237	55	2	6	0	0	0	3	0	0	2	0	307	300	7
09:00	0	58	14	1	4	1	0	1	1	0	0	0	0	80	76	4
10:00	0	66	16	1	5	0	0	1	2	0	0	0	0	91	87	4
11:00	0	74	17	2	6	1	0	1	2	0	0	0	0	103	97	6
12 PM	0	78	20	0	5	0	0	0	4	0	0	0	0	107	103	4
13:00	1	71	13	1	8	0	0	2	2	0	0	1	0	99	93	6
14:00	0	106	40	1	6	0	1	1	4	0	0	0	0	159	152	7
15:00	0	240	59	1	15	0	1	5	0	0	0	0	0	321	314	7
16:00	0	124	33	1	7	0	0	0	2	0	0	0	0	167	164	3
17:00	0	142	26	1	5	2	0	0	0	0	0	0	0	176	173	3
18:00	0	107	24	0	8	0	0	0	0	0	0	0	0	139	139	0
19:00	0	67	13	0	1	0	0	0	0	0	0	0	0	81	81	0
20:00	0	52	8	0	2	0	0	0	0	0	0	0	0	62	62	0
21:00	0	41	5	0	0	0	0	0	0	0	0	0	0	46	46	0
22:00	0	25	3	0	1	0	0	0	0	0	0	0	0	29	29	0
23:00	1	9	4	0	0	0	0	0	0	0	0	1	0	15	14	1
Percent	0.2%	76.3%	17.0%	0.6%	4.1%	0.2%	0.1%	0.5%	0.9%	0.0%	0.0%	0.2%	0.0%		97.6%	2.4%
AM Peak	08:00	08:00	08:00	08:00	07:00	09:00		06:00	08:00			08:00		08:00	08:00	08:00
Vol.	2	237	55	2	6	1		1	3			2		307	300	7
PM Peak	13:00	15:00	15:00	13:00	15:00	17:00	14:00	15:00	12:00			13:00		15:00	15:00	14:00
Vol.	1	240	59	1	15	2	1	5	4			1		321	314	7

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REDTEPISB
Site Code: 057-22809

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Non Trucks	Trucks
09/21/2																
2	0	15	11	0	0	0	0	0	0	0	0	0	0	26	26	0
01:00	0	10	3	0	0	0	0	0	3	0	0	0	0	16	13	3
02:00	0	13	0	0	1	0	0	0	0	0	0	0	0	14	14	0
03:00	0	15	4	2	1	0	0	0	0	0	0	0	0	22	20	2
04:00	0	28	5	1	3	0	0	0	0	0	0	0	0	37	36	1
05:00	1	39	8	0	7	0	0	0	0	0	0	1	0	56	55	1
06:00	1	101	36	0	10	0	0	2	0	0	0	1	0	151	148	3
07:00	1	308	80	3	26	0	0	2	3	1	0	1	0	425	415	10
08:00	3	481	119	6	30	0	0	1	4	1	0	3	0	648	633	15
09:00	0	112	31	1	10	1	0	1	4	0	0	0	0	160	153	7
10:00	0	124	26	2	11	1	0	2	5	0	0	0	0	171	161	10
11:00	1	138	39	4	16	2	0	1	5	1	0	1	0	208	194	14
12 PM	0	152	45	1	13	0	0	2	10	0	0	0	0	223	210	13
13:00	1	151	40	2	18	0	0	4	3	1	0	1	0	221	210	11
14:00	1	255	87	2	18	1	1	2	7	0	0	0	1	375	361	14
15:00	0	460	131	1	35	1	1	6	2	0	0	0	0	637	626	11
16:00	2	261	82	1	16	0	0	0	3	0	0	2	0	367	361	6
17:00	0	318	59	1	17	2	0	1	0	0	0	0	0	398	394	4
18:00	0	229	55	0	11	0	0	0	0	0	0	0	0	295	295	0
19:00	1	173	32	0	6	0	0	0	0	0	0	1	0	213	212	1
20:00	0	152	37	1	13	0	0	0	0	0	0	0	0	203	202	1
21:00	0	146	26	0	3	0	0	0	0	0	0	0	0	175	175	0
22:00	0	72	14	0	3	0	0	0	2	0	0	0	0	91	89	2
23:00	2	35	11	0	2	1	0	0	0	0	0	2	0	53	50	3
Percent	0.3%	73.1%	18.9%	0.5%	5.2%	0.2%	0.0%	0.5%	1.0%	0.1%	0.0%	0.3%	0.0%		97.5%	2.5%
AM Peak	08:00	08:00	08:00	08:00	08:00	11:00		06:00	10:00	07:00		08:00		08:00	08:00	08:00
Vol.	3	481	119	6	30	2		2	5	1		3		648	633	15
PM Peak	16:00	15:00	15:00	13:00	15:00	17:00	14:00	15:00	12:00	13:00		16:00	14:00	15:00	15:00	14:00
Vol.	2	460	131	2	35	2	1	6	10	1		2	1	637	626	14

APPENDIX C

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-1

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Texas Street at Pioneer Avenue

Control Type:	Signalized	Delay (sec / veh):	34.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.803

Intersection Setup

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Base Volume Input [veh/h]	224	156	44	164	170	75	15	142	73	24	344	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	224	156	44	164	170	75	15	142	73	24	344	94
Peak Hour Factor	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	55	15	57	59	26	5	50	26	8	120	33
Total Analysis Volume [veh/h]	313	218	62	229	238	105	21	199	102	34	481	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	25	21	0	26	22	0	0	43	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	28	14	24	24	36	36	36
g / C, Green / Cycle	0.20	0.31	0.16	0.26	0.26	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.16	0.13	0.13	0.06	0.01	0.17	0.38
s, saturation flow rate [veh/h]	1700	1800	1700	1800	1800	1700	1800	1700
c, Capacity [veh/h]	349	557	268	472	472	95	719	722
d1, Uniform Delay [s]	34.89	25.44	36.94	28.27	26.06	16.44	19.49	26.18
k, delay calibration	0.12	0.50	0.11	0.50	0.50	0.11	0.11	0.37
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.24	3.22	7.64	3.82	1.09	1.15	0.39	12.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.50	0.85	0.50	0.22	0.22	0.42	0.90
d, Delay for Lane Group [s/veh]	44.12	28.65	44.59	32.10	27.15	17.59	19.88	38.68
Lane Group LOS	D	C	D	C	C	B	B	D
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.42	5.26	5.39	4.77	1.88	0.29	4.46	15.15
50th-Percentile Queue Length [ft/ln]	185.49	131.58	134.63	119.22	46.95	7.21	111.61	378.76
95th-Percentile Queue Length [veh/ln]	11.89	9.03	9.19	8.35	3.38	0.52	7.93	21.53
95th-Percentile Queue Length [ft/ln]	297.17	225.64	229.78	208.76	84.51	12.98	198.24	538.34

Movement, Approach, & Intersection Results

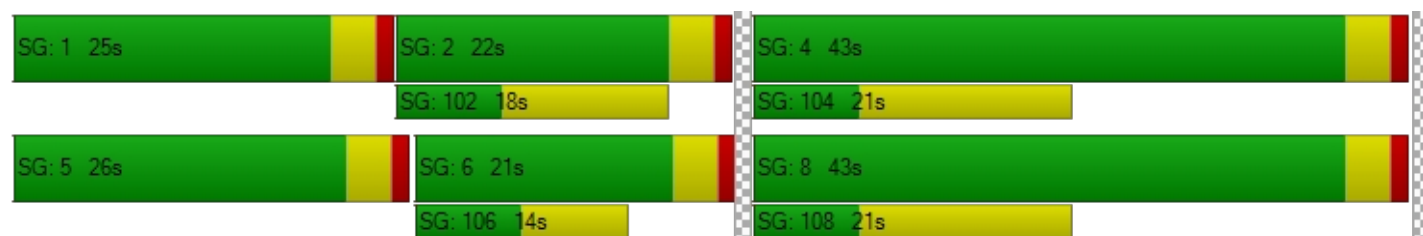
d_M, Delay for Movement [s/veh]	44.12	28.65	28.65	44.59	32.10	27.15	17.59	19.88	19.88	38.68	38.68	38.68
Movement LOS	D	C	C	D	C	C	B	B	B	D	D	D
d_A, Approach Delay [s/veh]	36.82			36.19			19.73			38.68		
Approach LOS	D			D			B			D		
d_I, Intersection Delay [s/veh]	34.63											
Intersection LOS	C											
Intersection V/C	0.803											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.70			34.70			34.70			34.70		
I_p,int, Pedestrian LOS Score for Intersection	2.415			2.390			2.337			2.268		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	378			400			866			866		
d_b, Bicycle Delay [s]	29.63			28.82			14.47			14.47		
I_b,int, Bicycle LOS Score for Intersection	2.538			2.503			2.091			2.626		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Texas Street at San Bernardino Avenue

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

Intersection Setup

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Base Volume Input [veh/h]	62	186	22	52	168	97	79	198	25	91	574	152
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	186	22	52	168	97	79	198	25	91	574	152
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	54	6	15	48	28	23	57	7	26	165	44
Total Analysis Volume [veh/h]	71	214	25	60	194	112	91	228	29	105	661	175
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	94	25	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	0	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	46	46	46	46	36	36	36	36	36
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.04	0.11	0.06	0.05	0.14	0.06	0.37	0.10
s, saturation flow rate [veh/h]	1700	1700	1800	1800	1700	1800	1700	1800	1800
c, Capacity [veh/h]	922	736	924	924	120	716	539	716	716
d1, Uniform Delay [s]	13.02	11.04	11.93	11.35	17.23	19.03	17.38	25.78	18.07
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.13	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	0.22	0.52	0.27	9.41	0.30	0.17	6.48	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.08	0.21	0.12	0.76	0.36	0.19	0.92	0.24
d, Delay for Lane Group [s/veh]	14.01	11.25	12.45	11.62	26.64	19.33	17.56	32.25	18.24
Lane Group LOS	B	B	B	B	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.77	0.62	2.15	1.18	1.48	3.71	1.39	13.99	2.39
50th-Percentile Queue Length [ft/ln]	94.31	15.54	53.78	29.44	37.06	92.64	34.67	349.72	59.79
95th-Percentile Queue Length [veh/ln]	6.79	1.12	3.87	2.12	2.67	6.67	2.50	20.12	4.31
95th-Percentile Queue Length [ft/ln]	169.75	27.98	96.81	53.00	66.70	166.75	62.41	503.07	107.63

Movement, Approach, & Intersection Results

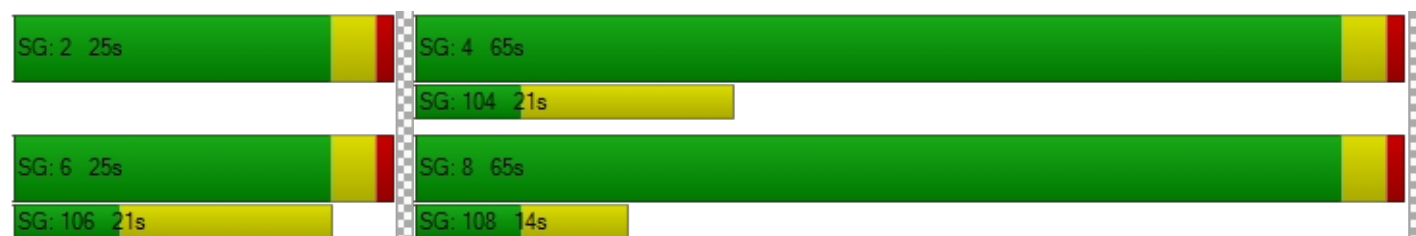
d_M, Delay for Movement [s/veh]	14.01	14.01	14.01	11.25	12.45	11.62	26.64	19.33	19.33	17.56	32.25	18.24
Movement LOS	B	B	B	B	B	B	C	B	B	B	C	B
d_A, Approach Delay [s/veh]	14.01			12.00			21.24			28.01		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.62											
Intersection LOS	C											
Intersection V/C	0.603											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			0.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.65			34.65			0.00			34.65		
I_p,int, Pedestrian LOS Score for Intersection	2.175			2.466			0.000			2.522		
Crosswalk LOS	B			B			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	467			467			1356			1356		
d_b, Bicycle Delay [s]	26.43			26.43			4.66			4.66		
I_b,int, Bicycle LOS Score for Intersection	2.071			2.164			2.134			3.112		
Bicycle LOS	B			B			B			C		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Texas Street at Pioneer Avenue

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

Intersection Setup

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Base Volume Input [veh/h]	70	34	79	24	31	30	38	308	71	53	119	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	34	79	24	31	30	38	308	71	53	119	26
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	10	22	7	9	8	11	87	20	15	34	7
Total Analysis Volume [veh/h]	79	38	89	27	35	34	43	347	80	60	134	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	22	0	10	22	0	0	58	0	0	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	51	3	49	49	24	24	24
g / C, Green / Cycle	0.06	0.57	0.03	0.54	0.54	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.05	0.07	0.02	0.02	0.02	0.03	0.24	0.13
s, saturation flow rate [veh/h]	1700	1800	1700	1800	1800	1700	1800	1700
c, Capacity [veh/h]	101	1024	58	978	978	304	475	499
d1, Uniform Delay [s]	41.76	9.01	42.70	9.58	9.58	25.03	31.98	28.08
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.09	0.25	5.78	0.07	0.07	0.21	6.38	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.12	0.47	0.04	0.03	0.14	0.90	0.45
d, Delay for Lane Group [s/veh]	53.84	9.25	48.47	9.65	9.64	25.24	38.36	28.70
Lane Group LOS	D	A	D	A	A	C	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.05	1.15	0.68	0.32	0.31	0.70	9.53	4.07
50th-Percentile Queue Length [ft/ln]	51.27	28.68	16.92	8.07	7.84	17.57	238.32	101.80
95th-Percentile Queue Length [veh/ln]	3.69	2.07	1.22	0.58	0.56	1.26	14.60	7.33
95th-Percentile Queue Length [ft/ln]	92.28	51.63	30.45	14.53	14.10	31.62	364.91	183.24

Movement, Approach, & Intersection Results

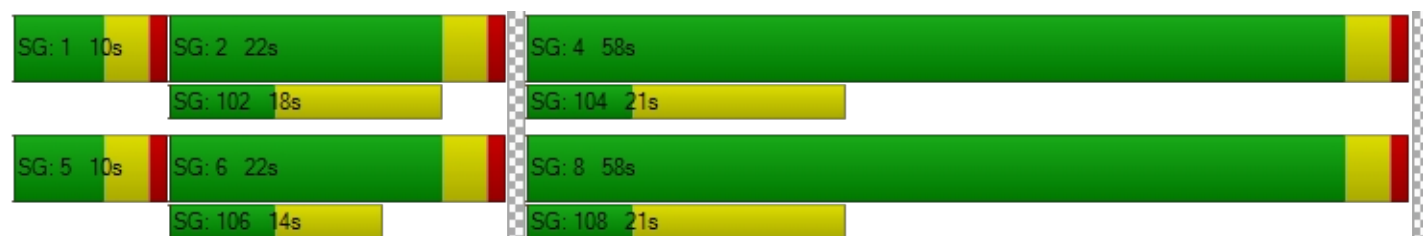
d_M, Delay for Movement [s/veh]	53.84	9.25	9.25	48.47	9.65	9.64	25.24	38.36	38.36	28.70	28.70	28.70
Movement LOS	D	A	A	D	A	A	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	26.35			20.57			37.16			28.70		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.42											
Intersection LOS	C											
Intersection V/C	0.373											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.68			34.68			34.68			34.68		
I_p,int, Pedestrian LOS Score for Intersection	2.309			2.242			2.173			2.049		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	400			400			1200			1200		
d_b, Bicycle Delay [s]	28.81			28.81			7.21			7.21		
I_b,int, Bicycle LOS Score for Intersection	1.900			1.718			2.335			1.928		
Bicycle LOS	A			A			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Texas Street at San Bernardino Avenue

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Base Volume Input [veh/h]	63	140	85	24	110	45	57	663	69	43	294	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	140	85	24	110	45	57	663	69	43	294	25
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	39	24	7	31	13	16	186	19	12	82	7
Total Analysis Volume [veh/h]	71	157	95	27	123	50	64	742	77	48	329	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	94	26	0	0	64	0	0	64	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	0	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	39	39	39	39	43	43	43	43	43
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.19	0.02	0.07	0.03	0.04	0.46	0.03	0.18	0.02
s, saturation flow rate [veh/h]	1700	1700	1800	1800	1700	1800	1700	1800	1800
c, Capacity [veh/h]	780	571	774	774	635	866	106	866	866
d1, Uniform Delay [s]	18.03	14.84	15.68	15.02	12.58	22.22	12.46	14.82	12.30
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.23	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	0.16	0.44	0.16	0.07	11.52	3.02	0.28	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.05	0.16	0.06	0.10	0.95	0.45	0.38	0.03
d, Delay for Lane Group [s/veh]	19.65	15.00	16.12	15.18	12.65	33.74	15.48	15.09	12.32
Lane Group LOS	B	B	B	B	B	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	4.88	0.34	1.60	0.62	0.68	17.91	0.59	4.12	0.29
50th-Percentile Queue Length [ft/ln]	122.11	8.42	39.88	15.48	17.05	447.75	14.66	103.04	7.25
95th-Percentile Queue Length [veh/ln]	8.51	0.61	2.87	1.11	1.23	24.85	1.06	7.42	0.52
95th-Percentile Queue Length [ft/ln]	212.72	15.15	71.78	27.86	30.69	621.26	26.38	185.48	13.06

Movement, Approach, & Intersection Results

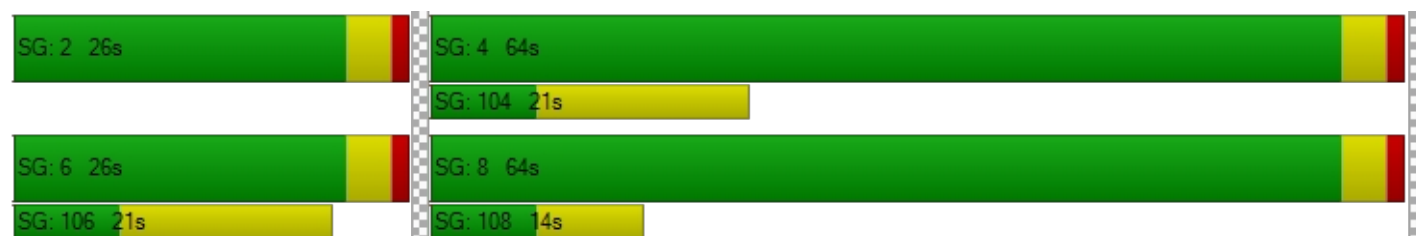
d_M, Delay for Movement [s/veh]	19.65	19.65	19.65	15.00	16.12	15.18	12.65	33.74	33.74	15.48	15.09	12.32
Movement LOS	B	B	B	B	B	B	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	19.65			15.73			32.21			14.95		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	24.29											
Intersection LOS	C											
Intersection V/C	0.708											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			0.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.65			34.65			0.00			34.65		
I_p,int, Pedestrian LOS Score for Intersection	2.061			2.331			0.000			2.478		
Crosswalk LOS	B			B			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	489			489			1334			1334		
d_b, Bicycle Delay [s]	25.67			25.67			4.99			4.99		
I_b,int, Bicycle LOS Score for Intersection	2.093			1.890			3.017			2.228		
Bicycle LOS	B			A			C			B		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



APPENDIX C-II

**EXISTING WITH PROJECT
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: Texas Street at Pioneer Avenue

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

Intersection Setup

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Base Volume Input [veh/h]	224	162	44	165	186	76	15	142	73	24	344	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	224	162	44	165	186	76	15	142	73	24	344	94
Peak Hour Factor	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	57	15	58	65	27	5	50	26	8	120	33
Total Analysis Volume [veh/h]	313	227	62	231	260	106	21	199	102	34	481	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	25	22	0	25	22	0	0	43	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	28	14	24	24	36	36	36
g / C, Green / Cycle	0.20	0.31	0.16	0.26	0.26	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.16	0.14	0.14	0.06	0.01	0.17	0.38
s, saturation flow rate [veh/h]	1700	1800	1700	1800	1800	1700	1800	1700
c, Capacity [veh/h]	349	555	270	472	472	95	719	722
d1, Uniform Delay [s]	34.89	25.66	36.91	28.68	26.07	16.44	19.49	26.18
k, delay calibration	0.12	0.50	0.11	0.50	0.50	0.11	0.11	0.37
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.24	3.46	7.73	4.59	1.10	1.15	0.39	12.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.52	0.86	0.55	0.22	0.22	0.42	0.90
d, Delay for Lane Group [s/veh]	44.12	29.12	44.64	33.26	27.17	17.59	19.88	38.68
Lane Group LOS	D	C	D	C	C	B	B	D
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.42	5.49	5.44	5.33	1.90	0.29	4.46	15.15
50th-Percentile Queue Length [ft/ln]	185.49	137.23	135.94	133.25	47.43	7.21	111.61	378.76
95th-Percentile Queue Length [veh/ln]	11.89	9.33	9.26	9.12	3.42	0.52	7.93	21.53
95th-Percentile Queue Length [ft/ln]	297.17	233.30	231.54	227.90	85.38	12.98	198.24	538.34

Movement, Approach, & Intersection Results

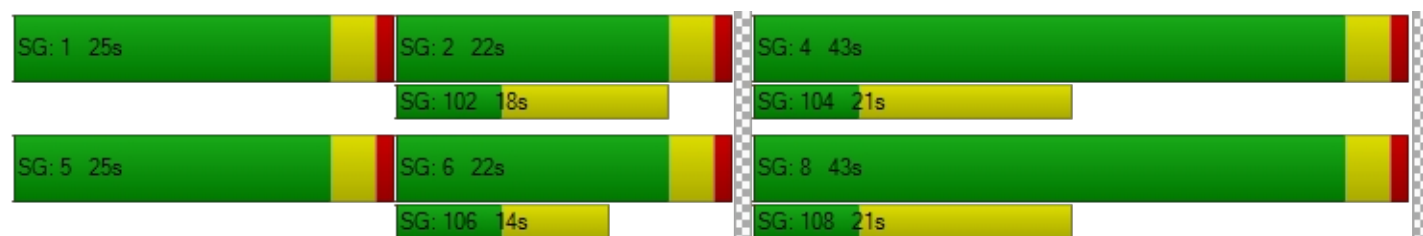
d_M, Delay for Movement [s/veh]	44.12	29.12	29.12	44.64	33.26	27.17	17.59	19.88	19.88	38.68	38.68	38.68
Movement LOS	D	C	C	D	C	C	B	B	B	D	D	D
d_A, Approach Delay [s/veh]	36.92			36.58			19.73			38.68		
Approach LOS	D			D			B			D		
d_I, Intersection Delay [s/veh]	34.80											
Intersection LOS	C											
Intersection V/C	0.818											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.70			34.70			34.70			34.70		
I_p,int, Pedestrian LOS Score for Intersection	2.422			2.398			2.337			2.269		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	400			400			866			866		
d_b, Bicycle Delay [s]	28.82			28.82			14.47			14.47		
I_b,int, Bicycle LOS Score for Intersection	2.553			2.545			2.091			2.626		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Texas Street at San Bernardino Avenue

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

Intersection Setup

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Base Volume Input [veh/h]	62	187	22	54	172	108	83	198	25	91	574	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	187	22	54	172	108	83	198	25	91	574	153
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	54	6	16	50	31	24	57	7	26	165	44
Total Analysis Volume [veh/h]	71	215	25	62	198	124	96	228	29	105	661	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	94	25	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	0	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	46	46	46	46	36	36	36	36	36
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.04	0.11	0.07	0.06	0.14	0.06	0.37	0.10
s, saturation flow rate [veh/h]	1700	1700	1800	1800	1700	1800	1700	1800	1800
c, Capacity [veh/h]	922	735	924	924	120	716	539	716	716
d1, Uniform Delay [s]	13.03	11.05	11.96	11.44	17.29	19.03	17.38	25.77	18.08
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.13	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	0.23	0.53	0.30	11.52	0.30	0.17	6.48	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.08	0.21	0.13	0.80	0.36	0.19	0.92	0.25
d, Delay for Lane Group [s/veh]	14.02	11.28	12.49	11.74	28.81	19.33	17.56	32.25	18.25
Lane Group LOS	B	B	B	B	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.79	0.64	2.20	1.31	1.62	3.71	1.39	13.99	2.41
50th-Percentile Queue Length [ft/ln]	94.69	16.09	55.04	32.85	40.52	92.63	34.67	349.69	60.17
95th-Percentile Queue Length [veh/ln]	6.82	1.16	3.96	2.36	2.92	6.67	2.50	20.12	4.33
95th-Percentile Queue Length [ft/ln]	170.44	28.96	99.07	59.12	72.94	166.74	62.40	503.03	108.31

Movement, Approach, & Intersection Results

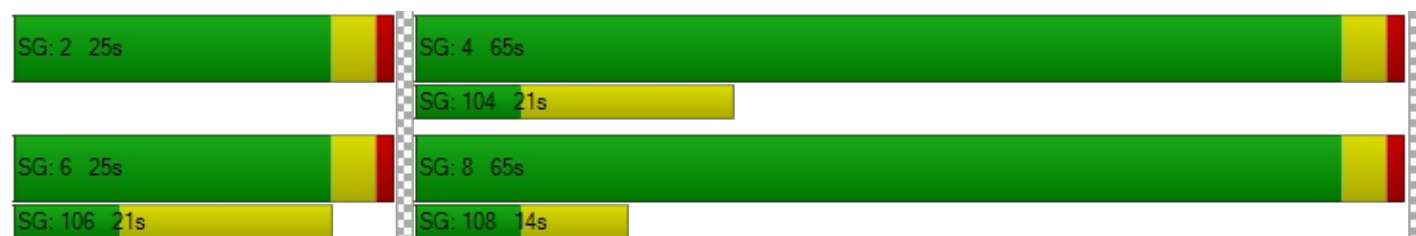
d_M, Delay for Movement [s/veh]	14.02	14.02	14.02	11.28	12.49	11.74	28.81	19.33	19.33	17.56	32.25	18.25
Movement LOS	B	B	B	B	B	B	C	B	B	B	C	B
d_A, Approach Delay [s/veh]	14.02			12.05			21.91			28.00		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.66											
Intersection LOS	C											
Intersection V/C	0.604											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			0.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.65			34.65			0.00			34.65		
I_p,int, Pedestrian LOS Score for Intersection	2.177			2.479			0.000			2.525		
Crosswalk LOS	B			B			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	467			467			1356			1356		
d_b, Bicycle Delay [s]	26.43			26.43			4.66			4.66		
I_b,int, Bicycle LOS Score for Intersection	2.073			2.193			2.142			3.114		
Bicycle LOS	B			B			B			C		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Texas Street at Pioneer Avenue

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.388

Intersection Setup

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Base Volume Input [veh/h]	70	53	79	25	42	31	39	308	71	53	119	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	53	79	25	42	31	39	308	71	53	119	27
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	15	22	7	12	9	11	87	20	15	34	8
Total Analysis Volume [veh/h]	79	60	89	28	47	35	44	347	80	60	134	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	39	0	10	39	0	0	41	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	51	3	49	49	24	24	24
g / C, Green / Cycle	0.06	0.57	0.03	0.54	0.54	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.05	0.08	0.02	0.03	0.02	0.03	0.24	0.13
s, saturation flow rate [veh/h]	1700	1800	1700	1800	1800	1700	1800	1700
c, Capacity [veh/h]	101	1024	59	979	979	302	473	498
d1, Uniform Delay [s]	41.76	9.12	42.65	9.61	9.54	25.11	32.06	28.17
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.15	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.09	0.30	5.77	0.09	0.07	0.22	8.54	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.15	0.47	0.05	0.04	0.15	0.90	0.45
d, Delay for Lane Group [s/veh]	53.84	9.42	48.41	9.70	9.61	25.33	40.61	28.81
Lane Group LOS	D	A	D	A	A	C	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.05	1.36	0.70	0.44	0.32	0.72	9.83	4.10
50th-Percentile Queue Length [ft/ln]	51.27	34.11	17.51	10.88	8.05	18.02	245.71	102.51
95th-Percentile Queue Length [veh/ln]	3.69	2.46	1.26	0.78	0.58	1.30	14.97	7.38
95th-Percentile Queue Length [ft/ln]	92.28	61.40	31.51	19.59	14.49	32.44	374.24	184.51

Movement, Approach, & Intersection Results

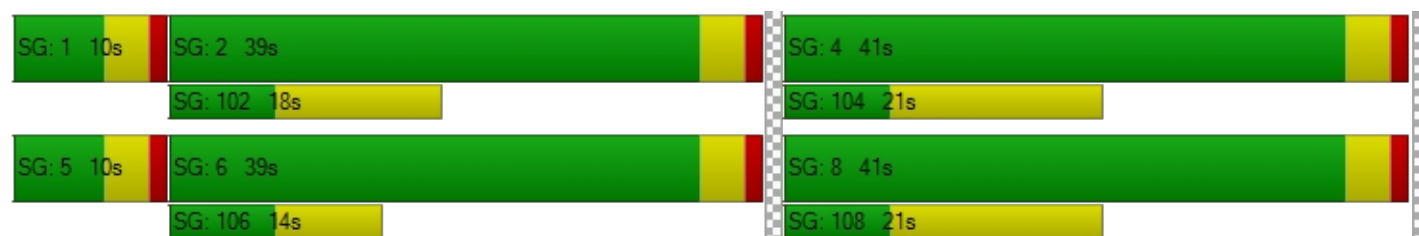
d_M, Delay for Movement [s/veh]	53.84	9.42	9.42	48.41	9.70	9.61	25.33	40.61	40.61	28.81	28.81	28.81
Movement LOS	D	A	A	D	A	A	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	24.81			19.53			39.18			28.81		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	31.67											
Intersection LOS	C											
Intersection V/C	0.388											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.68			34.68			34.68			34.68		
I_p,int, Pedestrian LOS Score for Intersection	2.317			2.253			2.173			2.050		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	778			778			822			822		
d_b, Bicycle Delay [s]	16.82			16.82			15.62			15.62		
I_b,int, Bicycle LOS Score for Intersection	1.936			1.741			2.337			1.929		
Bicycle LOS	A			A			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Texas Street at San Bernardino Avenue

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Base Volume Input [veh/h]	63	144	85	25	112	52	70	663	69	43	294	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	144	85	25	112	52	70	663	69	43	294	27
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	40	24	7	31	15	20	186	19	12	82	8
Total Analysis Volume [veh/h]	71	161	95	28	125	58	78	742	77	48	329	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	28	0	94	28	0	0	62	0	0	62	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	0	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	39	39	39	39	43	43	43	43	43
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.19	0.02	0.07	0.03	0.05	0.46	0.03	0.18	0.02
s, saturation flow rate [veh/h]	1700	1700	1800	1800	1700	1800	1700	1800	1800
c, Capacity [veh/h]	780	562	774	774	641	866	109	866	866
d1, Uniform Delay [s]	18.08	14.84	15.69	15.09	12.70	22.23	12.47	14.82	12.32
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.25	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.66	0.17	0.45	0.19	0.08	12.18	2.76	0.28	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.05	0.16	0.07	0.12	0.95	0.44	0.38	0.03
d, Delay for Lane Group [s/veh]	19.73	15.01	16.14	15.27	12.78	34.41	15.23	15.10	12.34
Lane Group LOS	B	B	B	B	B	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	4.96	0.35	1.62	0.72	0.84	18.07	0.58	4.12	0.31
50th-Percentile Queue Length [ft/ln]	123.99	8.74	40.57	18.04	20.97	451.84	14.54	103.08	7.78
95th-Percentile Queue Length [veh/ln]	8.61	0.63	2.92	1.30	1.51	25.05	1.05	7.42	0.56
95th-Percentile Queue Length [ft/ln]	215.30	15.74	73.02	32.47	37.75	626.15	26.17	185.55	14.01

Movement, Approach, & Intersection Results

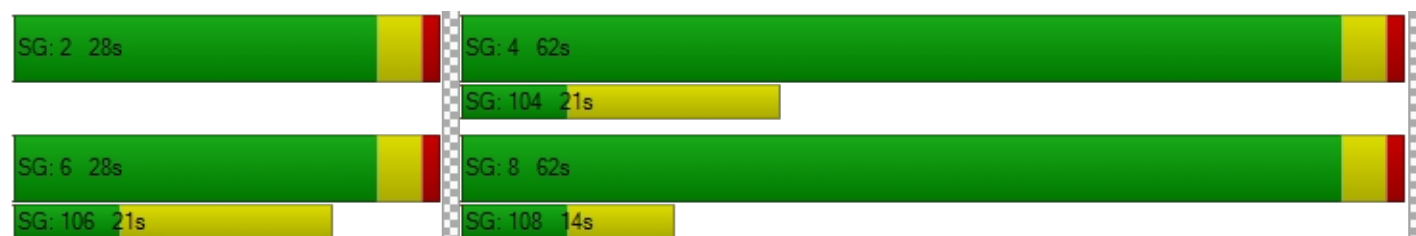
d_M, Delay for Movement [s/veh]	19.73	19.73	19.73	15.01	16.14	15.27	12.78	34.41	34.41	15.23	15.10	12.34
Movement LOS	B	B	B	B	B	B	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	19.73			15.75			32.53			14.91		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	24.44											
Intersection LOS	C											
Intersection V/C	0.711											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			0.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.65			34.65			0.00			34.65		
I_p,int, Pedestrian LOS Score for Intersection	2.064			2.359			0.000			2.480		
Crosswalk LOS	B			B			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	534			534			1290			1290		
d_b, Bicycle Delay [s]	24.18			24.18			5.68			5.68		
I_b,int, Bicycle LOS Score for Intersection	2.099			1.908			3.040			2.231		
Bicycle LOS	B			A			C			B		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



TRAFFIC CIRCULATION ANALYSIS
TTLIC REDLANDS TEXAS ST, LLC
SINGLE-FAMILY RESIDENTIAL DEVELOPMENT
PROJECT (TENTATIVE TRACT MAP NO. 20520)
Redlands, California
January 9, 2023

Prepared for:
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4350 Von Karman Avenue, Suite 200
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LLG Ref. 2-22-4587-1



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TRAFFIC CIRCULATION ANALYSIS
TTLIC REDLANDS TEXAS ST, LLC
SINGLE-FAMILY RESIDENTIAL DEVELOPMENT PROJECT
(TENTATIVE TRACT MAP NO. 20520)

Redlands, California

January 9, 2023

1.0 INTRODUCTION

This traffic circulation analysis addresses the potential circulation needs associated with the proposed single-family residential community to be developed by TTLIC Redlands Texas St, LLC (hereinafter referred to as Project), located in the City of Redlands, California. The Project site is located along the east side of Texas Street, approximately 500 feet north of Domestic Avenue. The proposed Project includes the development of 35 single-family residential dwelling units.

This traffic report documents the findings and recommendations of a traffic circulation analysis conducted by Linscott, Law & Greenspan Engineers (LLG) to determine the potential circulation effects and Project-related improvements associated with the proposed Project. The traffic analysis estimates the trip generation potential of the proposed project and evaluates the operating conditions at two (2) key study intersections within the project vicinity, both without and with the proposed project. Where necessary, intersection improvements/mitigation measures are identified.

This traffic report satisfies City of Redlands criteria and is consistent with the requirements and procedures outlined in the most current *Congestion Management Program for San Bernardino County*. The Scope of Work for the traffic study was developed in collaboration with City staff and is provided in *Appendix A*.

The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak hour traffic information has been collected at two (2) key study locations on a “typical” weekday for use in the preparation of intersection level of service calculations. A “typical” weekday constitutes a Tuesday, Wednesday or Thursday and refers to a non-holiday condition when local schools are in session. This traffic report analyzes existing weekday AM peak hour and PM peak hour traffic conditions upon completion of the proposed Project.

This analysis evaluates the potential traffic circulation impacts associated with the proposed Project, which includes a level of service (LOS) analysis based on City of Redlands Measure U. It should be noted that transportation impacts associated with new development under CEQA no longer includes LOS analyses and is now based on vehicle miles traveled (VMT) analyses. Measure U became effective December 12, 1997 and is an initiative ordinance of the people of Redlands establishing principles of managed development.

1.1 Study Area

The two (2) key study intersections selected for evaluation were determined primarily through application of San Bernardino County CMP criteria and in coordination with City of Redlands staff. The intersections listed below provide local access to the study area and define the extent of the boundaries for this traffic analysis. The jurisdictions where the study intersections are located are identified as well.

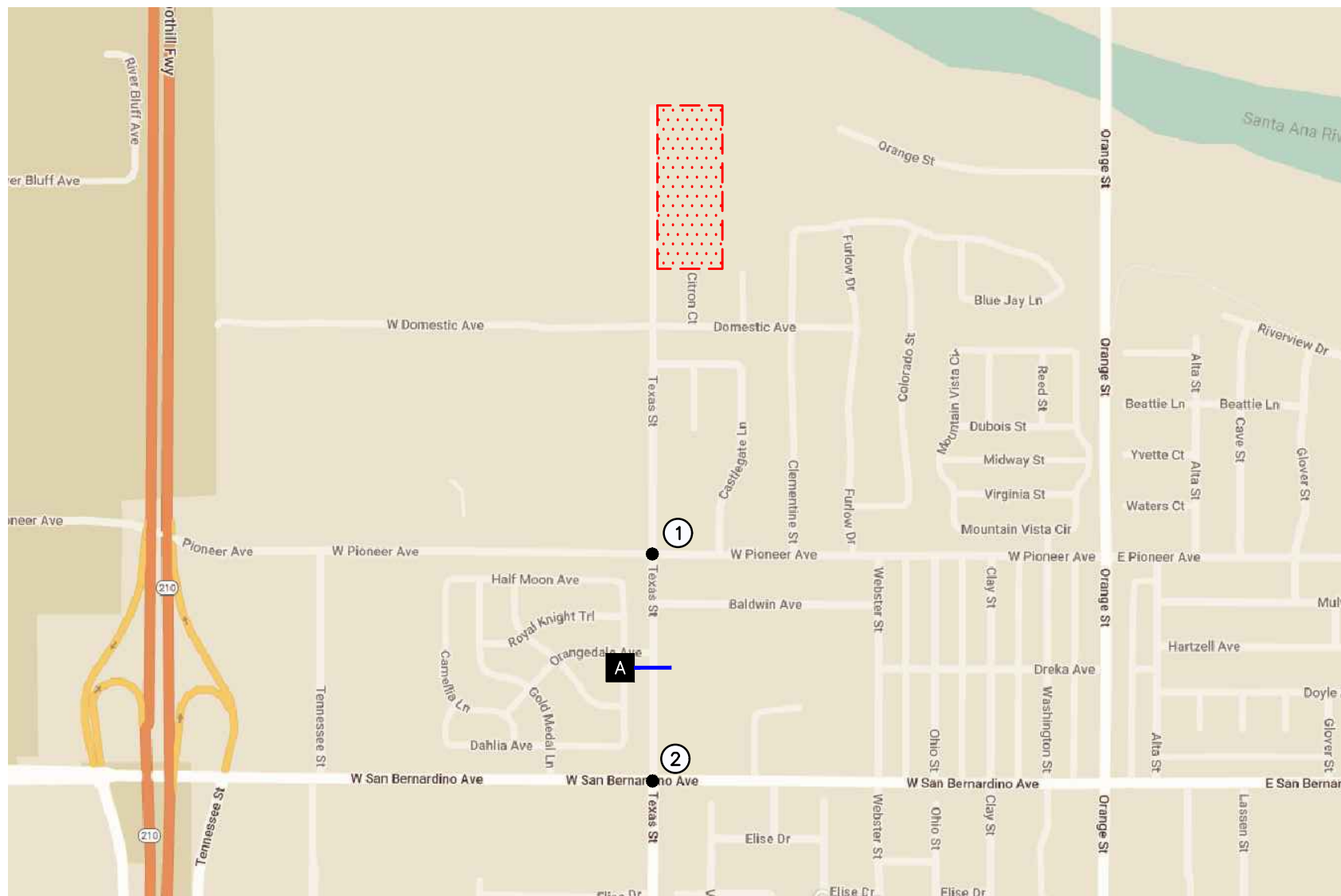
Study Intersections

1. Texas Street at Pioneer Avenue (City of Redlands)
2. Texas Street at San Bernardino Avenue (City of Redlands)

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the project and depicts the study locations and surrounding street system. The Level of Service (LOS) investigations at these key locations were used to evaluate the potential circulation effects associated with the proposed project. When necessary, this report recommends intersection improvements that may be required to restore/maintain an acceptable Level of Service and/or offset the circulation effects of the project.

Included in this Traffic Analysis are:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- AM and PM peak hour analyses for existing conditions,
- AM and PM peak hour analyses for existing with Project conditions,
- Area Traffic Improvements, and
- Site Access and Circulation Evaluation,



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SOURCE: GOOGLE

KEY

- ⊙ = STUDY INTERSECTION
- = STUDY ROADWAY SEGMENT
- ▤ = PROJECT SITE

FIGURE 1-1

VICINITY MAP

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS

2.0 PROJECT DESCRIPTION

The subject property is located along the east side of Texas Street, approximately 500 feet north of Domestic Avenue in the City of Redlands, California. The proposed Project site is a 14,69±-acre rectangular-shaped vacant parcel of land that is zoned Agricultural District – 1 and designated as Very Low Density Residential in the City’s General Plan. The proposed Project includes the development of 35 single-family residential dwelling units.

Figure 2-1 presents the existing aerial photograph of the Project site. *Figure 2-2* presents the proposed Project site plan prepared by Huitt-Zollars.

2.1 Site Access

Access to the Project site is proposed to be provided via three (3) cul-de-sacs (Street A, Street B and Street C) that would intersect with Texas Street, with a 4th cul-de-sac located at the northerly terminus of Texas Street. Streets A, B and C will be constructed to the City’s local residential street standard with a paved width of 36-feet within a right-of-way of 60-feet. Texas Street will be constructed to ultimate half-section width per the City’s residential collector standards (20-feet paved with 32-foot right-of-way), with an additional 14-feet of pavement.



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SOURCE: GOOGLE

KEY

 = PROJECT SITE

FIGURE 2-1

EXISTING SITE AERIAL

TTLC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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SOURCE: HUITT-ZOLLARS

FIGURE 2-2

PROPOSED SITE PLAN

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3.0 EXISTING CONDITIONS

3.1 Existing Street System

Regional access to the project site is provided via the San Bernardino (I-10) Freeway. The I-10 Freeway, located south of the project site, is a major highway, which extends through San Bernardino County and links Redlands with the neighboring communities. The principal local network of streets serving the project includes Texas Street, Pioneer Avenue, and San Bernardino Avenue. The following discussion provides a brief synopsis of these key area streets.

Texas Street is a two-lane divided roadway north of Pioneer Avenue, a three-lane divided roadway between Pioneer Avenue and San Bernardino Avenue, and a two-lane undivided roadway south of San Bernardino Avenue, oriented in the north-south direction. On-street parking is generally not permitted north of San Bernardino Avenue, but is permitted south of San Bernardino Avenue within the vicinity of the Project. The posted speed limit on Texas Street is 30 miles per hour (mph) between Pioneer Avenue and San Bernardino Avenue, and 40 mph north of Pioneer Avenue and south of San Bernardino Avenue. A traffic signal controls the study intersections of Texas Street at Pioneer Avenue and San Bernardino Avenue.

Pioneer Avenue is a two-lane, undivided roadway, oriented in the east-west direction. On-street parking is generally not permitted within the vicinity of the Project. The posted speed limit on Pioneer Avenue is 35 mph.

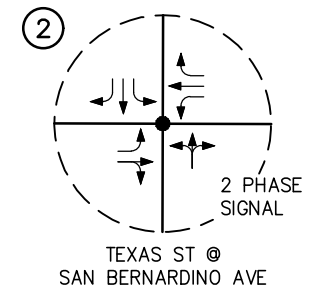
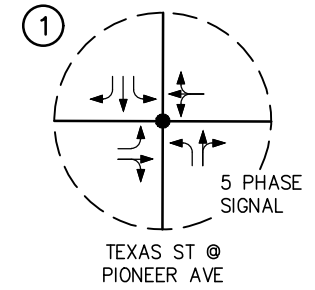
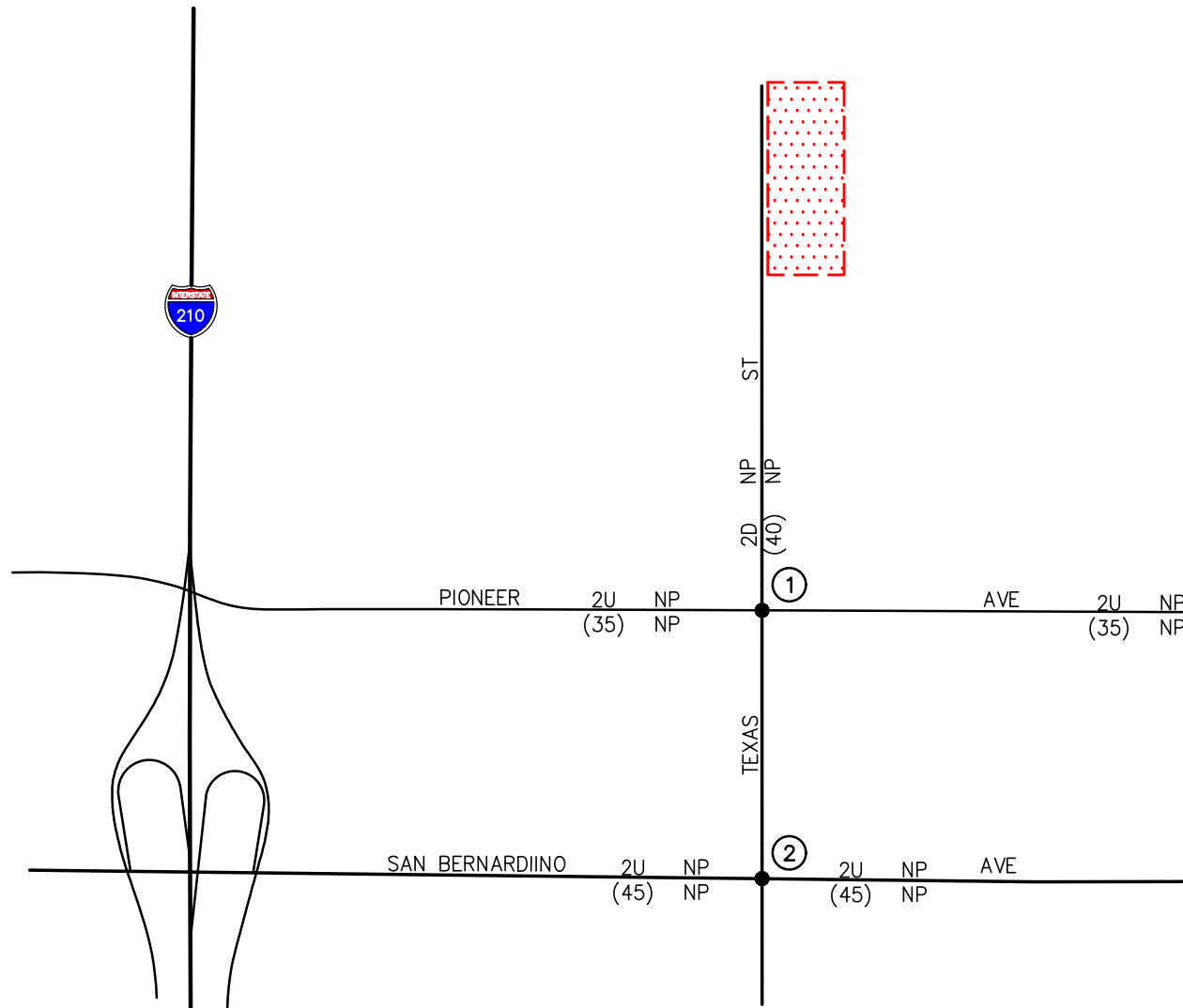
San Bernardino Avenue is a two-lane, undivided roadway, oriented in the east-west direction. On-street parking is generally not permitted within the vicinity of the Project. The posted speed limit on San Bernardino Avenue is 45 mph.

Figure 3-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This figure identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area study intersections.

3.2 Existing Traffic Volumes

Two (2) key study intersections have been identified as the locations at which to evaluate existing traffic operating conditions. Some portion of potential project-related traffic will pass through each of these intersections, and their analysis will reveal the expected circulation effects of the project. These key study intersections were selected for evaluation based on discussions with City of Redlands Development Services Department staff.

Existing AM and PM peak hour traffic volumes for the key study intersections evaluated in this report were obtained from manual morning and evening peak hour turning movement counts conducted by Counts Unlimited, Inc. in September 2022. *Figures 3-2* and *3-3* illustrate the existing AM and PM peak hour traffic volumes at the key study intersections evaluated in this report, respectively. *Appendix B* contains the detailed peak hour count sheets for the key intersections evaluated in this report.



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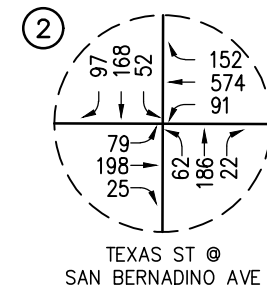
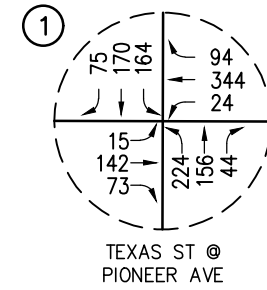
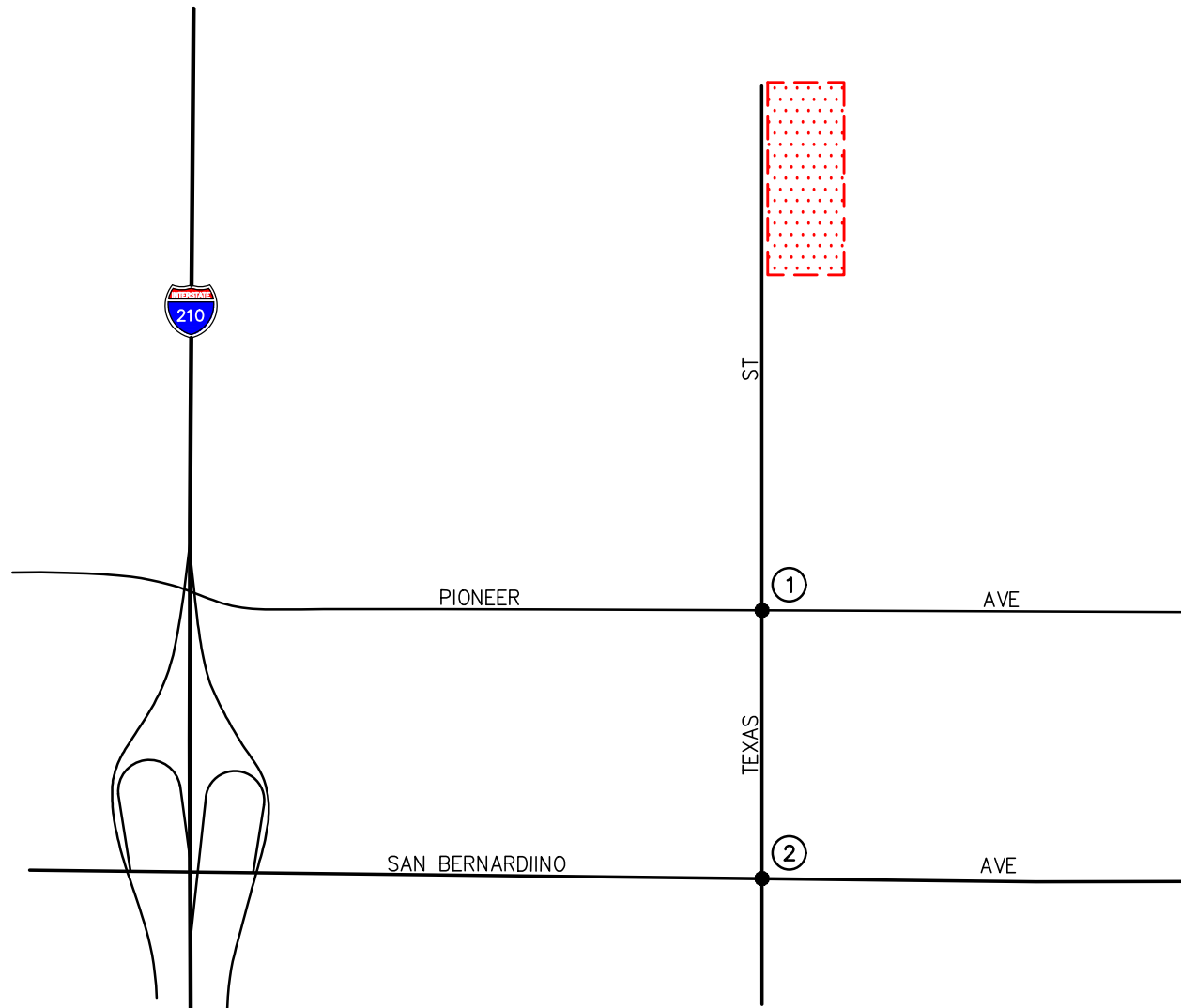
KEY

- ← = APPROACH LANE ASSIGNMENT
- = TRAFFIC SIGNAL, ▼ = STOP SIGN
- P = PARKING, NP = NO PARKING
- U = UNDIVIDED, D = DIVIDED
- 2 = NUMBER OF TRAVEL LANES
- (XX) = POSTED SPEED LIMIT (MPH)
- = PROJECT SITE

FIGURE 3-1

EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

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KEY



= STUDY INTERSECTION

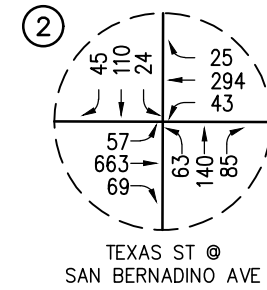
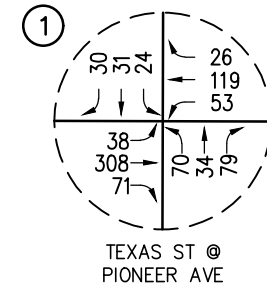
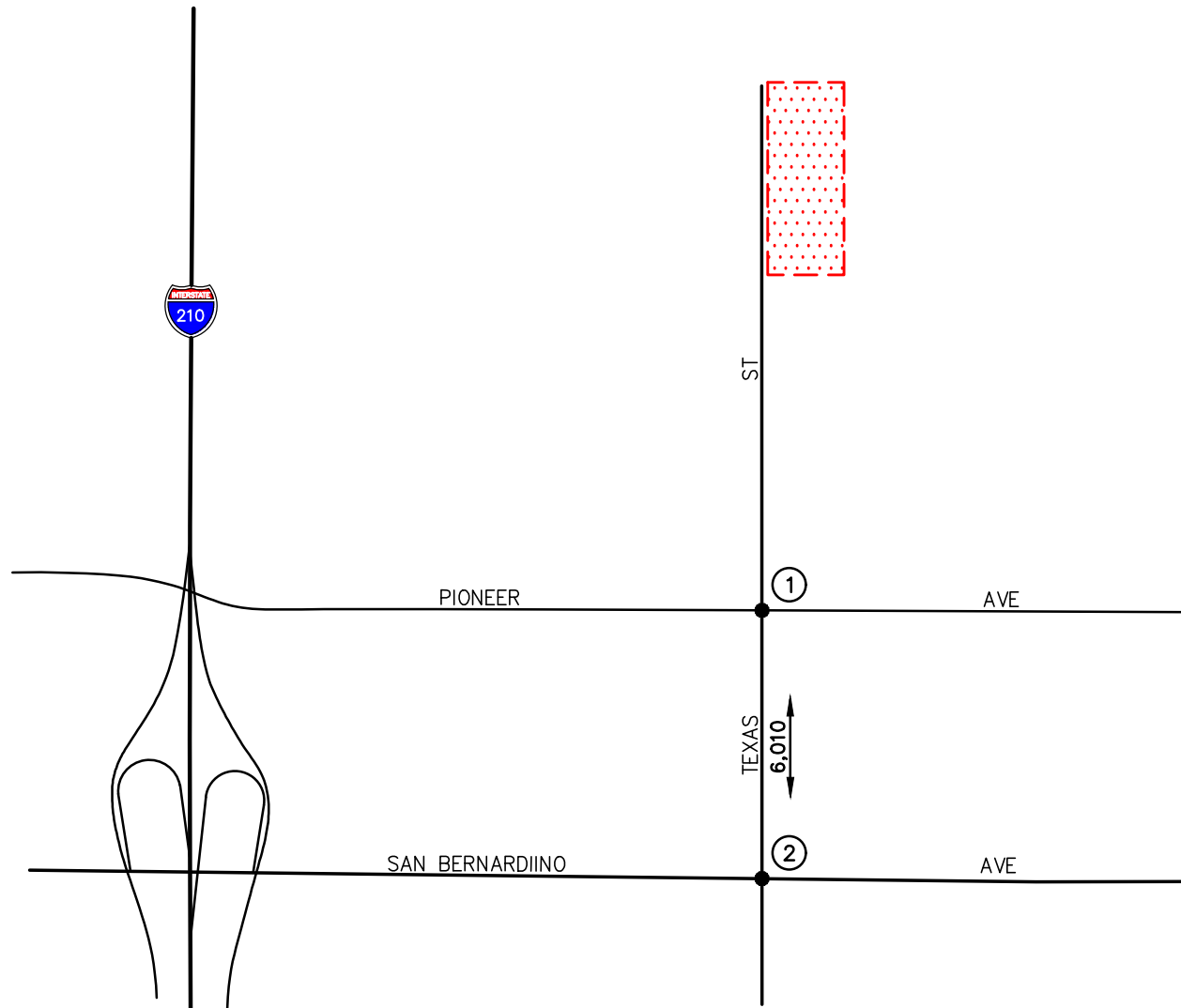


= PROJECT SITE

FIGURE 3-2

EXISTING AM PEAK HOUR TRAFFIC VOLUMES
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KEY

- ① = STUDY INTERSECTION
- XX,XXX = DAILY TRAFFIC VOLUMES
- = PROJECT SITE

FIGURE 3-3

EXISTING PM PEAK HOUR AND
DAILY TRAFFIC VOLUMES

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS

3.3 Existing Intersection Conditions

In conformance with City of Redlands and San Bernardino County CMP requirements, existing Weekday AM and Weekday PM peak hour operating conditions for the two (2) key study intersections were evaluated using the methodology outlined in *Chapter 19 of the Highway Capacity Manual 6 (HCM 6)* for signalized intersections.

3.3.1 Highway Capacity Manual (HCM) Method of Analysis (Signalized Intersections)

Based on the HCM operations method of analysis, level of service for signalized intersections and approaches is defined in terms of control delay, which is a measure of the increase in travel time due to traffic signal control, driver discomfort, and fuel consumption. Control delay includes the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed. LOS criteria for traffic signals are stated in terms of the control delay in seconds per vehicle. The LOS thresholds established for the automobile mode at a signalized intersection are shown in *Table 3-1*.

3.4 Level of Service Criteria

According to the City of Redlands, LOS “C” is the minimum acceptable condition that should be maintained during the peak commute hours at all intersections presently at LOS C or better (General Plan Policy 5.20a). Additionally, City of Redlands General Plan Policy 5.20c states that: Where the current level of service at a location within the City of Redlands is below the LOS C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location.

The City of Redlands General Plan Policy 5.20b states that within a specific area within the northwestern portion of the city, LOS C or better shall be maintained; however, a reduced LOS may be accepted on a case-by-case basis upon approval by a four-fifths (4/5) vote of the total authorized membership of the City Council. It should be noted that the Project site is not located within this area.

TABLE 3-1
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (HCM)¹

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent occurrences.
F	≥ 80.0	Severe congestion This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

¹ Source: *Highway Capacity Manual* 6, Chapter 19: Signalized Intersections.

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic characteristics of the proposed Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations and/or rates to the Project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound Project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of Project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway segments and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the effect of project-related traffic is isolated by comparing operational (LOS) conditions at the selected key intersection using expected future traffic volumes with and without forecast project traffic. If necessary, the need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the 11th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2021]. Specifically, trip rates for ITE Land Use 210: Single Family Detached Housing will be used to forecast the trip generation potential of the proposed Project.

A review of the bottom portion of **Table 5-1** shows that the proposed Project is forecast to generate 330 daily trips (one half arriving, one half departing), with 25 trips (7 inbound, 18 outbound) produced in the AM peak hour and 33 trips (21 inbound, 12 outbound) produced in the PM peak hour on a weekday.

5.2 Project Traffic Distribution and Assignment

The general, directional traffic distribution pattern for the proposed Project is presented in **Figure 5-1**. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- the site's proximity to major traffic carriers (i.e. I-210 Freeway, etc.),
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals
- the traffic-carrying capacity and travel speed available on roadways serving the Project site,
- input from City of Redlands staff, and
- ingress/egress availability at the project site.

The anticipated AM and PM peak hour project volumes associated with the proposed Project are presented in **Figures 5-2** and **5-3**, respectively. The traffic volume assignments presented in **Figures 5-2** and **5-3** reflect the traffic distribution characteristics shown in **Figure 5-1** and the traffic generation forecast presented in **Table 5-1**.

5.3 Existing With Project Traffic Conditions

The Existing Plus Project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared to assess the potential effects of Project-related traffic on the circulation system as it currently exists. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to accommodate the traffic circulation effects of the Project, if any.

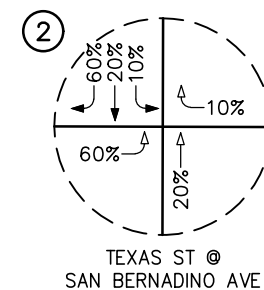
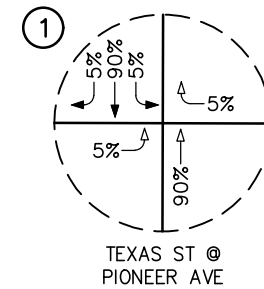
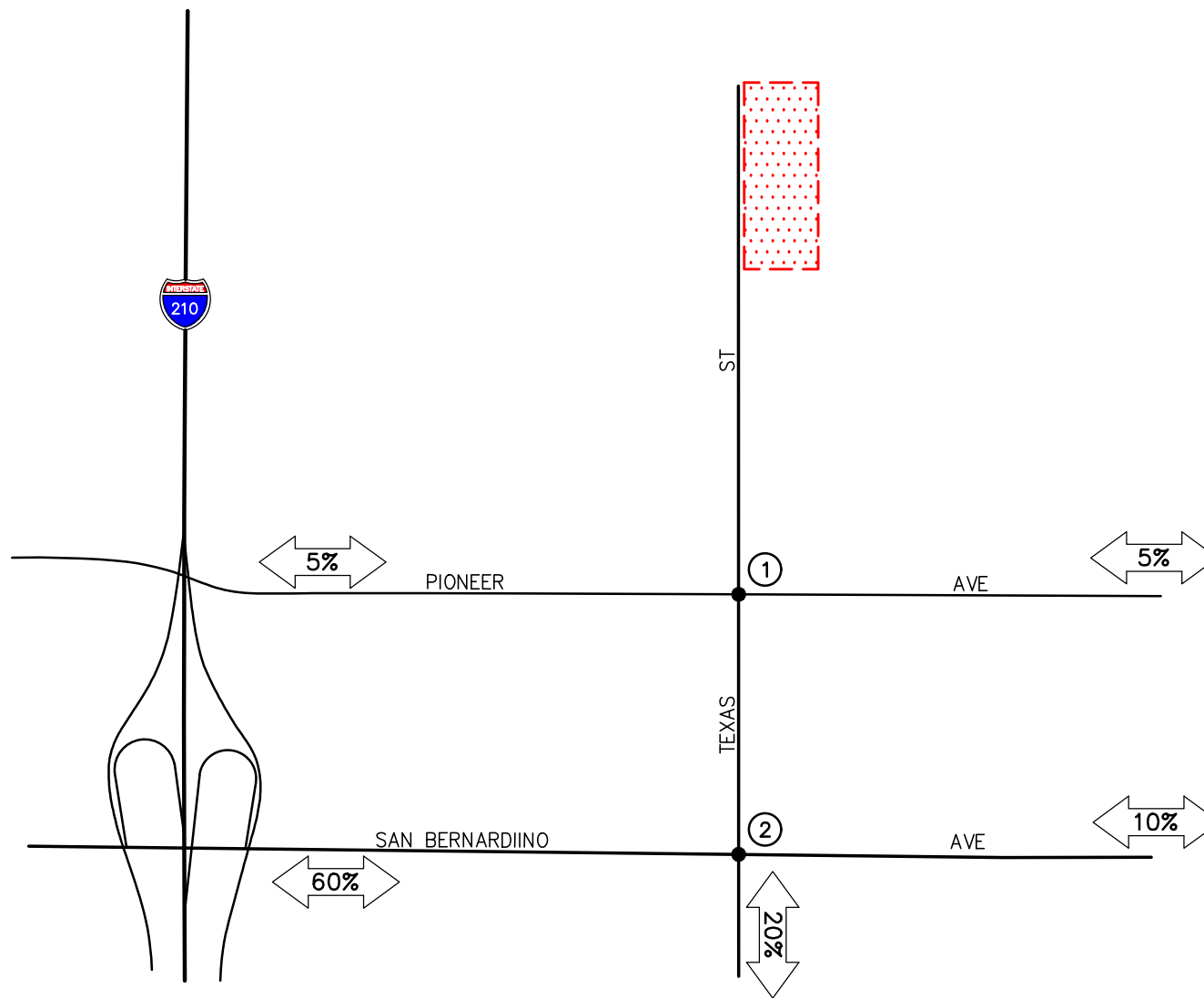
Figures 5-4 and **5-5** present projected AM and PM peak hour traffic volumes at the two (2) key study intersections with the addition of the trips generated by the proposed Project to existing peak hour traffic volumes.

TABLE 5-1
PROJECT TRIP GENERATION FORECAST

Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Trip Rates:</u>							
▪ 210: Single Family Detached Housing (TE/DU)	9.43	26%	74%	0.70	63%	37%	0.94
<u>Project Trip Generation:</u>							
▪ TTLC Redlands Texas – TTM No. 20520 (35 DU)	330	7	18	25	21	12	33
Total Project Trip Generation	330	7	18	25	21	12	33

Notes:

- TE/DU = Trip Ends per Dwelling Unit



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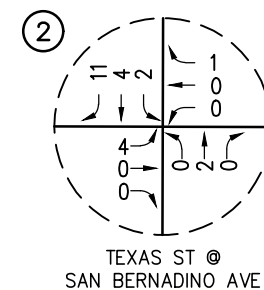
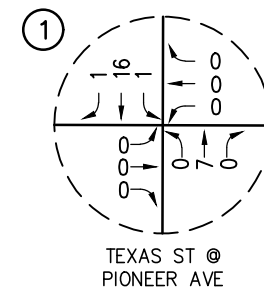
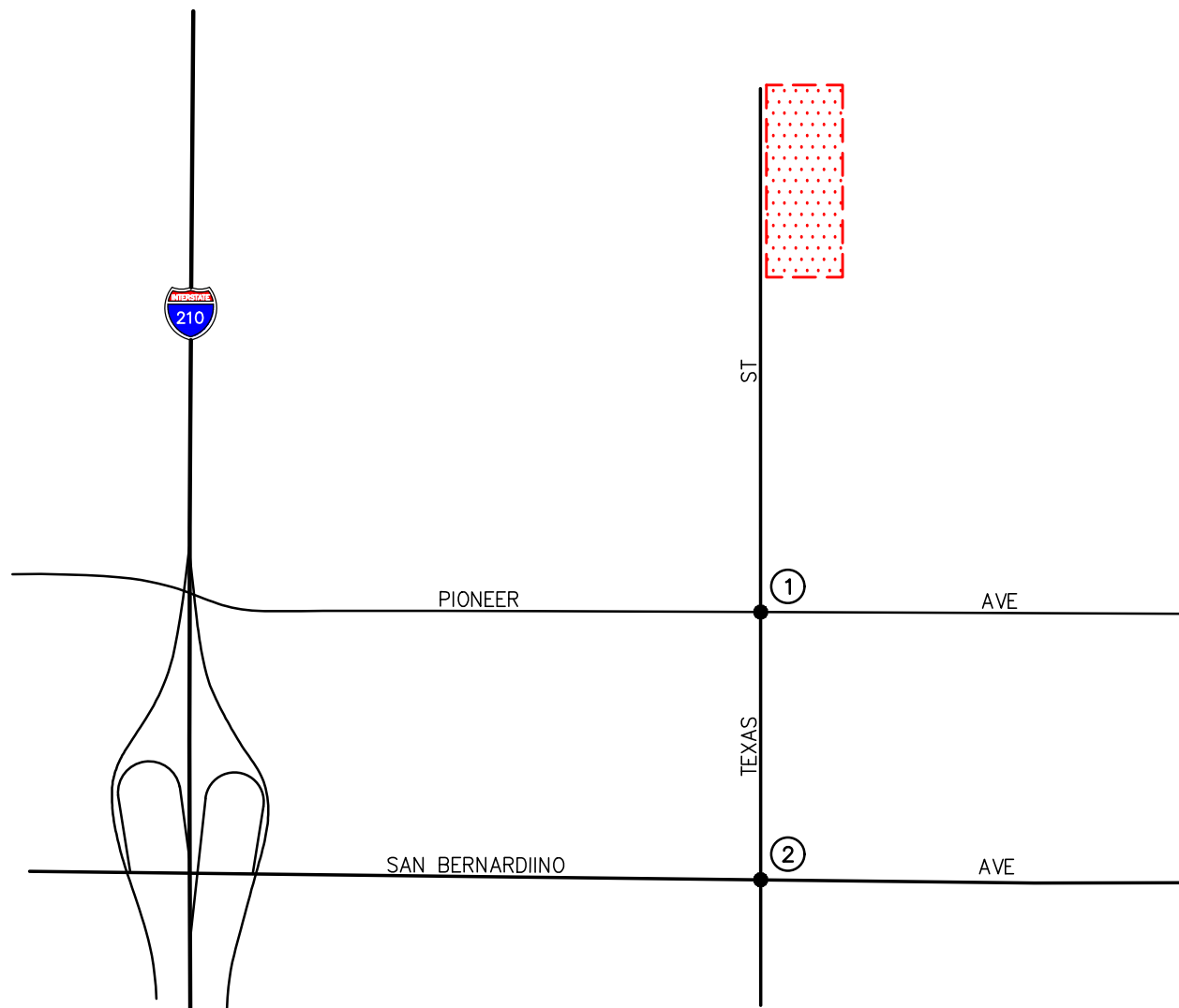
KEY

- ① = STUDY INTERSECTION
- ← = INBOUND PERCENTAGE
- = OUTBOUND PERCENTAGE
- [Red Hatched Box] = PROJECT SITE

FIGURE 5-1

PROJECT TRAFFIC DISTRIBUTION PATTERN

TTLC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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= STUDY INTERSECTION



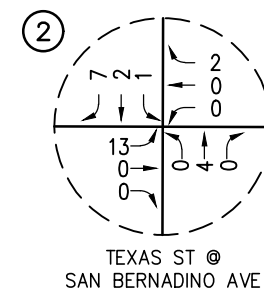
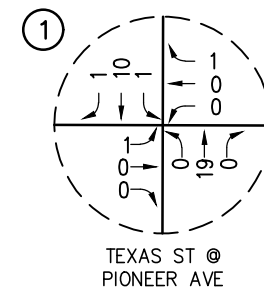
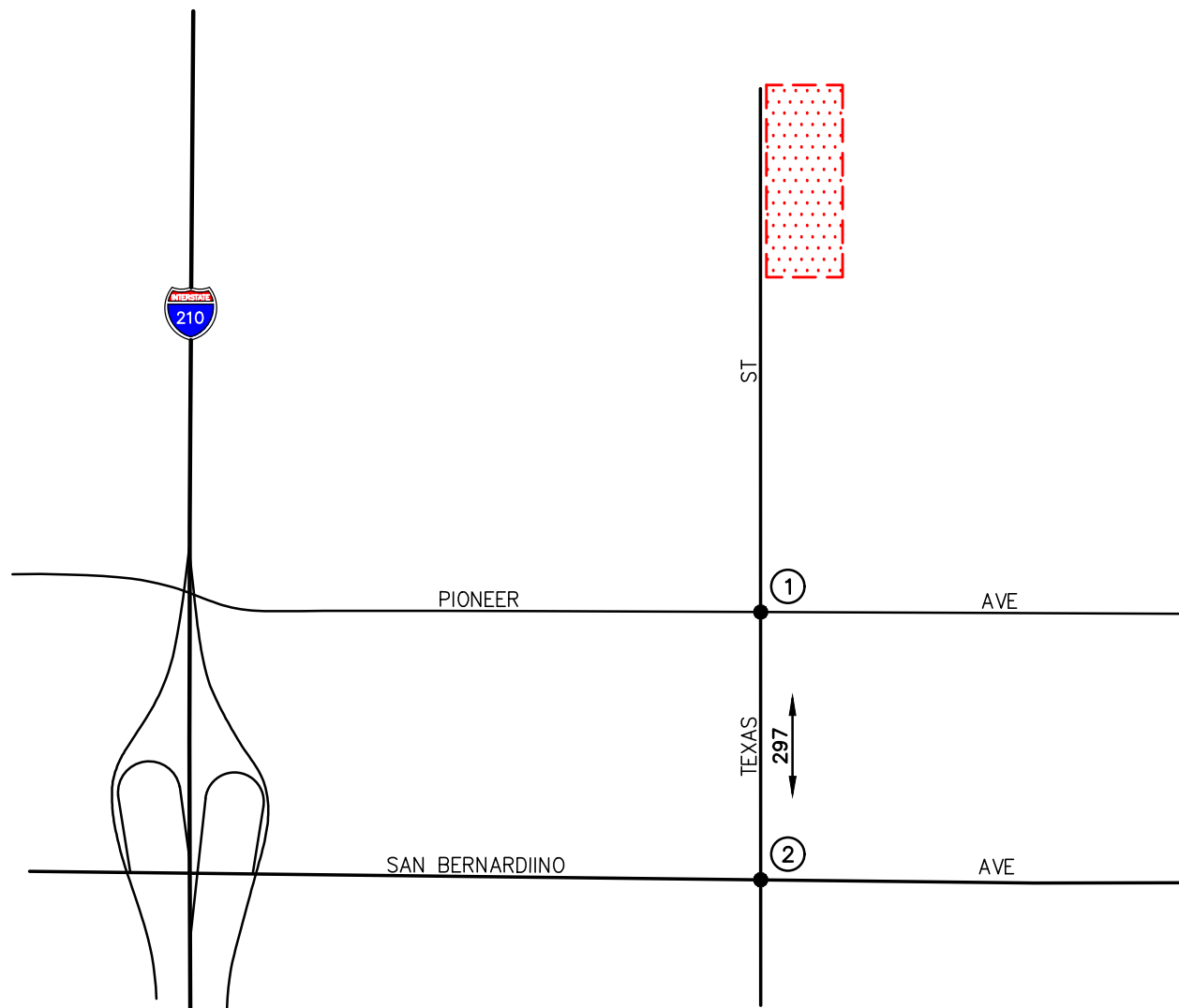
= PROJECT SITE

FIGURE 5-2

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

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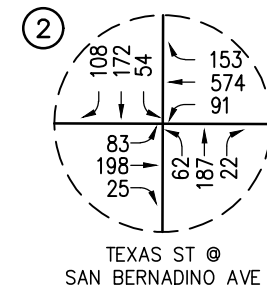
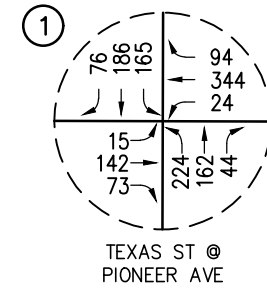
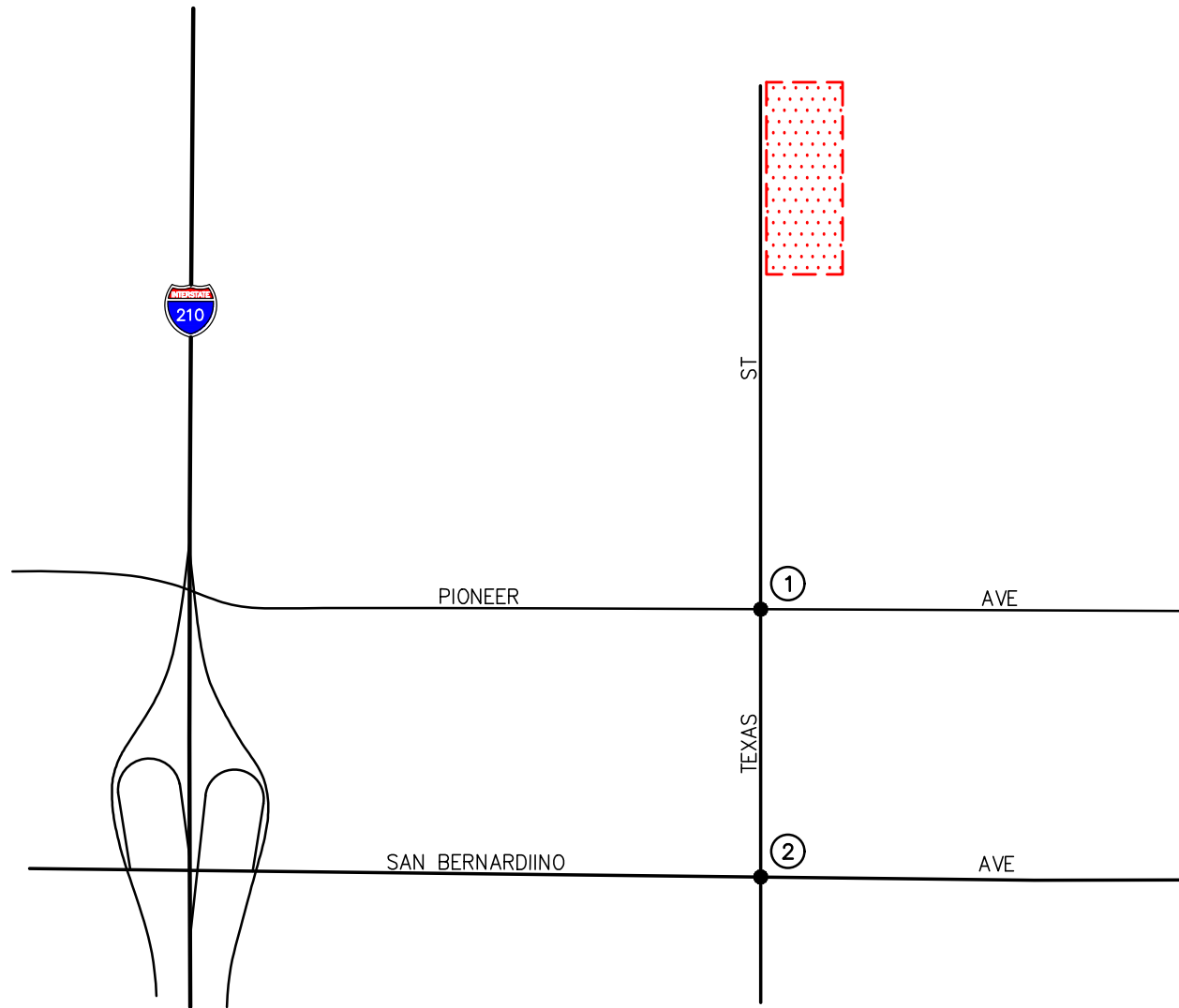
KEY

- ① = STUDY INTERSECTION
- XX,XXX = DAILY TRAFFIC VOLUMES
- = PROJECT SITE

FIGURE 5-3

PM PEAK HOUR AND DAILY PROJECT TRAFFIC VOLUMES

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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= STUDY INTERSECTION

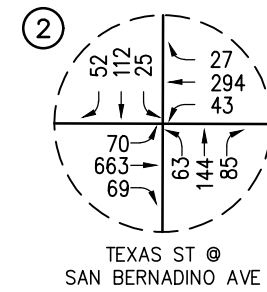
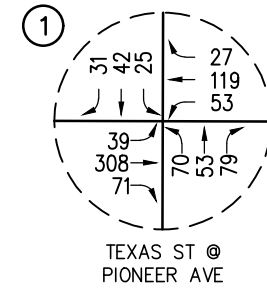
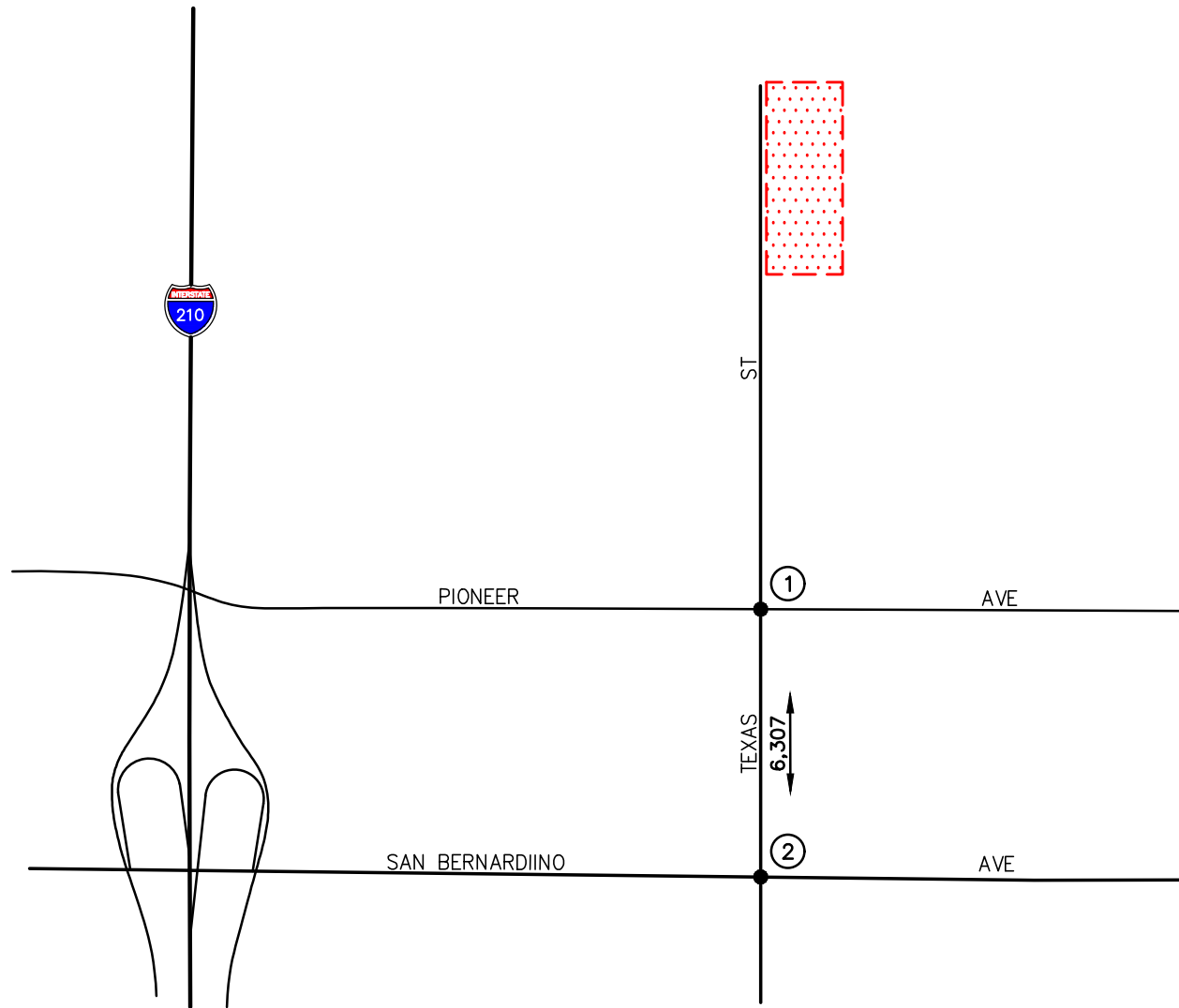


= PROJECT SITE

FIGURE 5-4

EXISTING WITH PROJECT AM PEAK
HOUR TRAFFIC VOLUMES

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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KEY

- ① = STUDY INTERSECTION
- XX,XXX = DAILY TRAFFIC VOLUMES
- = PROJECT SITE

FIGURE 5-5

EXISTING WITH PROJECT PM PEAK
HOUR AND DAILY TRAFFIC VOLUMES
TTLC REDLANDS TEXAS RESIDENTIAL, REDLANDS

6.0 TRAFFIC CIRCULATION ANALYSIS METHODOLOGY

The potential circulation effects of the added peak hour project traffic volumes generated by the Project have been evaluated based on the analysis of existing operating conditions at two (2) key study intersections. Operating conditions at the key study intersections were evaluated during the AM and PM peak hours for existing traffic conditions without, then with the proposed Project.

The previously discussed capacity analysis procedures were utilized to investigate the service level characteristics at each study intersection. The significance of the potential circulation effects of the project at each key intersection was then evaluated using the LOS standards and criteria defined in this report.

6.1 Level of Service Criteria and Thresholds

Per City of Redlands General Plan Policy 5.20a, LOS “C” is the minimum acceptable condition that should be maintained during the peak commute hours at all intersections presently at LOS C or better. Additionally, City of Redlands General Plan Policy 5.20c states that: Where the current level of service at a location within the City of Redlands is below the LOS C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location.

6.2 Traffic Analysis Scenarios

The following scenarios are those for which volume/capacity calculations have been performed at the two (2) key intersections:

1. Existing Traffic Conditions;
2. Existing With Project Traffic Conditions;
3. Scenario (2) with Mitigation, if necessary;

7.0 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

7.1 Existing With Project Traffic Conditions

Table 7-1 summarizes the peak hour level of service results at the two (2) key study intersections for Existing With Project traffic conditions. The first column (1) of HCM/LOS values in *Table 7-1* presents a summary of existing AM and PM peak hour traffic conditions. The second column (2) lists Existing With Project traffic conditions. The third column (3) indicates whether the traffic associated with the Project will exceed the LOS standards and criteria defined in this report. The fourth column (4) indicates the anticipated level of service with planned and/or recommended improvements, where needed.

7.1.1 Existing Traffic Conditions

Review of column (1) of *Table 7-1* indicates that the two (2) key study intersections currently operate at acceptable LOS C during the AM and PM peak hours.

7.1.2 Existing With Project Traffic Conditions

Review of columns (2) and (3) of *Table 7-1* indicates that the two (2) key study intersections will continue to operate at acceptable LOS C during the AM and PM peak hours with the addition of traffic associated with the proposed Project. As such, improvements at the study intersections are not needed based on the LOS standards and criteria specified in this report.

Appendix C presents the HCM/LOS calculations for the key study intersections.

TABLE 7-1
EXISTING WITH PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Study Intersection	Minimum Acceptable LOS	Time Period	(1)		(2)		(3)	(4)	
			Existing Traffic Conditions		Existing With Project Traffic Conditions		Exceed LOS Criteria	Existing With Project With Mitigation	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
1. Texas Street at Pioneer Avenue	C	AM	34.6	C	34.8	C	No	--	--
		PM	31.4	C	31.7	C	No	--	--
2. Texas Street at San Bernardino Avenue	C	AM	21.6	C	21.7	C	No	--	--
		PM	24.3	C	24.4	C	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Table 3-1* for the LOS definitions

8.0 AREA-WIDE TRAFFIC IMPROVEMENTS

The results of the intersection capacity analysis for the proposed Project concludes that the Project will not generate a significant number of new trips requiring intersection improvements to accommodate project traffic.

8.1 Existing With Project Recommended Improvements

The results of the intersection capacity analysis presented previously in *Table 7-1* concludes that the proposed Project will not require intersection improvements at either of the two (2) study intersections.

8.2 City of Redlands Development Impact Fee (DIF) Program

Pursuant to the requirements of the City of Redlands, Development Impact Fees will be required of the Project. The DIF is applied to pay a portion of the costs identified for public facilities, including transportation-related improvements. The current fee schedule as of April 2019 is summarized in *Table 8-1*. The Development Impact Fee is based on the size of all new developments, with the cost per unit or cost per square-foot of development determined based on the type of development (i.e. single family, commercial, industrial, etc.).

Review of *Table 8-1* indicates that the City's Development Impact Fee rate for single-family residential land uses range from \$30.11 per dwelling unit to \$3,959.94 per dwelling unit. Subject to confirmation by City staff, the proposed Project's Development Impact Fee (i.e. 35 dwelling units) totals \$270,568.20.

TABLE 8-1
CITY OF REDLANDS DEVELOPMENT IMPACT FEE SUMMARY²

Land Use Category	Fee per Single Family Dwelling Unit	Project Fee	% of Total Fees
Open Space and Parks	\$3,959.94	\$138,597.90	51.22%
Libraries	\$264.58	\$9,260.30	3.42%
Storm Drain Facilities	\$700.00	\$24,500.00	9.06%
Public Facilities	\$686.45	\$24,025.75	8.88%
Fire Protection Facilities	\$577.08	\$20,197.80	7.46%
Police Facilities	\$30.11	\$1,053.85	0.39%
Transportation System Improvements	\$1,512.36	\$52,932.60	19.57%
Total	\$7,730.52	\$270,568.20	100.00%

² Source: City of Redlands, *Resolution No. 7951*, dated April 2, 2019.

9.0 SITE ACCESS AND INTERNAL CIRCULATION EVALUATION

9.1 Circulation Evaluation

Access to the Project site is proposed to be provided via three (3) cul-de-sacs (Street A, Street B and Street C) along Texas Street, with a 4th cul-de-sac located at the northerly terminus of Texas Street. Access for small service/delivery trucks (i.e. UPS, FedEx, and trash trucks) and fire trucks for the Project site have been evaluated. Our evaluation of the circulation shown on the Project site plan was performed using the *Turning Vehicle Templates*, developed by Jack E. Leisch & Associates and *AutoTURN for AutoCAD* computer software that simulates turning maneuvers for various types of vehicles.

Figures 9-1 and **9-2** illustrates the turning movements required of a small delivery truck (SU-30) and fire truck, respectively, as it circulates throughout the project site. Overall, the turning maneuvers for both SU-30 and fire truck are considered adequate.

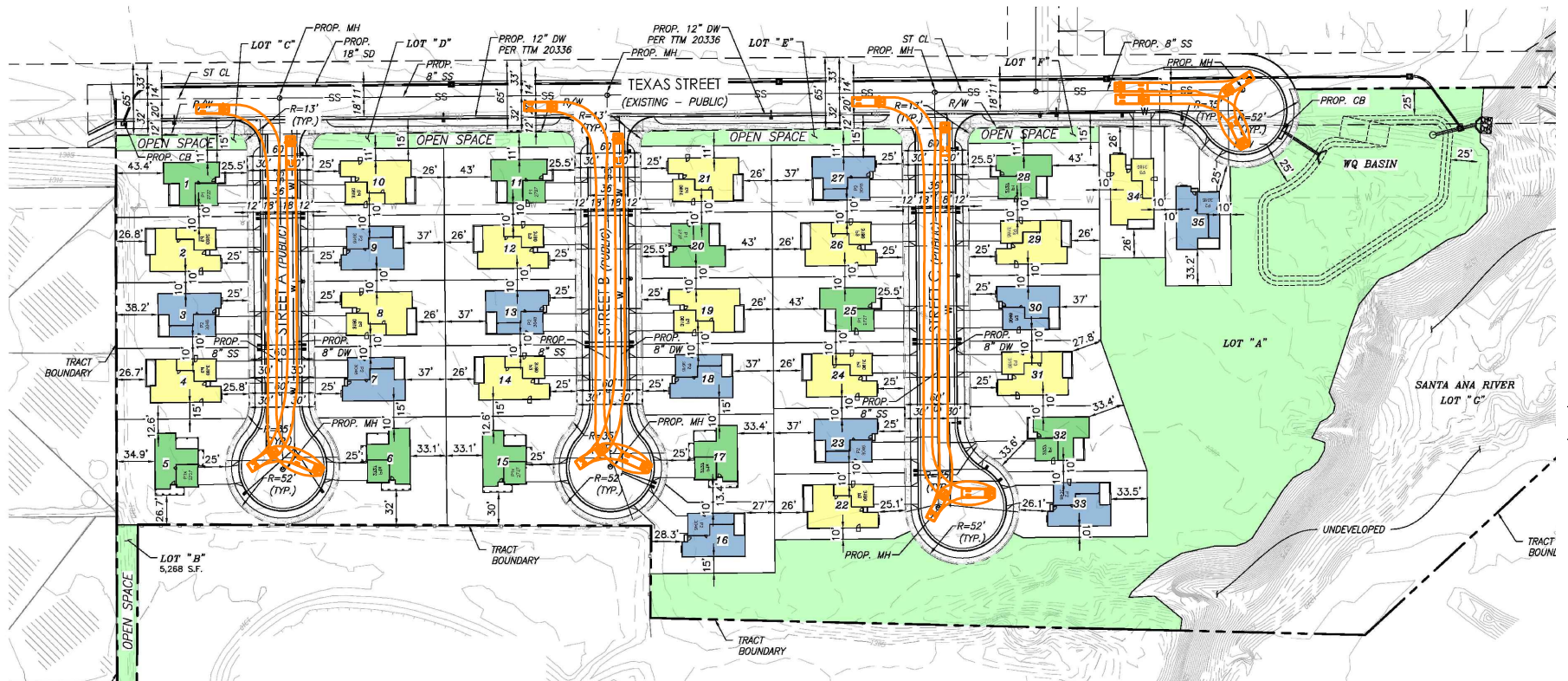
9.2 Sight Distance Evaluation

At intersections and/or project driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross all lanes of through traffic, cross the near lanes and turn left, or turn right, without requiring through traffic to radically alter their speed. A sight distance evaluation has been performed for the three (3) cul-de-sacs (Street A, Street B and Street C) along Texas Street.

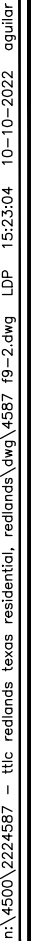
The Sight Distance Evaluation prepared for the project driveways are based on the criteria and procedures set forth by the California Department of Transportation (Caltrans) in the State's *Highway Design Manual (HDM)*. Corner sight distance was utilized for the evaluation. Corner sight distance is defined in the Caltrans HDM to be the distance required by the driver of a vehicle, traveling at a given speed, to maneuver their vehicle and avoid an object without radically altering their speed. Line of sight for corner sight distance is to be determined from a 3½ foot height at the location of the driver of a vehicle on a minor road to a 4¼ foot object height in the center of the approaching lane of the major road.

Based on the criteria set forth in Table 405.1A of the Caltrans HDM and a prima facie speed limit of 25 mph along Texas Street, north of Domestic Avenue, a corner sight distance of 276 feet is required for vehicles approaching from the right and a corner sight distance of 239 feet is required for vehicles approaching from the left.

Figure 9-3 presents the results of the sight distance evaluation at the three (3) cul-de-sacs (Street A, Street B and Street C) along Texas Street based on the application of the corner sight distance criteria. The figures illustrate the limited use areas. As shown, the sight lines at the proposed Project driveways are expected to be adequate as long as obstructions within the sight triangles are minimized.



n:\4500\2224587 - tlc redlands texas residential, redlands.dwg 4587 f9-1.dwg LDP 15:11:38 10-10-2022 agular



SOURCE: HUITT-ZOLLARS

FIGURE 9-2

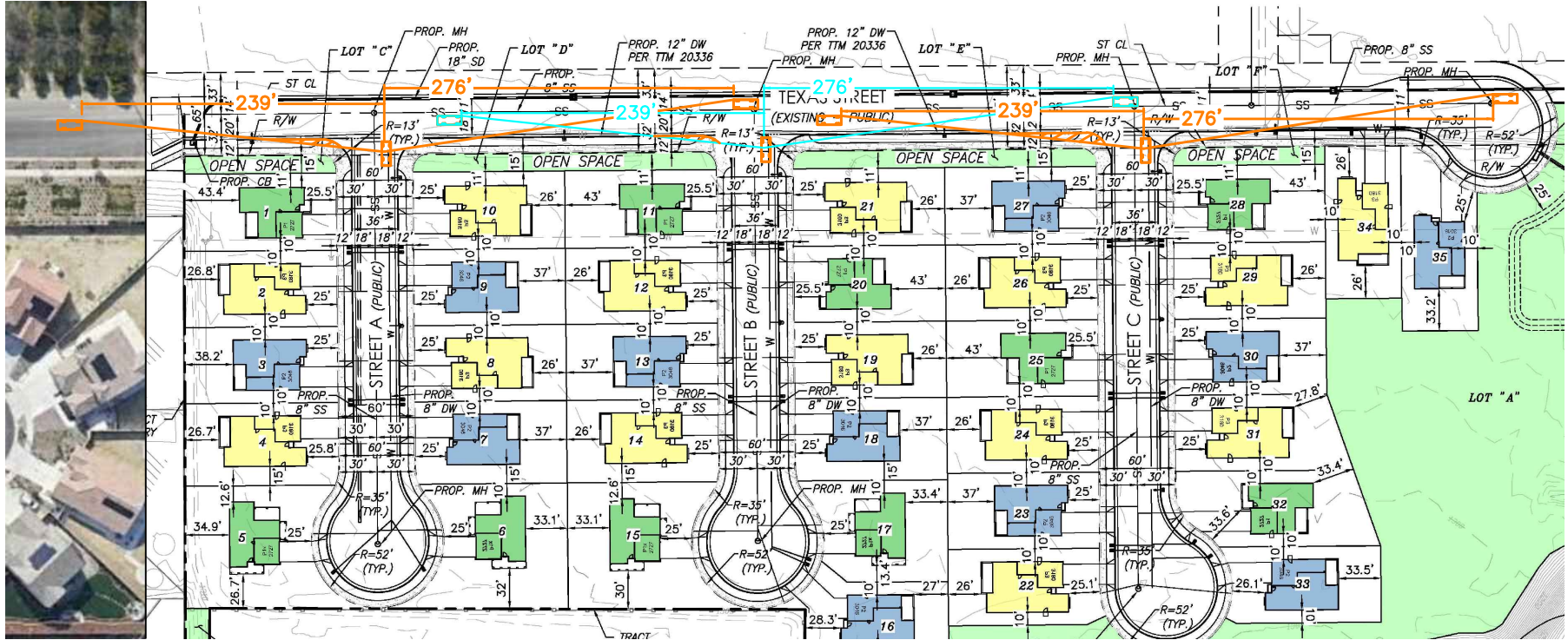
FIRE TRUCK TURNING ANALYSIS
TTLC REDLANDS TEXAS RESIDENTIAL, REDLANDS

SIGHT DISTANCE

DESIGN SPEED LIMIT:	25 MPH
REQUIRED CORNER SIGHT DISTANCE LOOKING RIGHT:	276 FEET
REQUIRED CORNER SIGHT DISTANCE LOOKING LEFT:	239 FEET

LEGEND

 PUBLIC RIGHT-OF-WAY LIMITED USE AREA: TO ENSURE ADEQUATE SIGHT DISTANCE, HARDSCAPE AND/OR LANDSCAPE SHALL NOT BE HIGHER THAN 36 INCHES ABOVE THE CURB/SIDEWALK. NO FENCES OR WALLS IN LIMITED USE AREA.



SOURCE: HUITT-ZOLLARS

FIGURE 9-3

SIGHT DISTANCE ANALYSIS

TTL REDLANDS TEXAS RESIDENTIAL, REDLANDS

LINSCOTT
LAW &
GREENSPAN
engineers



10.0 CITY OF REDLANDS' MEASURE "U" COMPLIANCE

The proposed Project is in compliance with the City of Redlands' Measure "U. The City of Redlands' Measure "U" states:

"The purpose and intent of this initiative measure is to establish comprehensive and inviolable principles of managed development for the City of Redlands that will preserve, enhance and maintain the special quality of life valued by this community. The principles of managed development established by this initiative measure assure that future development within the City of Redlands occurs in a way that promotes the social and economic well-being of the entire community."

More specifically, the proposed Project is in compliance with the following City of Redlands' Measure "U" *"Principals of Managed Development"*:

- Levels of Traffic Service throughout the City Shall Be Maintained, as all of the Project study intersections will operate at acceptable LOS C.
- Collector and Local Street Standards Shall Be Maintained, as the proposed Project will not impact the surrounding Local and Collector roadways.
- Circulation Patterns Shall Protect Residential Neighborhoods from Increased Traffic Congestion, as the proposed Project will distribute traffic directly to the Collector roadways.
- Designated Scenic Highways within the City Shall Be Maintained, as the proposed Project will not distribute traffic onto or impact the Scenic Highways within the City of Redlands.

11.0 SUMMARY OF FINDINGS AND CONCLUSIONS

- ***Project Description*** – The subject property is located along the east side of Texas Street, approximately 500 feet north of Domestic Avenue in the City of Redlands, California. The proposed Project site is a 14,69±-acre rectangular-shaped vacant parcel of land that is zoned Agricultural District – 1 and designated as Very Low Density Residential in the City’s General Plan. The proposed Project includes the development of 35 single-family residential dwelling units. Access to the Project site is proposed to be provided via three (3) cul-de-sacs (Street A, Street B and Street C) that would intersect with Texas Street, with a 4th cul-de-sac located at the northerly terminus of Texas Street.
- ***Study Scope*** – The following two (2) intersections was determined through application of San Bernardino County Congestion Management Program (CMP) criteria and in coordination with City of Redlands staff.

Study Intersections:

1. Texas Street at Pioneer Avenue (City of Redlands)
 2. Texas Street at San Bernardino Avenue (City of Redlands)
- ***Level of Service (LOS) Criteria*** – Per City of Redlands General Plan Policy 5.20a, LOS “C” is the minimum acceptable condition that should be maintained during the peak commute hours at all intersections presently at LOS C or better. Additionally, City of Redlands General Plan Policy 5.20c states that: Where the current level of service at a location within the City of Redlands is below the LOS C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location.
 - ***Project Trip Generation*** – The proposed Project is forecast to generate 330 daily trips (one half arriving, one half departing), with 25 trips (7 inbound, 18 outbound) produced in the AM peak hour and 33 trips (21 inbound, 12 outbound) produced in the PM peak hour on a weekday.
 - ***Existing Traffic Conditions*** – The two (2) key study intersections currently operate at acceptable LOS C during the AM and PM peak hours.
 - ***Existing With Project Traffic Conditions*** – The two (2) key study intersections will continue to operate at acceptable LOS C during the AM and PM peak hours with the addition of traffic associated with the proposed Project. As such, improvements at the study intersections are not needed based on the LOS standards and criteria specified in this report.
 - ***Recommended Existing With Project Intersection Improvements*** – The proposed Project will not require intersection improvements at either of the two (2) study intersections.
 - ***City of Redlands Development Impact Fee Program*** – The City’s Development Impact Fee rate for single-family residential land uses range from \$30.11 per dwelling unit to \$3,959.94 per

dwelling unit. Subject to confirmation by City staff, the proposed Project's Development Impact Fee (i.e. 35 dwelling units) totals \$270,568.20.

- ***Site Access and Internal Circulation Evaluation*** – The turning movements required of a small delivery truck (SU-30) and fire truck as it circulates through the site are considered adequate. Additionally, the sight lines at the proposed Project driveways are expected to be adequate.
- ***Redlands' Measure "U"*** – The proposed Project is in compliance with the City of Redlands' Measure "U which states: *"The purpose and intent of this initiative measure is to establish comprehensive and inviolable principles of managed development for the City of Redlands that will preserve, enhance and maintain the special quality of life valued by this community. The principles of managed development established by this initiative measure assure that future development within the City of Redlands occurs in a way that promotes the social and economic well-being of the entire community."*

APPENDIX A

TRAFFIC STUDY SCOPE OF WORK

MEMORANDUM

LINSCOTT
LAW &
GREENSPAN

engineers

To: Don Young
City of Redlands Public Works Department

Date: September 2, 2022

From: Richard E. Barretto, P.E., Principal
Linscott, Law & Greenspan, Engineers

LLG Ref: 2.22.4589.1

Subject: ***Traffic Impact Analysis and VMT Assessment Scope of Work
TTLC Redlands Texas, LLC Single-Family Residential Development Project
(Tentative Tract Map No. 20520)
Redlands, California***

Engineers & Planners
Traffic
Transportation
Parking

**Linscott, Law &
Greenspan, Engineers**

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Irvine
San Diego
Woodland Hills

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following Traffic Impact Analysis Scope of Work (SOW) associated with a proposed residential community to be developed by TTLC Redlands Texas (herein referred to as the "Project") located in the City of Redlands. The work plan summarized below is proposed for the preparation of a Traffic Impact Analysis and VMT assessment as required by Measure U and in compliance with the *City of Redlands CEQA Assessment VMT Analysis Guidelines*.

The work program provided herein is based on our prior work experience within the City of Redlands, our understanding of the Project, as well as our discussion of Tuesday, August 30, 2022. The traffic analysis will satisfy the traffic impact requirements of the City of Redlands, will include a full description of Measure U and will be consistent with the requirements of the most current *Congestion Management Program (CMP) for San Bernardino County*.

Traffic Impact Analysis (TIA) Scope of Work

A. Project Description and Location: The subject property is located along the east side of Texas Street, approximately 500 feet north of Domestic Avenue in the City of Redlands, California. The proposed Project site is a 14,69±-acre rectangular-shaped vacant parcel of land that is zoned Agricultural District – 1 and designated as Very Low Density Residential in the City's General Plan. **Figure 1** presents a Vicinity Map, which illustrates the general location of the subject property and depicts the study locations and surrounding street system. **Figure 2** presents the existing aerial photograph of the Project site.

The proposed Project includes the development of 35 single-family residential dwelling units. Access to the Project site is proposed to be provided via three (3) cul-de-sacs (Street A, Street B and Street C) that would intersect with Texas Street, with a 4th cul-de-sac located at the northerly terminus of Texas Street. Streets A, B and C will be constructed to the City's local residential street standard with a paved width of 36-feet within a right-of-way of 60-feet. Texas Street will be constructed to ultimate half-section width per the City's residential

Philip M. Linscott, PE (1924-2000)
Jack M. Greenspan, PE (Ret.)
William A. Law, PE (Ret.)
Paul W. Wilkinson, PE
John P. Keating, PE
David S. Shender, PE
John A. Boorman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE

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collector standards (20-feet paved with 32-foot right-of-way), with an additional 14-feet of pavement. **Figure 3** presents the proposed Project site plan prepared by Huitt-Zollars.

- B. Project Trip Generation Forecast:** The trip generation potential of the proposed Project will be estimated using trip rates contained in the 11th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE), [Washington, D.C., 2021]. As shown in the upper portion of **Table 1**, ITE Land Use 210: Single Family Detached Housing will be used to forecast the trip generation potential of the proposed 35-unit residential development.

A review of the bottom portion of *Table 1* shows that the proposed Project is forecast to generate 330 daily trips (one half arriving, one half departing), with 25 trips (7 inbound, 18 outbound) produced in the AM peak hour and 33 trips (21 inbound, 12 outbound) produced in the PM peak hour on a weekday.

In consideration of *Section 2; 1A.60 PRINCIPLE SIX* of Measure U, which would apply to the Project analysis, Measure U does not explicitly identify the trip threshold for determining the requirement for when a level of service (LOS) analysis is necessary and/or which roadways and intersections should be included in such analyses for development Projects. However, historically the threshold for determining the need to perform LOS analyses for the purposes of Measure U compliance and identifying which intersections and roadways to analyze was based on a 50 peak hour trip threshold, as determined from the *County of San Bernardino CMP Traffic Impact Analysis Guidelines* traditionally used by the City for preparation of traffic studies within its jurisdiction.

As a result, subject to review and confirmation by City staff, and based on the Daily, AM peak hour, and PM peak hour trip generation potential of the proposed Project (i.e. < 50 peak hour trips) and Measure U thresholds for significance, the proposed Project is not likely to adversely impact the surrounding transportation system. Regardless, an LOS analysis will be prepared to address the Measure U requirements.

- C. Study Area:** Subject to the direction and requirements of the City, the following study intersections listed below are locations that will be evaluated to assess the LOS impact of the proposed Project in compliance with Measure U. The two (2) intersections listed below were selected based on Project location:

1. Pioneer Avenue Street at Texas Street
2. San Bernardino Avenue at Texas Street

Traffic data collection effort for the key study locations will be completed during the weekday AM peak period and PM peak period in September 2022 to establish baseline (existing) traffic volume conditions.

- D. *Existing plus Project Traffic:*** Existing plus Project traffic volumes will be developed by assigning Project traffic to existing traffic volumes at the study intersections based on the Project trip generation applied to the Project traffic distribution pattern. **Figure 4** presents the Project's anticipated trip distribution pattern.
- E. *Traffic Impact Analysis Scenarios:*** The following scenarios are those for which Weekday AM peak hour and PM peak hour Delay and corresponding LOS calculations will be performed at the key intersections for Existing plus Project conditions as required by Measure U:
1. Existing Traffic Conditions,
 2. Existing With Project Traffic Conditions,
 3. Scenario (2) with Recommended Improvements, if any,

The Level of Service (LOS) calculations will be based on Highway Capacity Manual (HCM) method of analysis for signalized intersections and unsignalized intersections. In addition CMP guidelines will be followed for HCM default values, costs, analysis, etc.

- F. *Site Access and Internal Circulation:*** Evaluate site access of the Project and internal circulation. Ensure that all access locations will provide safe egress and ingress including adequate sight distance in all directions.
- G. *Traffic Impact Analysis:*** Prepare a traffic impact analysis report that details all of the above-mentioned items, the analysis, findings and conclusions. The report will be suitably documented with tabular, graphic and appendix materials.

VMT (SB 743) Assessment Scope of Work

- A. *VMT Screening:*** Review Project's development totals and review the *City of Redlands CEQA Assessment VMT Analysis Guidelines*, with a focus to Project Screening, to confirm if the Project screens-out of a Project-level assessment is needed (i.e. TPA, Low VMT and/or Low Project type screening).
- B. *VMT Memorandum:*** Prepare a separate VMT Assessment Memorandum indicating what criteria is satisfied and how the proposed Project will screen out from a full VMT analysis, based on the California Governor's Office of Planning and Research (OPR) guidelines and *City of Redlands CEQA Assessment VMT Analysis Guidelines*.

* * * * *

We appreciate the opportunity to provide this Traffic Impact Analysis and VMT Scope of Work. Should you have any questions, please call us at (949) 825-6175. Thank You.

Approved by:

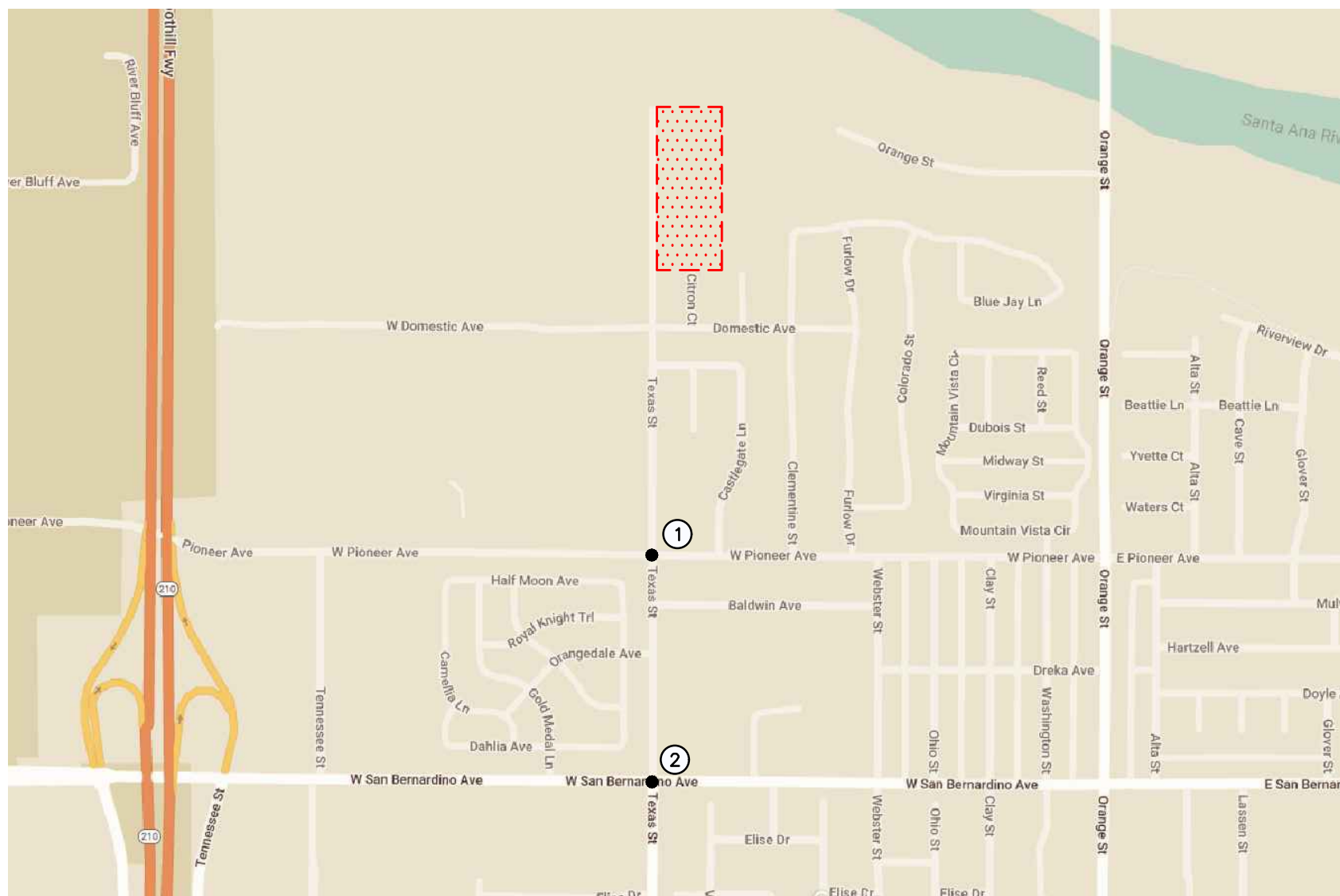
City of Redlands, Public Works Department

Date

Attachment

Cc: Sean Reilly, City of Redlands, Planning Department
Jaren Nuzman, TK Consulting, Inc.
Brett Little, Urban Advisory & Building Group, LLC

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SOURCE: GOOGLE

KEY

 = PROJECT SITE

FIGURE 1

VICINITY MAP

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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SOURCE: GOOGLE

KEY

 = PROJECT SITE

FIGURE 2

EXISTING SITE AERIAL

TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS



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SOURCE: HUITT-ZOLLARS

FIGURE 3

PROPOSED SITE PLAN

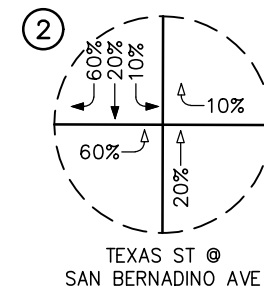
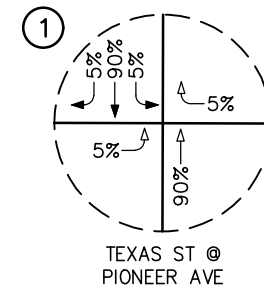
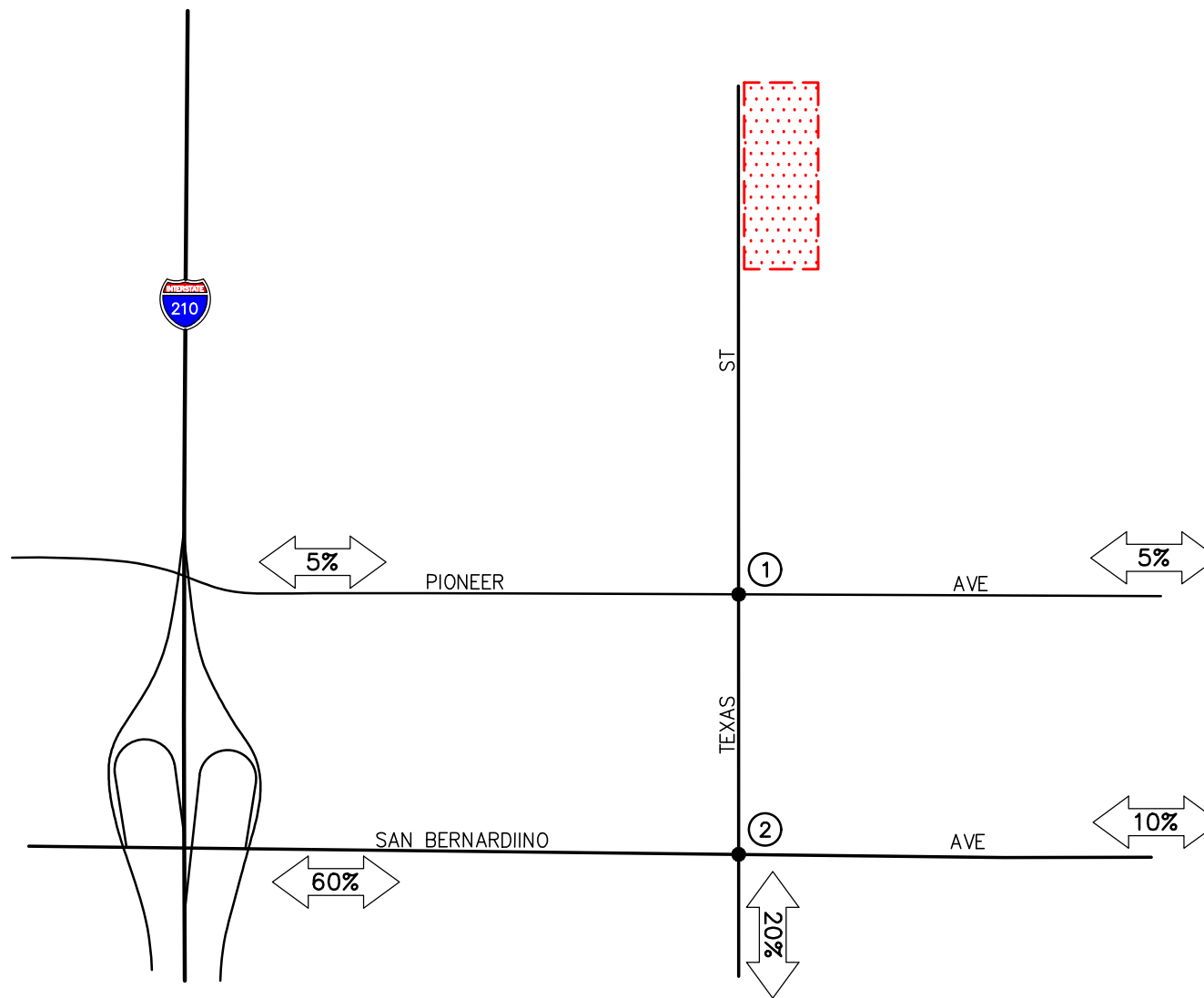
TLC REDLANDS TEXAS RESIDENTIAL, REDLANDS

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GREENSPAN

engineers



NO SCALE



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LAW &
GREENSPAN
engineers



KEY

- ① = STUDY INTERSECTION
- ← = INBOUND PERCENTAGE
- = OUTBOUND PERCENTAGE
- = PROJECT SITE

FIGURE 4

PROJECT TRIP DISTRIBUTION PATTERN
TTLIC REDLANDS TEXAS RESIDENTIAL, REDLANDS

TABLE 1
PROJECT TRAFFIC GENERATION RATES AND FORECAST¹

Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Trip Rates:</u>							
▪ 210: Single Family Detached Housing (TE/DU)	9.43	26%	74%	0.70	63%	37%	0.94
<u>Project Trip Generation:</u>							
▪ TTLC Redlands Texas -TTM No.20520 (35 DU)	330	7	18	25	21	12	33
Total Project Trip Generation	330	7	18	25	21	12	33

¹ Source: *Trip Generation*, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021).

APPENDIX B

EXISTING TRAFFIC COUNT DATA

APPENDIX B-1

INTERSECTION COUNTS

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio AM
Site Code : 05722809
Start Date : 9/21/2022
Page No : 1

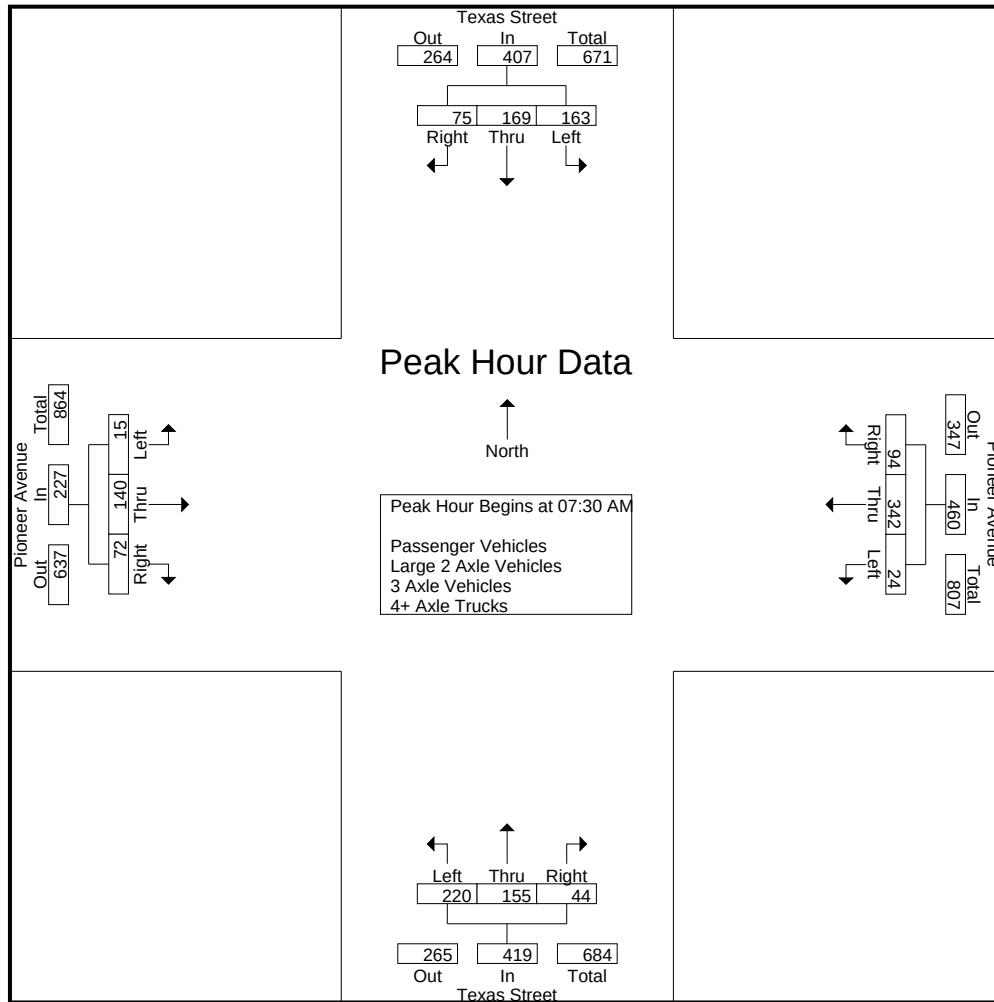
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	9	9	18	16	30	3	49	7	1	7	15	7	3	5	15	97
07:15 AM	7	19	3	29	11	64	11	86	26	9	4	39	3	23	19	45	199
07:30 AM	17	24	14	55	12	76	14	102	18	16	5	39	1	23	8	32	228
07:45 AM	24	23	13	60	4	79	32	115	43	29	11	83	1	30	15	46	304
Total	48	75	39	162	43	249	60	352	94	55	27	176	12	79	47	138	828
08:00 AM	48	45	19	112	5	97	27	129	81	39	20	140	6	43	22	71	452
08:15 AM	74	77	29	180	3	90	21	114	78	71	8	157	7	44	27	78	529
08:30 AM	17	35	8	60	5	28	3	36	14	10	10	34	7	29	26	62	192
08:45 AM	0	5	4	9	10	20	1	31	7	6	8	21	3	13	4	20	81
Total	139	162	60	361	23	235	52	310	180	126	46	352	23	129	79	231	1254
Grand Total	187	237	99	523	66	484	112	662	274	181	73	528	35	208	126	369	2082
Apprch %	35.8	45.3	18.9		10	73.1	16.9		51.9	34.3	13.8		9.5	56.4	34.1		
Total %	9	11.4	4.8	25.1	3.2	23.2	5.4	31.8	13.2	8.7	3.5	25.4	1.7	10	6.1	17.7	
Passenger Vehicles	185	235	99	519	65	481	112	658	271	179	73	523	35	206	124	365	2065
% Passenger Vehicles	98.9	99.2	100	99.2	98.5	99.4	100	99.4	98.9	98.9	100	99.1	100	99	98.4	98.9	99.2
Large 2 Axle Vehicles	2	2	0	4	1	0	0	1	0	2	0	2	0	1	1	2	9
% Large 2 Axle Vehicles	1.1	0.8	0	0.8	1.5	0	0	0.2	0	1.1	0	0.4	0	0.5	0.8	0.5	0.4
3 Axle Vehicles	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
% 3 Axle Vehicles	0	0	0	0	0	0.6	0	0.5	0	0	0	0	0	0.5	0	0.3	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	4
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	1.1	0	0	0.6	0	0	0.8	0.3	0.2

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	17	24	14	55	12	76	14	102	18	16	5	39	1	23	8	32	228
07:45 AM	24	23	13	60	4	79	32	115	43	29	11	83	1	30	15	46	304
08:00 AM	48	45	19	112	5	97	27	129	81	39	20	140	6	43	22	71	452
08:15 AM	74	77	29	180	3	90	21	114	78	71	8	157	7	44	27	78	529
Total Volume	163	169	75	407	24	342	94	460	220	155	44	419	15	140	72	227	1513
% App. Total	40	41.5	18.4		5.2	74.3	20.4		52.5	37	10.5		6.6	61.7	31.7		
PHF	.551	.549	.647	.565	.500	.881	.734	.891	.679	.546	.550	.667	.536	.795	.667	.728	.715

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio AM
Site Code : 05722809
Start Date : 9/21/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:30 AM				07:45 AM			
+0 mins.	24	23	13	60	12	76	14	102	18	16	5	39	1	30	15	46
+15 mins.	48	45	19	112	4	79	32	115	43	29	11	83	6	43	22	71
+30 mins.	74	77	29	180	5	97	27	129	81	39	20	140	7	44	27	78
+45 mins.	17	35	8	60	3	90	21	114	78	71	8	157	7	29	26	62
Total Volume	163	180	69	412	24	342	94	460	220	155	44	419	21	146	90	257
% App. Total	39.6	43.7	16.7		5.2	74.3	20.4		52.5	37	10.5		8.2	56.8	35	
PHF	.551	.584	.595	.572	.500	.881	.734	.891	.679	.546	.550	.667	.750	.830	.833	.824

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio AM
Site Code : 05722809
Start Date : 9/21/2022
Page No : 1

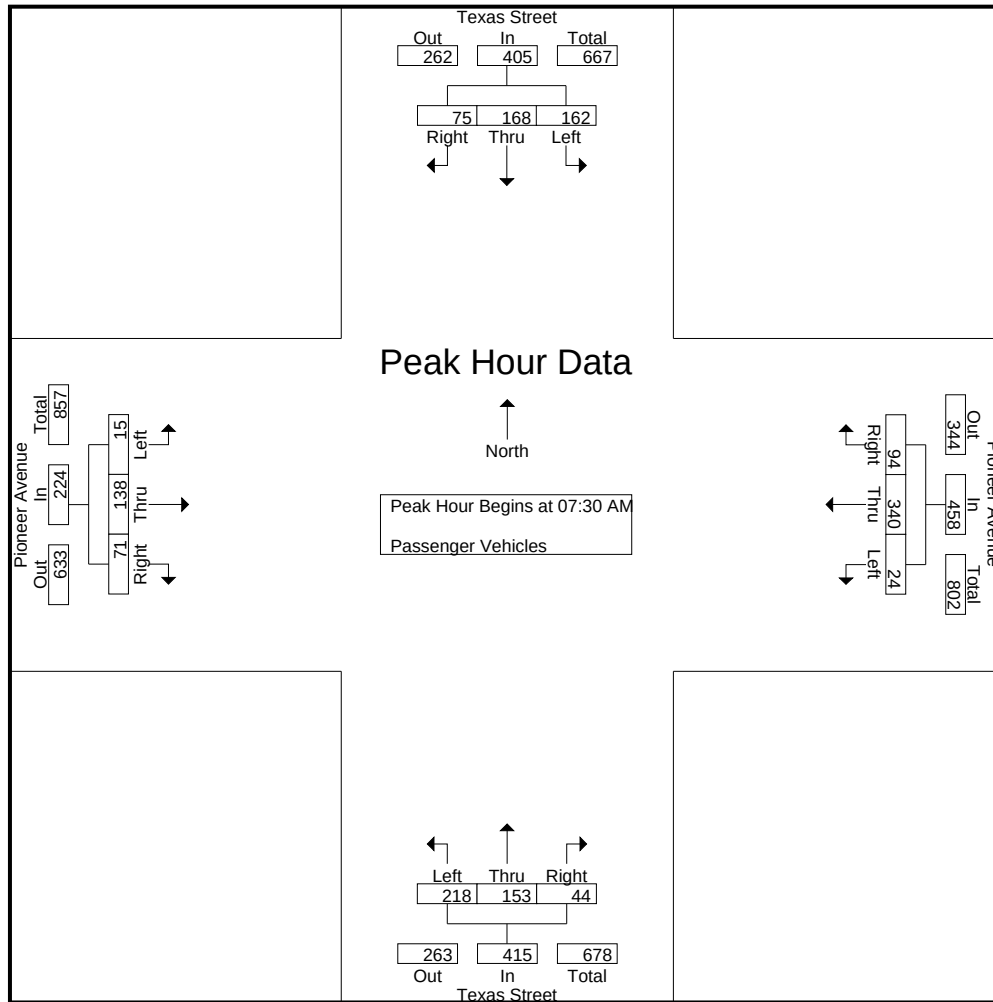
Groups Printed- Passenger Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	9	9	18	15	29	3	47	7	1	7	15	7	3	5	15	95
07:15 AM	7	19	3	29	11	64	11	86	26	9	4	39	3	23	18	44	198
07:30 AM	17	24	14	55	12	76	14	102	17	15	5	37	1	21	7	29	223
07:45 AM	24	23	13	60	4	78	32	114	42	29	11	82	1	30	15	46	302
Total	48	75	39	162	42	247	60	349	92	54	27	173	12	77	45	134	818
08:00 AM	48	45	19	112	5	96	27	128	81	39	20	140	6	43	22	71	451
08:15 AM	73	76	29	178	3	90	21	114	78	70	8	156	7	44	27	78	526
08:30 AM	16	34	8	58	5	28	3	36	14	10	10	34	7	29	26	62	190
08:45 AM	0	5	4	9	10	20	1	31	6	6	8	20	3	13	4	20	80
Total	137	160	60	357	23	234	52	309	179	125	46	350	23	129	79	231	1247
Grand Total	185	235	99	519	65	481	112	658	271	179	73	523	35	206	124	365	2065
Apprch %	35.6	45.3	19.1		9.9	73.1	17		51.8	34.2	14		9.6	56.4	34		
Total %	9	11.4	4.8	25.1	3.1	23.3	5.4	31.9	13.1	8.7	3.5	25.3	1.7	10	6	17.7	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	17	24	14	55	12	76	14	102	17	15	5	37	1	21	7	29	223
07:45 AM	24	23	13	60	4	78	32	114	42	29	11	82	1	30	15	46	302
08:00 AM	48	45	19	112	5	96	27	128	81	39	20	140	6	43	22	71	451
08:15 AM	73	76	29	178	3	90	21	114	78	70	8	156	7	44	27	78	526
Total Volume	162	168	75	405	24	340	94	458	218	153	44	415	15	138	71	224	1502
% App. Total	40	41.5	18.5		5.2	74.2	20.5		52.5	36.9	10.6		6.7	61.6	31.7		
PHF	.555	.553	.647	.569	.500	.885	.734	.895	.673	.546	.550	.665	.536	.784	.657	.718	.714

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	17	24	14	55	12	76	14	102	17	15	5	37	1	21	7	29
+15 mins.	24	23	13	60	4	78	32	114	42	29	11	82	1	30	15	46
+30 mins.	48	45	19	112	5	96	27	128	81	39	20	140	6	43	22	71
+45 mins.	73	76	29	178	3	90	21	114	78	70	8	156	7	44	27	78
Total Volume	162	168	75	405	24	340	94	458	218	153	44	415	15	138	71	224
% App. Total	40	41.5	18.5		5.2	74.2	20.5		52.5	36.9	10.6		6.7	61.6	31.7	
PHF	.555	.553	.647	.569	.500	.885	.734	.895	.673	.546	.550	.665	.536	.784	.657	.718

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio AM
Site Code : 05722809
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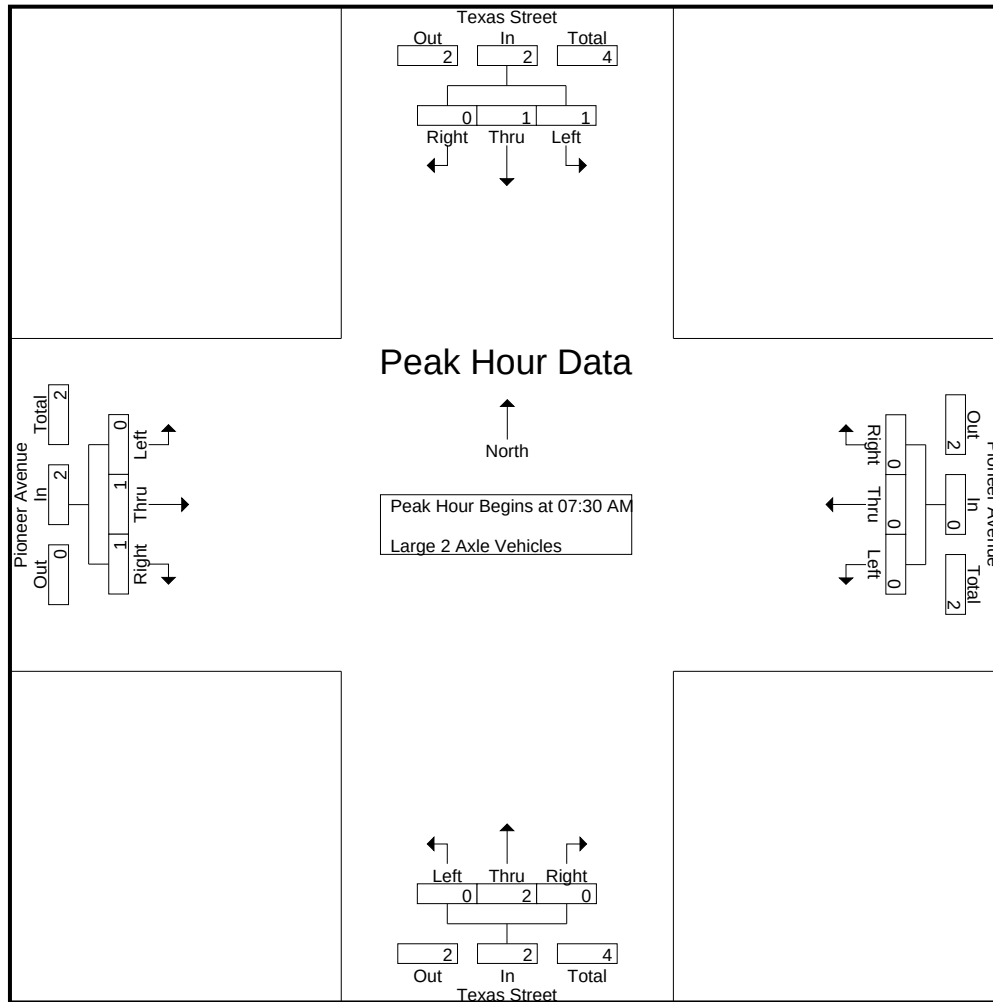
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	1	0	1	0	1	1	2	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:30 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Grand Total	2	2	0	4	1	0	0	1	0	2	0	2	0	1	1	2	9
Apprch %	50	50	0		100	0	0		0	100	0		0	50	50		
Total %	22.2	22.2	0	44.4	11.1	0	0	11.1	0	22.2	0	22.2	0	11.1	11.1	22.2	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total Volume	1	1	0	2	0	0	0	0	0	2	0	2	0	1	1	2	6
% App. Total	50	50	0		0	0	0		0	100	0		0	50	50		
PHF	.250	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.250	.250	.500

City of Redlands
N/S: Texas Street
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Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	1	1	0	2	0	0	0	0	0	2	0	2	0	1	1	2
% App. Total	50	50	0		0	0	0		0	100	0		0	50	50	
PHF	.250	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.250	.250

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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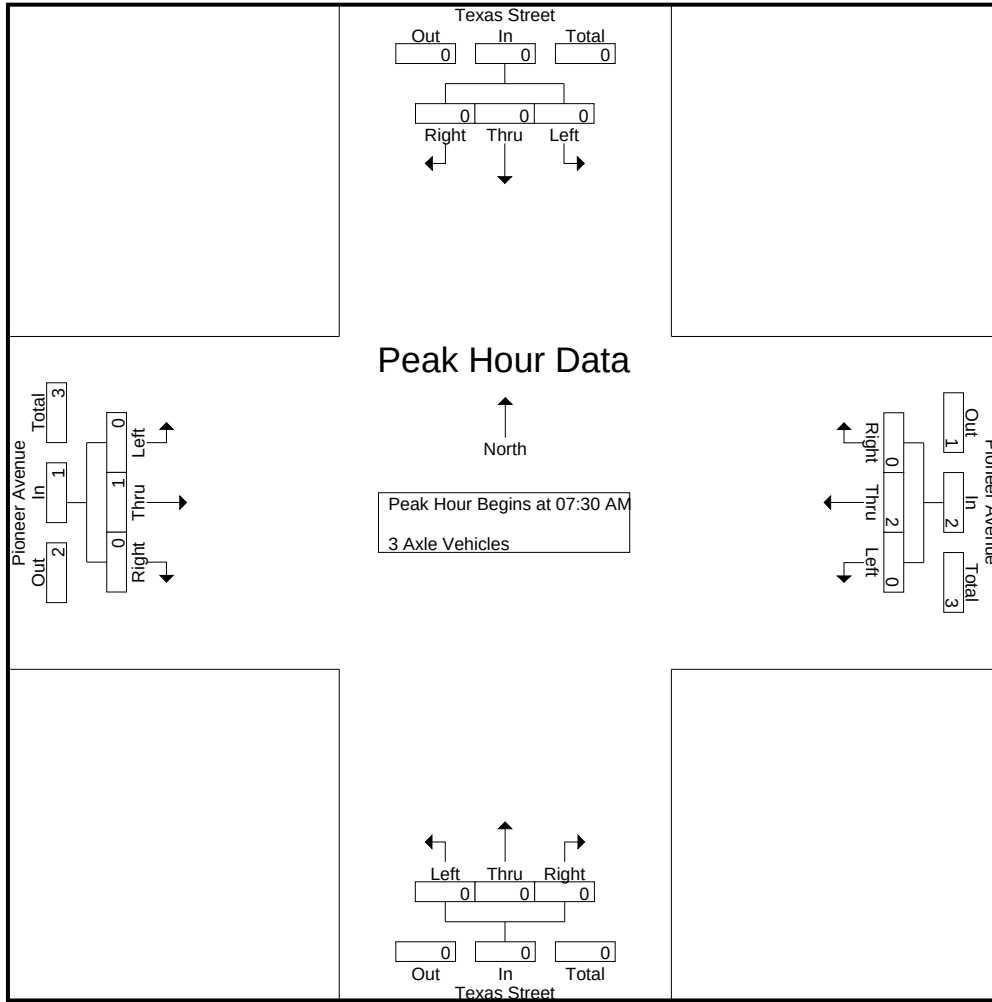
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	75	0	75	0	0	0	0	0	25	0	25	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.750

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio AM
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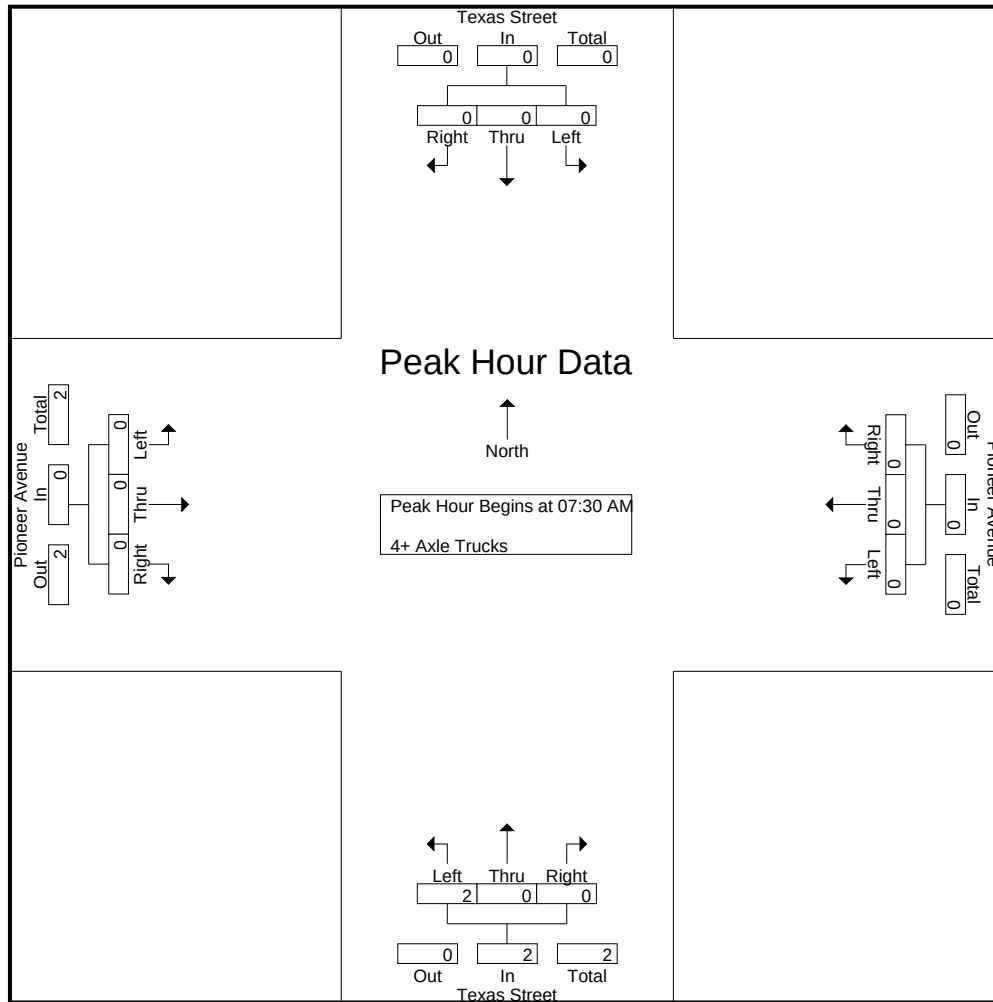
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	4
Apprch %	0	0	0		0	0	0		100	0	0		0	0	100		
Total %	0	0	0	0	0	0	0	0	75	0	0	75	0	0	25	25	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		100	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.500

City of Redlands
N/S: Texas Street
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Weather: Clear

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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
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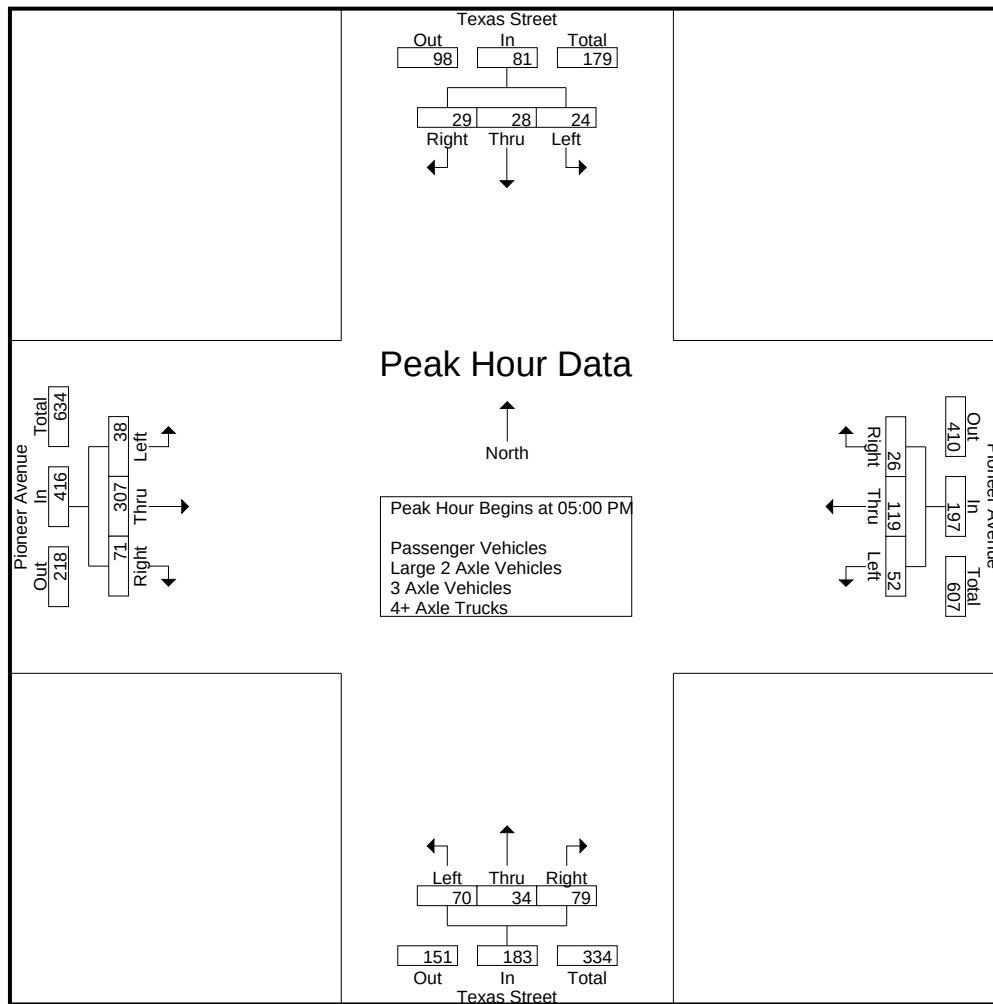
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	11	6	12	29	6	22	0	28	13	14	17	44	9	65	19	93	194
04:15 PM	2	4	2	8	12	27	2	41	10	8	25	43	4	52	22	78	170
04:30 PM	4	9	5	18	8	12	0	20	8	6	18	32	9	61	14	84	154
04:45 PM	2	4	3	9	16	22	2	40	11	8	17	36	8	62	15	85	170
Total	19	23	22	64	42	83	4	129	42	36	77	155	30	240	70	340	688
05:00 PM	1	7	5	13	11	20	6	37	12	6	19	37	10	72	12	94	181
05:15 PM	8	11	7	26	14	35	14	63	9	15	19	43	15	82	18	115	247
05:30 PM	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113	238
05:45 PM	6	4	4	14	16	32	2	50	28	5	20	53	3	69	22	94	211
Total	24	28	29	81	52	119	26	197	70	34	79	183	38	307	71	416	877
Grand Total	43	51	51	145	94	202	30	326	112	70	156	338	68	547	141	756	1565
Apprch %	29.7	35.2	35.2		28.8	62	9.2		33.1	20.7	46.2		9	72.4	18.7		
Total %	2.7	3.3	3.3	9.3	6	12.9	1.9	20.8	7.2	4.5	10	21.6	4.3	35	9	48.3	
Passenger Vehicles	42	45	49	136	93	202	30	325	112	70	156	338	68	546	141	755	1554
% Passenger Vehicles	97.7	88.2	96.1	93.8	98.9	100	100	99.7	100	100	100	100	100	99.8	100	99.9	99.3
Large 2 Axle Vehicles	1	3	2	6	1	0	0	1	0	0	0	0	0	1	0	1	8
% Large 2 Axle Vehicles	2.3	5.9	3.9	4.1	1.1	0	0	0.3	0	0	0	0	0	0.2	0	0.1	0.5
3 Axle Vehicles	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% 3 Axle Vehicles	0	3.9	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	2	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0.1

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	7	5	13	11	20	6	37	12	6	19	37	10	72	12	94	181
05:15 PM	8	11	7	26	14	35	14	63	9	15	19	43	15	82	18	115	247
05:30 PM	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113	238
05:45 PM	6	4	4	14	16	32	2	50	28	5	20	53	3	69	22	94	211
Total Volume	24	28	29	81	52	119	26	197	70	34	79	183	38	307	71	416	877
% App. Total	29.6	34.6	35.8		26.4	60.4	13.2		38.3	18.6	43.2		9.1	73.8	17.1		
PHF	.667	.636	.558	.723	.813	.850	.464	.782	.625	.567	.940	.863	.633	.914	.807	.904	.888

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	1	7	5	13	11	20	6	37	12	6	19	37	10	72	12	94
+15 mins.	8	11	7	26	14	35	14	63	9	15	19	43	15	82	18	115
+30 mins.	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113
+45 mins.	6	4	4	14	16	32	2	50	28	5	20	53	3	69	22	94
Total Volume	24	28	29	81	52	119	26	197	70	34	79	183	38	307	71	416
% App. Total	29.6	34.6	35.8		26.4	60.4	13.2		38.3	18.6	43.2		9.1	73.8	17.1	
PHF	.667	.636	.558	.723	.813	.850	.464	.782	.625	.567	.940	.863	.633	.914	.807	.904

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
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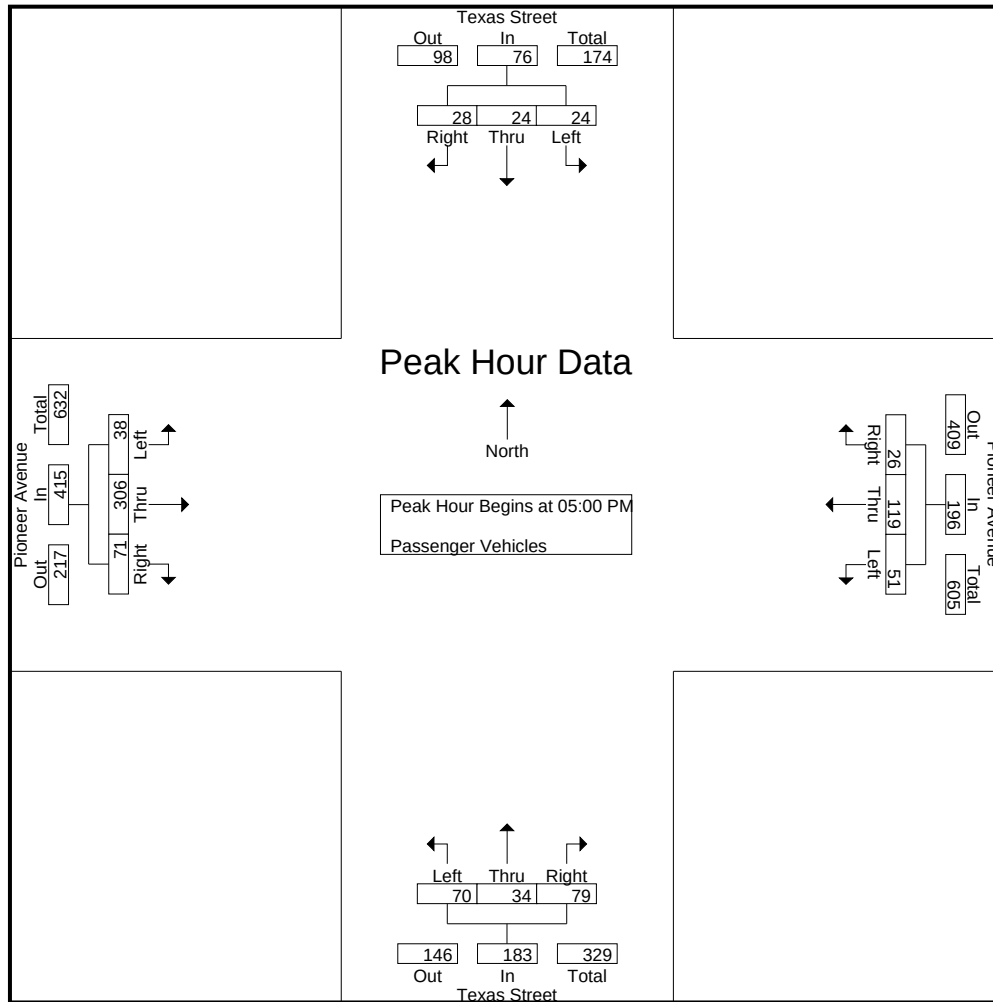
Groups Printed- Passenger Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	11	5	11	27	6	22	0	28	13	14	17	44	9	65	19	93	192
04:15 PM	2	3	2	7	12	27	2	41	10	8	25	43	4	52	22	78	169
04:30 PM	3	9	5	17	8	12	0	20	8	6	18	32	9	61	14	84	153
04:45 PM	2	4	3	9	16	22	2	40	11	8	17	36	8	62	15	85	170
Total	18	21	21	60	42	83	4	129	42	36	77	155	30	240	70	340	684
05:00 PM	1	6	4	11	11	20	6	37	12	6	19	37	10	71	12	93	178
05:15 PM	8	9	7	24	14	35	14	63	9	15	19	43	15	82	18	115	245
05:30 PM	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113	238
05:45 PM	6	3	4	13	15	32	2	49	28	5	20	53	3	69	22	94	209
Total	24	24	28	76	51	119	26	196	70	34	79	183	38	306	71	415	870
Grand Total	42	45	49	136	93	202	30	325	112	70	156	338	68	546	141	755	1554
Apprch %	30.9	33.1	36		28.6	62.2	9.2		33.1	20.7	46.2		9	72.3	18.7		
Total %	2.7	2.9	3.2	8.8	6	13	1.9	20.9	7.2	4.5	10	21.8	4.4	35.1	9.1	48.6	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	6	4	11	11	20	6	37	12	6	19	37	10	71	12	93	178
05:15 PM	8	9	7	24	14	35	14	63	9	15	19	43	15	82	18	115	245
05:30 PM	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113	238
05:45 PM	6	3	4	13	15	32	2	49	28	5	20	53	3	69	22	94	209
Total Volume	24	24	28	76	51	119	26	196	70	34	79	183	38	306	71	415	870
% App. Total	31.6	31.6	36.8		26	60.7	13.3		38.3	18.6	43.2		9.2	73.7	17.1		
PHF	.667	.667	.538	.679	.850	.850	.464	.778	.625	.567	.940	.863	.633	.911	.807	.902	.888

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	1	6	4	11	11	20	6	37	12	6	19	37	10	71	12	93
+15 mins.	8	9	7	24	14	35	14	63	9	15	19	43	15	82	18	115
+30 mins.	9	6	13	28	11	32	4	47	21	8	21	50	10	84	19	113
+45 mins.	6	3	4	13	15	32	2	49	28	5	20	53	3	69	22	94
Total Volume	24	24	28	76	51	119	26	196	70	34	79	183	38	306	71	415
% App. Total	31.6	31.6	36.8		26	60.7	13.3		38.3	18.6	43.2		9.2	73.7	17.1	
PHF	.667	.667	.538	.679	.850	.850	.464	.778	.625	.567	.940	.863	.633	.911	.807	.902

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
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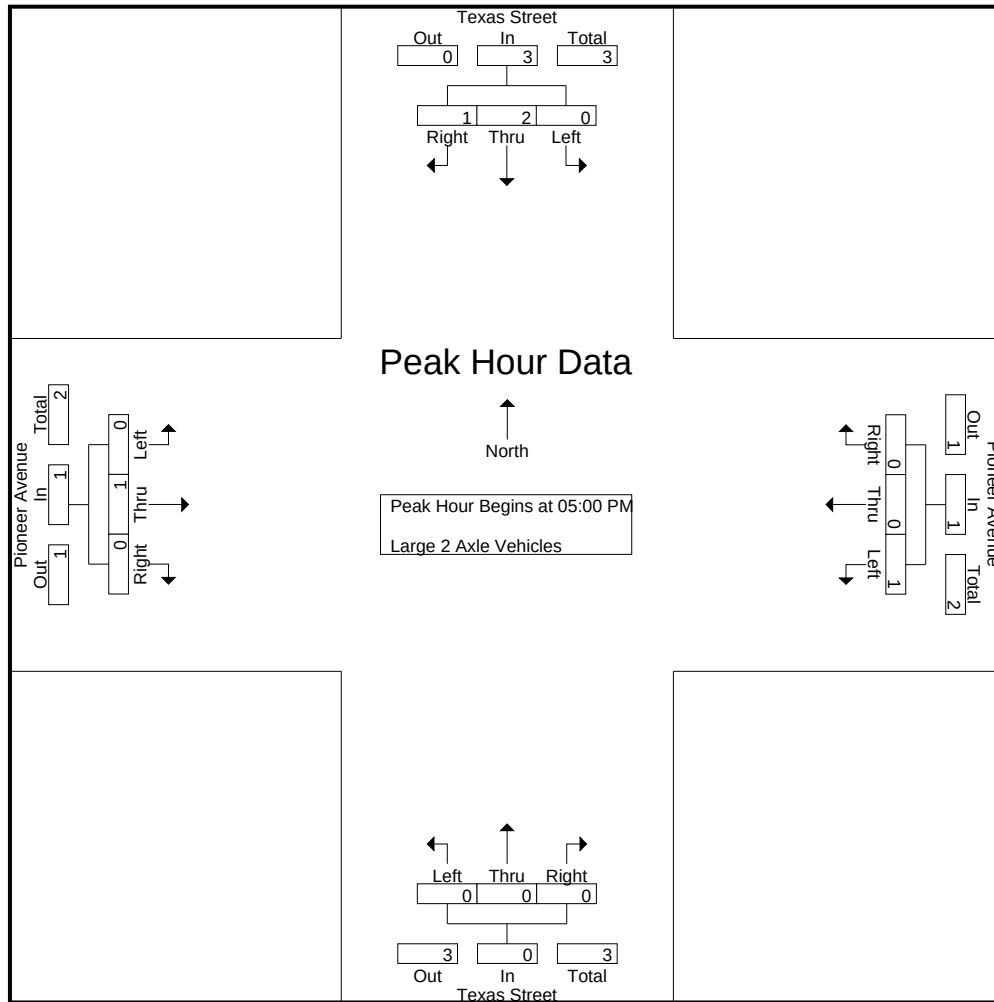
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	2	1	3	1	0	0	1	0	0	0	0	0	1	0	1	5
Grand Total	1	3	2	6	1	0	0	1	0	0	0	0	0	1	0	1	8
Apprch %	16.7	50	33.3		100	0	0		0	0	0		0	100	0		
Total %	12.5	37.5	25	75	12.5	0	0	12.5	0	0	0	0	0	12.5	0	12.5	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	2	1	3	1	0	0	1	0	0	0	0	0	1	0	1	5
% App. Total	0	66.7	33.3		100	0	0		0	0	0		0	100	0		
PHF	.000	.250	.250	.375	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.625

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	2	1	3	1	0	0	1	0	0	0	0	0	1	0	1
% App. Total	0	66.7	33.3		100	0	0		0	0	0		0	100	0	
PHF	.000	.250	.250	.375	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

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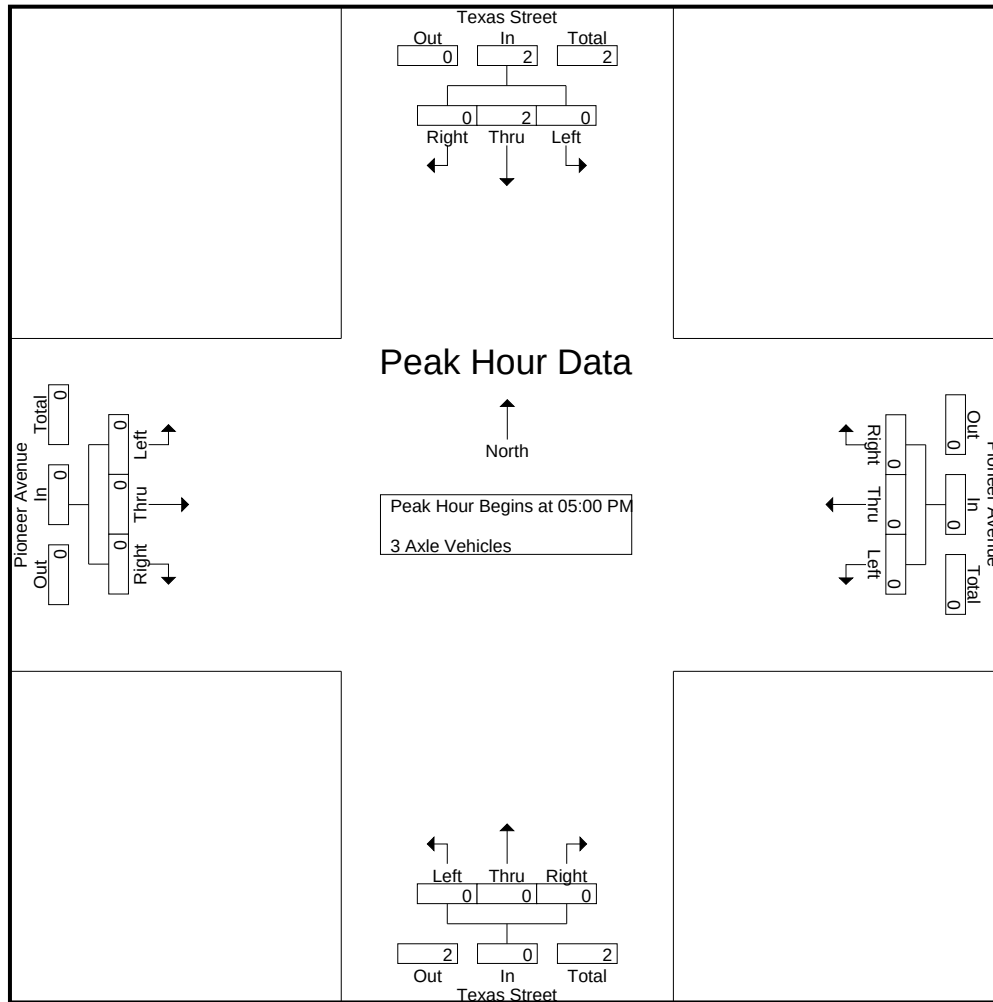
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	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
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	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
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
Start Date : 9/21/2022
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
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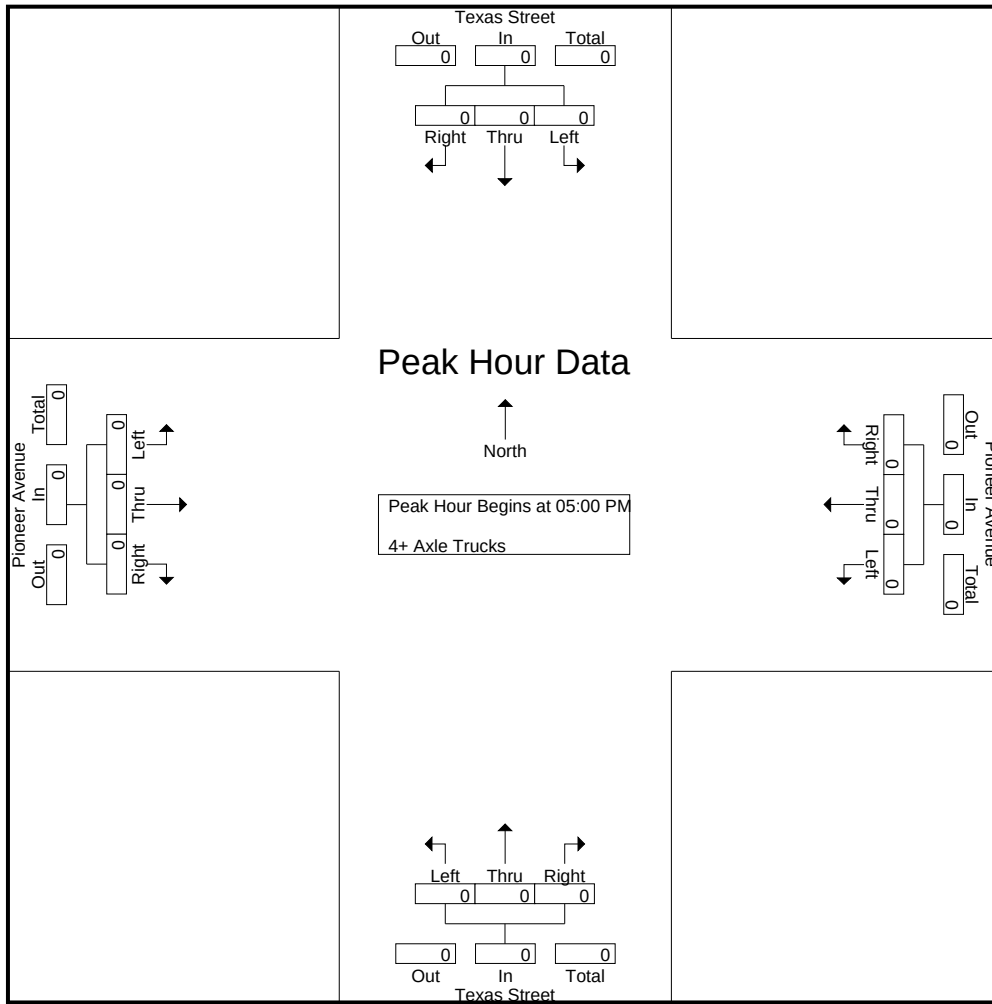
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	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
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Texas Street Southbound				Pioneer Avenue Westbound				Texas Street Northbound				Pioneer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 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
05:15 PM	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
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: Pioneer Avenue
Weather: Clear

File Name : 01_RED_Tex_Pio PM
Site Code : 05722809
Start Date : 9/21/2022
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
Site Code : 05722809
Start Date : 9/21/2022
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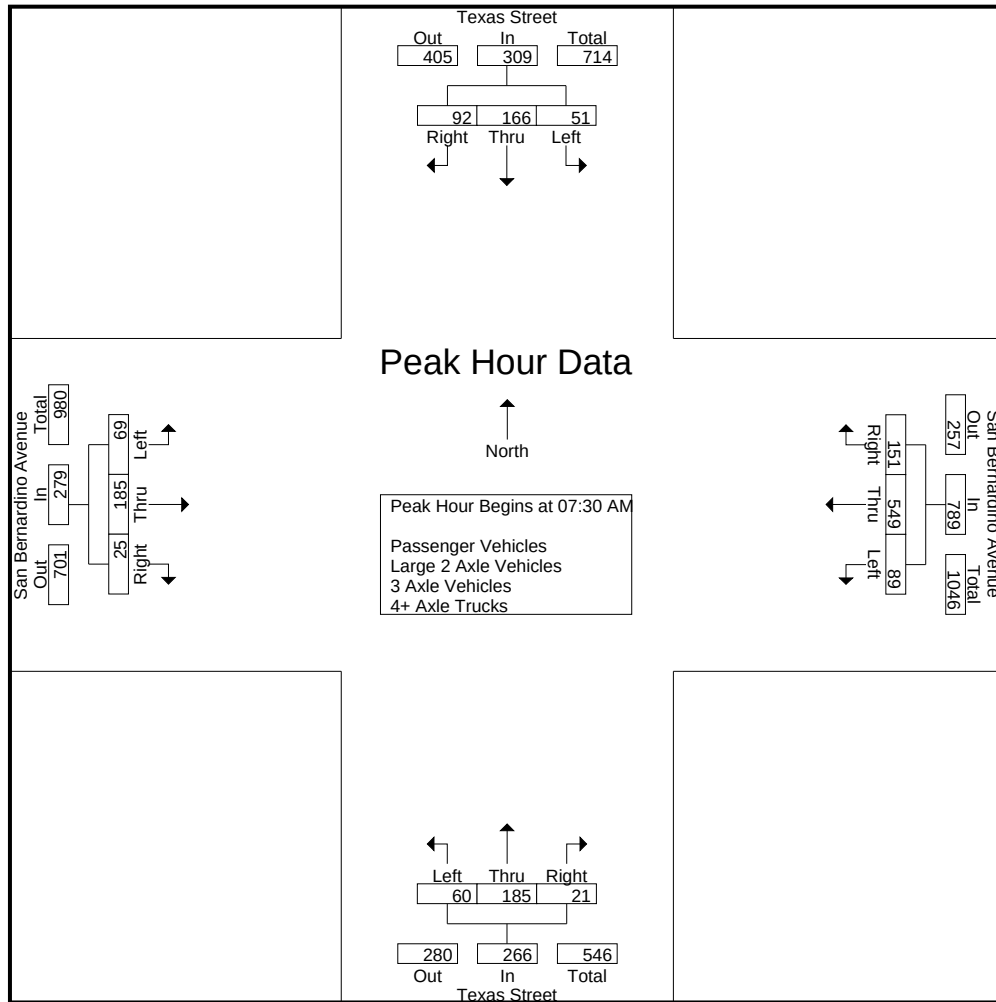
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	18	20	41	10	143	2	155	19	14	6	39	8	39	4	51	286
07:15 AM	4	32	22	58	10	150	14	174	20	25	5	50	12	64	7	83	365
07:30 AM	6	29	18	53	29	155	11	195	15	24	5	44	17	51	10	78	370
07:45 AM	7	26	18	51	26	132	33	191	20	40	6	66	18	33	2	53	361
Total	20	105	78	203	75	580	60	715	74	103	22	199	55	187	23	265	1382
08:00 AM	16	45	24	85	14	134	54	202	16	67	3	86	13	48	5	66	439
08:15 AM	22	66	32	120	20	128	53	201	9	54	7	70	21	53	8	82	473
08:30 AM	17	39	17	73	10	106	8	124	16	19	14	49	11	73	9	93	339
08:45 AM	2	13	14	29	9	81	5	95	10	8	7	25	16	56	6	78	227
Total	57	163	87	307	53	449	120	622	51	148	31	230	61	230	28	319	1478
Grand Total	77	268	165	510	128	1029	180	1337	125	251	53	429	116	417	51	584	2860
Apprch %	15.1	52.5	32.4		9.6	77	13.5		29.1	58.5	12.4		19.9	71.4	8.7		
Total %	2.7	9.4	5.8	17.8	4.5	36	6.3	46.7	4.4	8.8	1.9	15	4.1	14.6	1.8	20.4	
Passenger Vehicles	75	263	159	497	124	999	177	1300	120	246	52	418	101	379	51	531	2746
% Passenger Vehicles	97.4	98.1	96.4	97.5	96.9	97.1	98.3	97.2	96	98	98.1	97.4	87.1	90.9	100	90.9	96
Large 2 Axle Vehicles	2	5	1	8	4	16	3	23	5	5	1	11	8	25	0	33	75
% Large 2 Axle Vehicles	2.6	1.9	0.6	1.6	3.1	1.6	1.7	1.7	4	2	1.9	2.6	6.9	6	0	5.7	2.6
3 Axle Vehicles	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	0	5	5	0	12	0	12	0	0	0	0	7	13	0	20	37
% 4+ Axle Trucks	0	0	3	1	0	1.2	0	0.9	0	0	0	0	6	3.1	0	3.4	1.3

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	6	29	18	53	29	155	11	195	15	24	5	44	17	51	10	78	370
07:45 AM	7	26	18	51	26	132	33	191	20	40	6	66	18	33	2	53	361
08:00 AM	16	45	24	85	14	134	54	202	16	67	3	86	13	48	5	66	439
08:15 AM	22	66	32	120	20	128	53	201	9	54	7	70	21	53	8	82	473
Total Volume	51	166	92	309	89	549	151	789	60	185	21	266	69	185	25	279	1643
% App. Total	16.5	53.7	29.8		11.3	69.6	19.1		22.6	69.5	7.9		24.7	66.3	9		
PHF	.580	.629	.719	.644	.767	.885	.699	.976	.750	.690	.750	.773	.821	.873	.625	.851	.868

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
Site Code : 05722809
Start Date : 9/21/2022
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:45 AM				08:00 AM			
+0 mins.	7	26	18	51	29	155	11	195	20	40	6	66	13	48	5	66
+15 mins.	16	45	24	85	26	132	33	191	16	67	3	86	21	53	8	82
+30 mins.	22	66	32	120	14	134	54	202	9	54	7	70	11	73	9	93
+45 mins.	17	39	17	73	20	128	53	201	16	19	14	49	16	56	6	78
Total Volume	62	176	91	329	89	549	151	789	61	180	30	271	61	230	28	319
% App. Total	18.8	53.5	27.7		11.3	69.6	19.1		22.5	66.4	11.1		19.1	72.1	8.8	
PHF	.705	.667	.711	.685	.767	.885	.699	.976	.763	.672	.536	.788	.726	.788	.778	.858

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
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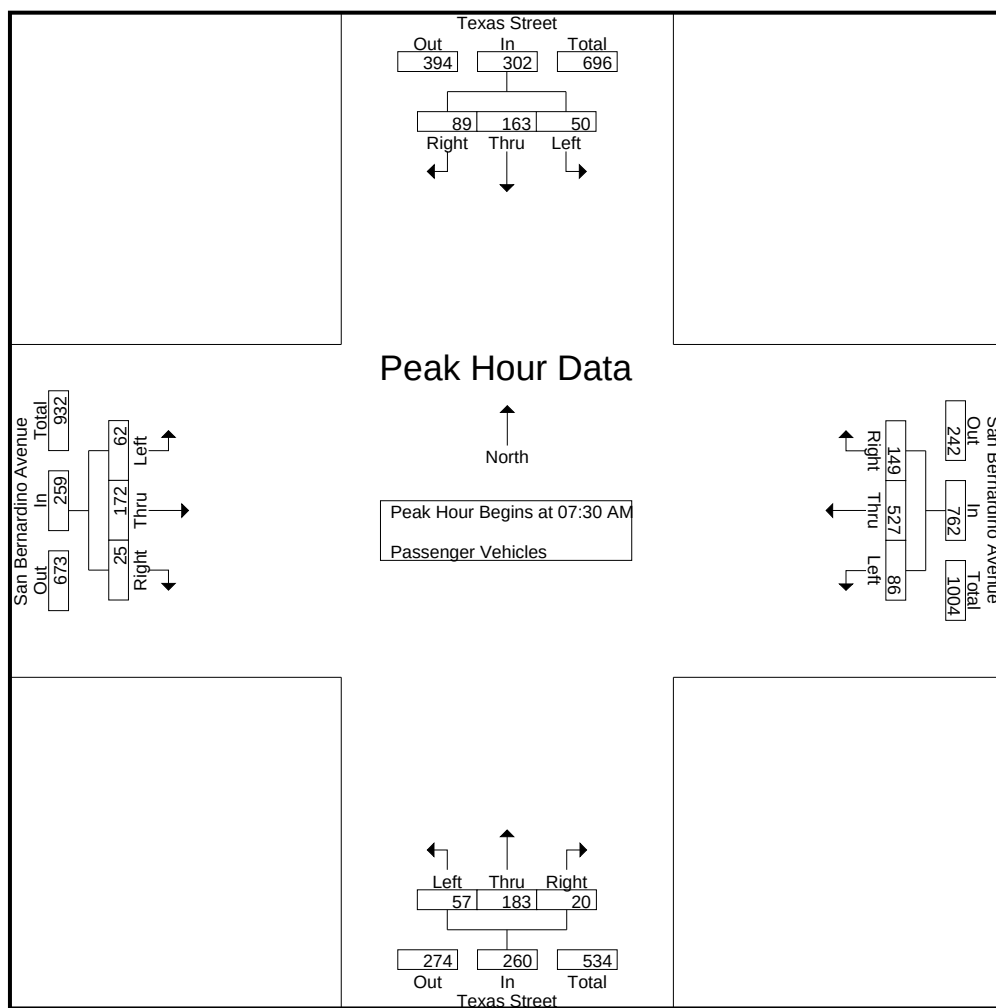
Groups Printed- Passenger Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	17	20	40	9	142	2	153	19	13	6	38	8	35	4	47	278
07:15 AM	4	32	21	57	10	147	14	171	19	23	5	47	11	56	7	74	349
07:30 AM	5	28	18	51	28	148	10	186	15	23	5	43	15	50	10	75	355
07:45 AM	7	26	17	50	26	125	33	184	20	40	6	66	16	29	2	47	347
Total	19	103	76	198	73	562	59	694	73	99	22	194	50	170	23	243	1329
08:00 AM	16	45	23	84	12	130	53	195	14	67	3	84	12	44	5	61	424
08:15 AM	22	64	31	117	20	124	53	197	8	53	6	67	19	49	8	76	457
08:30 AM	16	38	16	70	10	104	8	122	16	19	14	49	9	67	9	85	326
08:45 AM	2	13	13	28	9	79	4	92	9	8	7	24	11	49	6	66	210
Total	56	160	83	299	51	437	118	606	47	147	30	224	51	209	28	288	1417
Grand Total	75	263	159	497	124	999	177	1300	120	246	52	418	101	379	51	531	2746
Apprch %	15.1	52.9	32		9.5	76.8	13.6		28.7	58.9	12.4		19	71.4	9.6		
Total %	2.7	9.6	5.8	18.1	4.5	36.4	6.4	47.3	4.4	9	1.9	15.2	3.7	13.8	1.9	19.3	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	28	18	51	28	148	10	186	15	23	5	43	15	50	10	75	355
07:45 AM	7	26	17	50	26	125	33	184	20	40	6	66	16	29	2	47	347
08:00 AM	16	45	23	84	12	130	53	195	14	67	3	84	12	44	5	61	424
08:15 AM	22	64	31	117	20	124	53	197	8	53	6	67	19	49	8	76	457
Total Volume	50	163	89	302	86	527	149	762	57	183	20	260	62	172	25	259	1583
% App. Total	16.6	54	29.5		11.3	69.2	19.6		21.9	70.4	7.7		23.9	66.4	9.7		
PHF	.568	.637	.718	.645	.768	.890	.703	.967	.713	.683	.833	.774	.816	.860	.625	.852	.866

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	5	28	18	51	28	148	10	186	15	23	5	43	15	50	10	75
+15 mins.	7	26	17	50	26	125	33	184	20	40	6	66	16	29	2	47
+30 mins.	16	45	23	84	12	130	53	195	14	67	3	84	12	44	5	61
+45 mins.	22	64	31	117	20	124	53	197	8	53	6	67	19	49	8	76
Total Volume	50	163	89	302	86	527	149	762	57	183	20	260	62	172	25	259
% App. Total	16.6	54	29.5		11.3	69.2	19.6		21.9	70.4	7.7		23.9	66.4	9.7	
PHF	.568	.637	.718	.645	.768	.890	.703	.967	.713	.683	.833	.774	.816	.860	.625	.852

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
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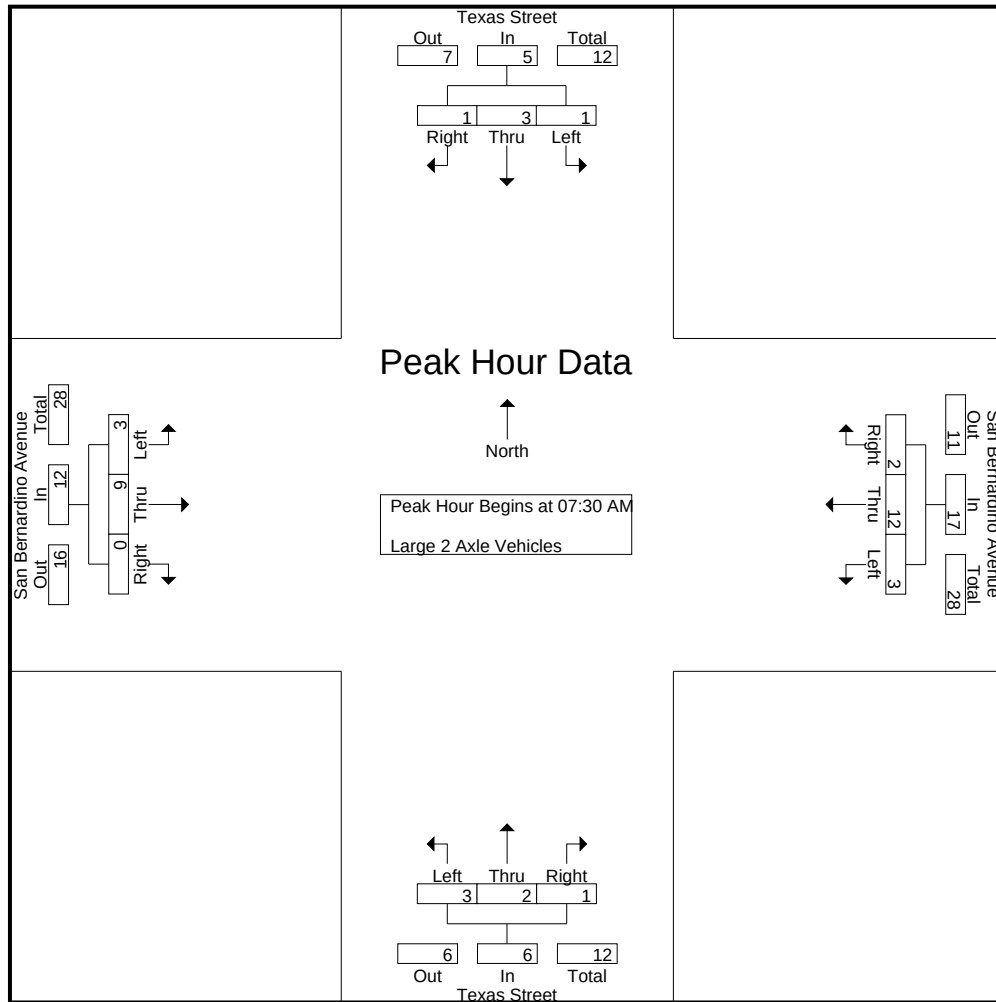
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	1	1	0	2	0	1	0	1	0	3	0	3	7
07:15 AM	0	0	0	0	0	1	0	1	1	2	0	3	1	4	0	5	9
07:30 AM	1	1	0	2	1	3	1	5	0	1	0	1	0	1	0	1	9
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
Total	1	2	0	3	2	8	1	11	1	4	0	5	1	11	0	12	31
08:00 AM	0	0	0	0	2	3	1	6	2	0	0	2	1	3	0	4	12
08:15 AM	0	2	1	3	0	3	0	3	1	1	1	3	2	2	0	4	13
08:30 AM	1	1	0	2	0	1	0	1	0	0	0	0	0	6	0	6	9
08:45 AM	0	0	0	0	0	1	1	2	1	0	0	1	4	3	0	7	10
Total	1	3	1	5	2	8	2	12	4	1	1	6	7	14	0	21	44
Grand Total	2	5	1	8	4	16	3	23	5	5	1	11	8	25	0	33	75
Apprch %	25	62.5	12.5		17.4	69.6	13		45.5	45.5	9.1		24.2	75.8	0		
Total %	2.7	6.7	1.3	10.7	5.3	21.3	4	30.7	6.7	6.7	1.3	14.7	10.7	33.3	0	44	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	1	0	2	1	3	1	5	0	1	0	1	0	1	0	1	9
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
08:00 AM	0	0	0	0	2	3	1	6	2	0	0	2	1	3	0	4	12
08:15 AM	0	2	1	3	0	3	0	3	1	1	1	3	2	2	0	4	13
Total Volume	1	3	1	5	3	12	2	17	3	2	1	6	3	9	0	12	40
% App. Total	20	60	20		17.6	70.6	11.8		50	33.3	16.7		25	75	0		
PHF	.250	.375	.250	.417	.375	1.00	.500	.708	.375	.500	.250	.500	.375	.750	.000	.750	.769

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	1	1	0	2	1	3	1	5	0	1	0	1	0	1	0	1
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3
+30 mins.	0	0	0	0	2	3	1	6	2	0	0	2	1	3	0	4
+45 mins.	0	2	1	3	0	3	0	3	1	1	1	3	2	2	0	4
Total Volume	1	3	1	5	3	12	2	17	3	2	1	6	3	9	0	12
% App. Total	20	60	20		17.6	70.6	11.8		50	33.3	16.7		25	75	0	
PHF	.250	.375	.250	.417	.375	1.000	.500	.708	.375	.500	.250	.500	.375	.750	.000	.750

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

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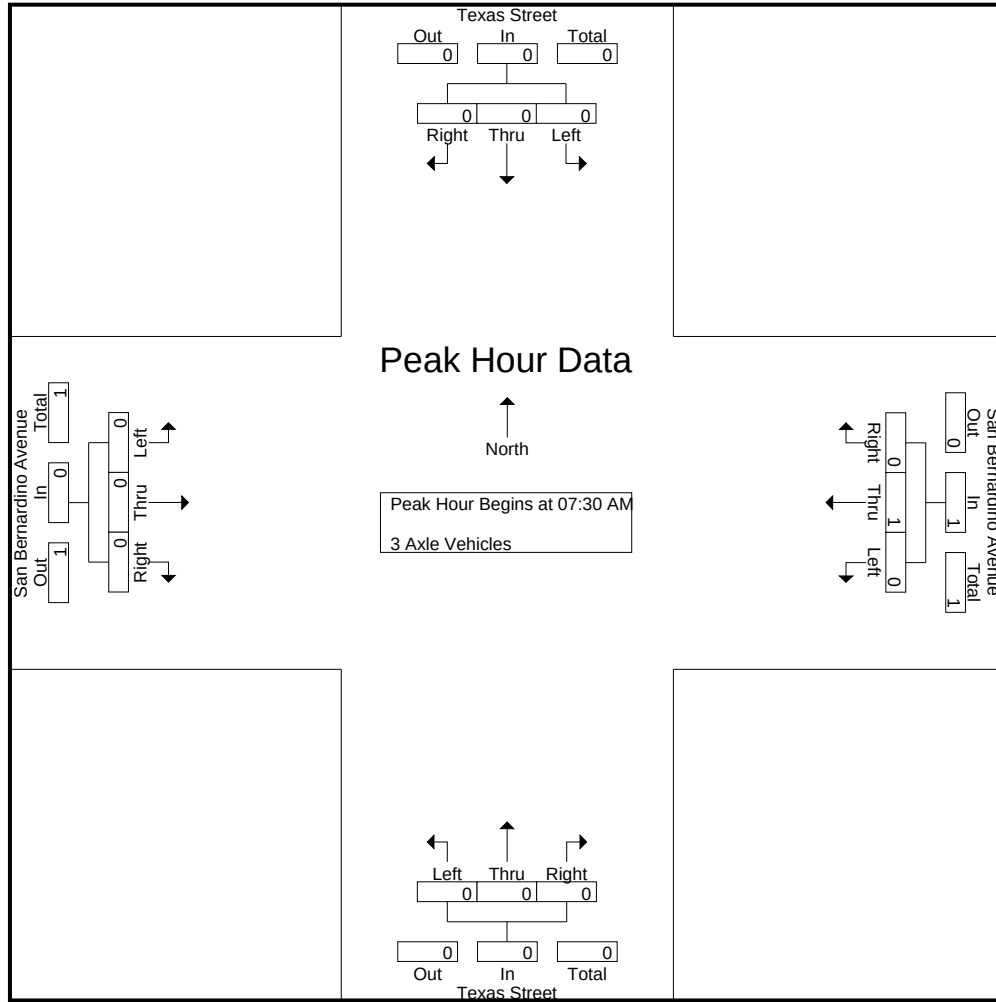
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
Site Code : 05722809
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
Site Code : 05722809
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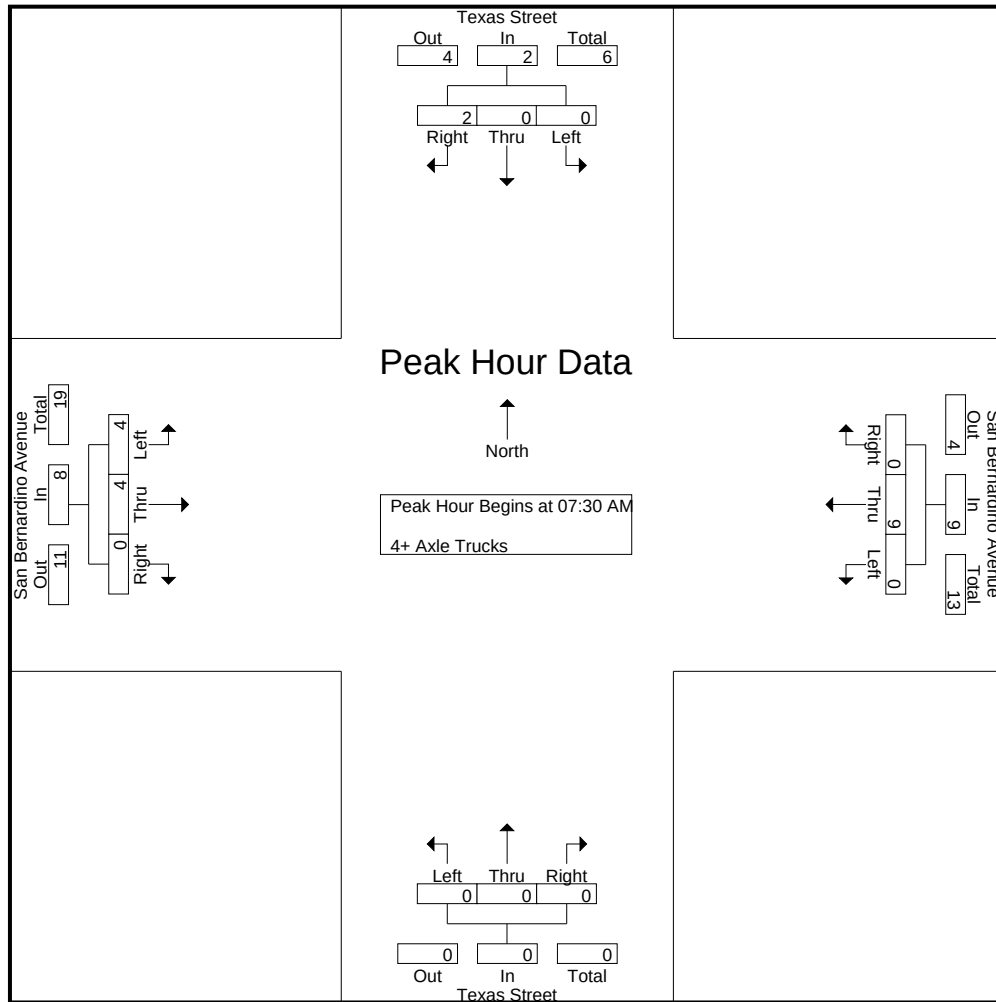
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	4	0	4	6
07:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	2	0	0	2	6
07:45 AM	0	0	1	1	0	4	0	4	0	0	0	0	2	1	0	3	8
Total	0	0	2	2	0	9	0	9	0	0	0	0	4	6	0	10	21
08:00 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	2	0	0	2	4
08:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	1	4	0	5	7
Total	0	0	3	3	0	3	0	3	0	0	0	0	3	7	0	10	16
Grand Total	0	0	5	5	0	12	0	12	0	0	0	0	7	13	0	20	37
Apprch %	0	0	100		0	100	0		0	0	0		35	65	0		
Total %	0	0	13.5	13.5	0	32.4	0	32.4	0	0	0	0	18.9	35.1	0	54.1	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	2	0	0	2	6
07:45 AM	0	0	1	1	0	4	0	4	0	0	0	0	2	1	0	3	8
08:00 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	0	0	2	2	0	9	0	9	0	0	0	0	4	4	0	8	19
% App. Total	0	0	100		0	100	0		0	0	0		50	50	0		
PHF	.000	.000	.500	.500	.000	.563	.000	.563	.000	.000	.000	.000	.500	.500	.000	.667	.594

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B AM
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	4	0	4	0	0	0	0	2	0	0	2
+15 mins.	0	0	1	1	0	4	0	4	0	0	0	0	2	1	0	3
+30 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	0	0	2	2	0	9	0	9	0	0	0	0	4	4	0	8
% App. Total	0	0	100		0	100	0		0	0	0		50	50	0	
PHF	.000	.000	.500	.500	.000	.563	.000	.563	.000	.000	.000	.000	.500	.500	.000	.667

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B PM
Site Code : 05722809
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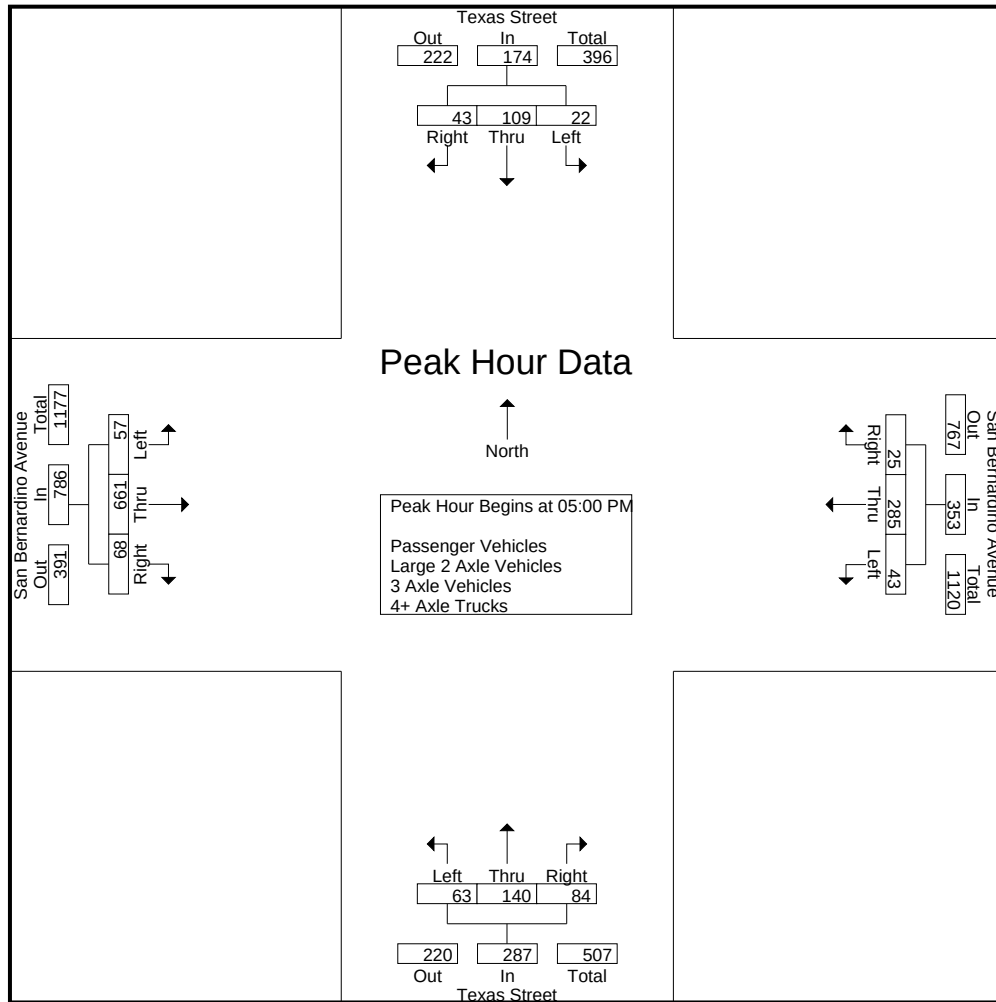
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	24	13	42	9	71	8	88	18	38	16	72	21	135	10	166	368
04:15 PM	7	28	8	43	9	77	2	88	16	26	10	52	18	148	10	176	359
04:30 PM	9	22	9	40	16	75	2	93	23	32	6	61	12	138	16	166	360
04:45 PM	2	30	10	42	14	88	3	105	18	23	22	63	13	158	16	187	397
Total	23	104	40	167	48	311	15	374	75	119	54	248	64	579	52	695	1484
05:00 PM	5	21	12	38	7	67	3	77	14	33	21	68	14	154	16	184	367
05:15 PM	6	30	11	47	8	67	2	77	11	35	27	73	17	155	15	187	384
05:30 PM	5	24	12	41	16	80	8	104	15	37	17	69	8	159	20	187	401
05:45 PM	6	34	8	48	12	71	12	95	23	35	19	77	18	193	17	228	448
Total	22	109	43	174	43	285	25	353	63	140	84	287	57	661	68	786	1600
Grand Total	45	213	83	341	91	596	40	727	138	259	138	535	121	1240	120	1481	3084
Apprch %	13.2	62.5	24.3		12.5	82	5.5		25.8	48.4	25.8		8.2	83.7	8.1		
Total %	1.5	6.9	2.7	11.1	3	19.3	1.3	23.6	4.5	8.4	4.5	17.3	3.9	40.2	3.9	48	
Passenger Vehicles	41	210	77	328	91	576	40	707	137	259	137	533	120	1229	119	1468	3036
% Passenger Vehicles	91.1	98.6	92.8	96.2	100	96.6	100	97.2	99.3	100	99.3	99.6	99.2	99.1	99.2	99.1	98.4
Large 2 Axle Vehicles	2	3	3	8	0	14	0	14	1	0	1	2	0	11	1	12	36
% Large 2 Axle Vehicles	4.4	1.4	3.6	2.3	0	2.3	0	1.9	0.7	0	0.7	0.4	0	0.9	0.8	0.8	1.2
3 Axle Vehicles	2	0	3	5	0	0	0	0	0	0	0	0	1	0	0	1	6
% 3 Axle Vehicles	4.4	0	3.6	1.5	0	0	0	0	0	0	0	0	0.8	0	0	0.1	0.2
4+ Axle Trucks	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	6
% 4+ Axle Trucks	0	0	0	0	0	1	0	0.8	0	0	0	0	0	0	0	0	0.2

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	5	21	12	38	7	67	3	77	14	33	21	68	14	154	16	184	367
05:15 PM	6	30	11	47	8	67	2	77	11	35	27	73	17	155	15	187	384
05:30 PM	5	24	12	41	16	80	8	104	15	37	17	69	8	159	20	187	401
05:45 PM	6	34	8	48	12	71	12	95	23	35	19	77	18	193	17	228	448
Total Volume	22	109	43	174	43	285	25	353	63	140	84	287	57	661	68	786	1600
% App. Total	12.6	62.6	24.7		12.2	80.7	7.1		22	48.8	29.3		7.3	84.1	8.7		
PHF	.917	.801	.896	.906	.672	.891	.521	.849	.685	.946	.778	.932	.792	.856	.850	.862	.893

City of Redlands
N/S: Texas Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Tex_San B PM
Site Code : 05722809
Start Date : 9/21/2022
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				05:00 PM				05:00 PM			
+0 mins.	5	21	12	38	9	71	8	88	14	33	21	68	14	154	16	184
+15 mins.	6	30	11	47	9	77	2	88	11	35	27	73	17	155	15	187
+30 mins.	5	24	12	41	16	75	2	93	15	37	17	69	8	159	20	187
+45 mins.	6	34	8	48	14	88	3	105	23	35	19	77	18	193	17	228
Total Volume	22	109	43	174	48	311	15	374	63	140	84	287	57	661	68	786
% App. Total	12.6	62.6	24.7		12.8	83.2	4		22	48.8	29.3		7.3	84.1	8.7	
PHF	.917	.801	.896	.906	.750	.884	.469	.890	.685	.946	.778	.932	.792	.856	.850	.862

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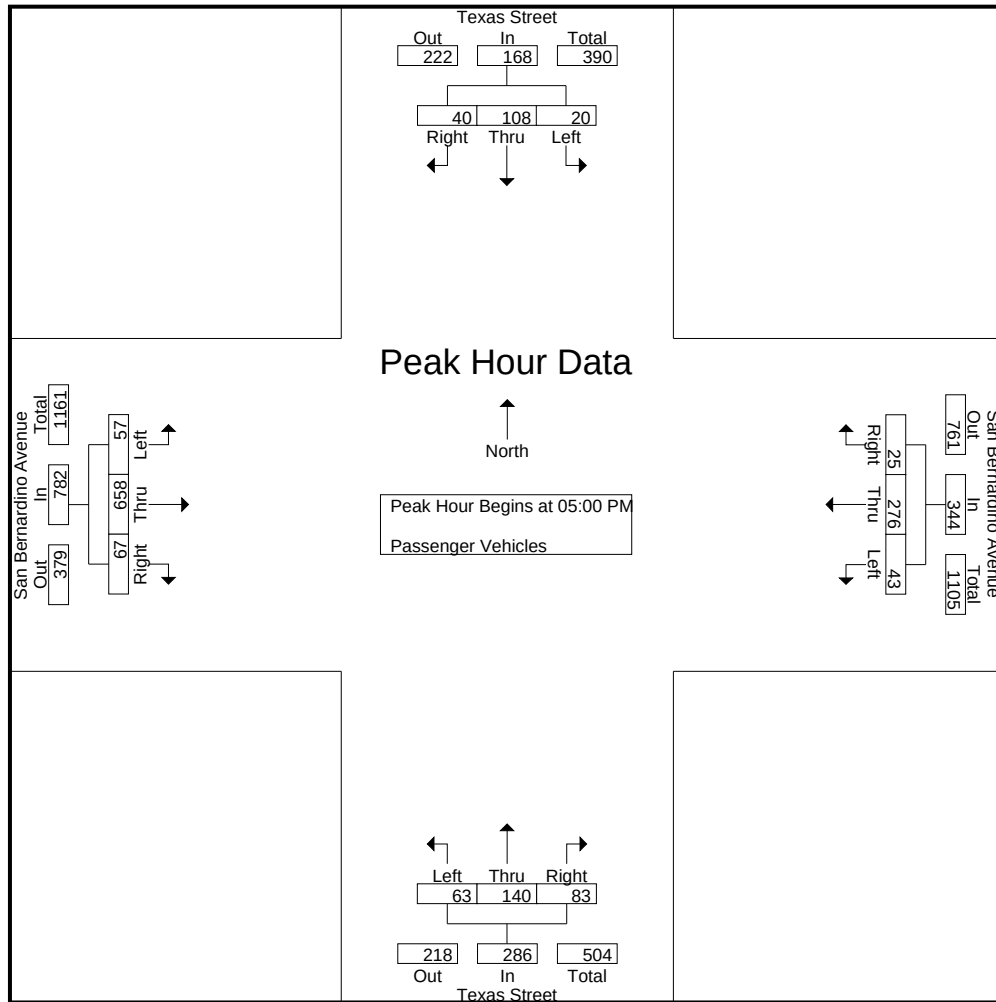
Groups Printed- Passenger Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	24	12	40	9	68	8	85	17	38	16	71	21	135	10	166	362
04:15 PM	6	27	6	39	9	75	2	86	16	26	10	52	17	143	10	170	347
04:30 PM	9	21	9	39	16	74	2	92	23	32	6	61	12	135	16	163	355
04:45 PM	2	30	10	42	14	83	3	100	18	23	22	63	13	158	16	187	392
Total	21	102	37	160	48	300	15	363	74	119	54	247	63	571	52	686	1456
05:00 PM	4	21	12	37	7	66	3	76	14	33	20	67	14	154	16	184	364
05:15 PM	5	30	10	45	8	65	2	75	11	35	27	73	17	155	15	187	380
05:30 PM	5	24	12	41	16	78	8	102	15	37	17	69	8	157	19	184	396
05:45 PM	6	33	6	45	12	67	12	91	23	35	19	77	18	192	17	227	440
Total	20	108	40	168	43	276	25	344	63	140	83	286	57	658	67	782	1580
Grand Total	41	210	77	328	91	576	40	707	137	259	137	533	120	1229	119	1468	3036
Apprch %	12.5	64	23.5		12.9	81.5	5.7		25.7	48.6	25.7		8.2	83.7	8.1		
Total %	1.4	6.9	2.5	10.8	3	19	1.3	23.3	4.5	8.5	4.5	17.6	4	40.5	3.9	48.4	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	21	12	37	7	66	3	76	14	33	20	67	14	154	16	184	364
05:15 PM	5	30	10	45	8	65	2	75	11	35	27	73	17	155	15	187	380
05:30 PM	5	24	12	41	16	78	8	102	15	37	17	69	8	157	19	184	396
05:45 PM	6	33	6	45	12	67	12	91	23	35	19	77	18	192	17	227	440
Total Volume	20	108	40	168	43	276	25	344	63	140	83	286	57	658	67	782	1580
% App. Total	11.9	64.3	23.8		12.5	80.2	7.3		22	49	29		7.3	84.1	8.6		
PHF	.833	.818	.833	.933	.672	.885	.521	.843	.685	.946	.769	.929	.792	.857	.882	.861	.898

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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	4	21	12	37	7	66	3	76	14	33	20	67	14	154	16	184
+15 mins.	5	30	10	45	8	65	2	75	11	35	27	73	17	155	15	187
+30 mins.	5	24	12	41	16	78	8	102	15	37	17	69	8	157	19	184
+45 mins.	6	33	6	45	12	67	12	91	23	35	19	77	18	192	17	227
Total Volume	20	108	40	168	43	276	25	344	63	140	83	286	57	658	67	782
% App. Total	11.9	64.3	23.8		12.5	80.2	7.3		22	49	29		7.3	84.1	8.6	
PHF	.833	.818	.833	.933	.672	.885	.521	.843	.685	.946	.769	.929	.792	.857	.882	.861

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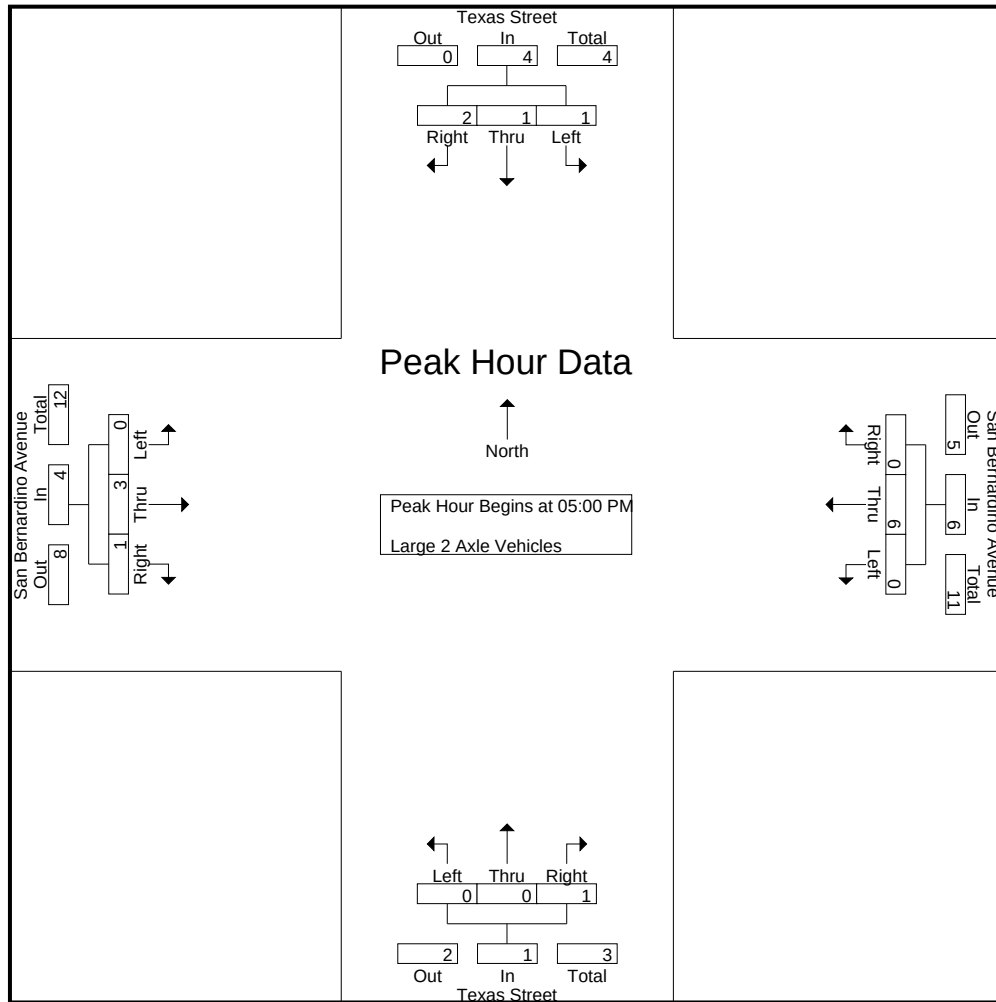
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
04:15 PM	1	1	1	3	0	2	0	2	0	0	0	0	0	5	0	5	10
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	3	0	3	5
04:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
Total	1	2	1	4	0	8	0	8	1	0	0	1	0	8	0	8	21
05:00 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
05:15 PM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
05:45 PM	0	1	1	2	0	2	0	2	0	0	0	0	0	1	0	1	5
Total	1	1	2	4	0	6	0	6	0	0	1	1	0	3	1	4	15
Grand Total	2	3	3	8	0	14	0	14	1	0	1	2	0	11	1	12	36
Apprch %	25	37.5	37.5		0	100	0		50	0	50		0	91.7	8.3		
Total %	5.6	8.3	8.3	22.2	0	38.9	0	38.9	2.8	0	2.8	5.6	0	30.6	2.8	33.3	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 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	1	0	1	0	0	1	1	0	0	0	0	2
05:15 PM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
05:45 PM	0	1	1	2	0	2	0	2	0	0	0	0	0	1	0	1	5
Total Volume	1	1	2	4	0	6	0	6	0	0	1	1	0	3	1	4	15
% App. Total	25	25	50		0	100	0		0	0	100		0	75	25		
PHF	.250	.250	.500	.500	.000	.750	.000	.750	.000	.000	.250	.250	.000	.375	.250	.333	.750

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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0
+15 mins.	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3
+45 mins.	0	1	1	2	0	2	0	2	0	0	0	0	0	1	0	1
Total Volume	1	1	2	4	0	6	0	6	0	0	1	1	0	3	1	4
% App. Total	25	25	50		0	100	0		0	0	100		0	75	25	
PHF	.250	.250	.500	.500	.000	.750	.000	.750	.000	.000	.250	.250	.000	.375	.250	.333

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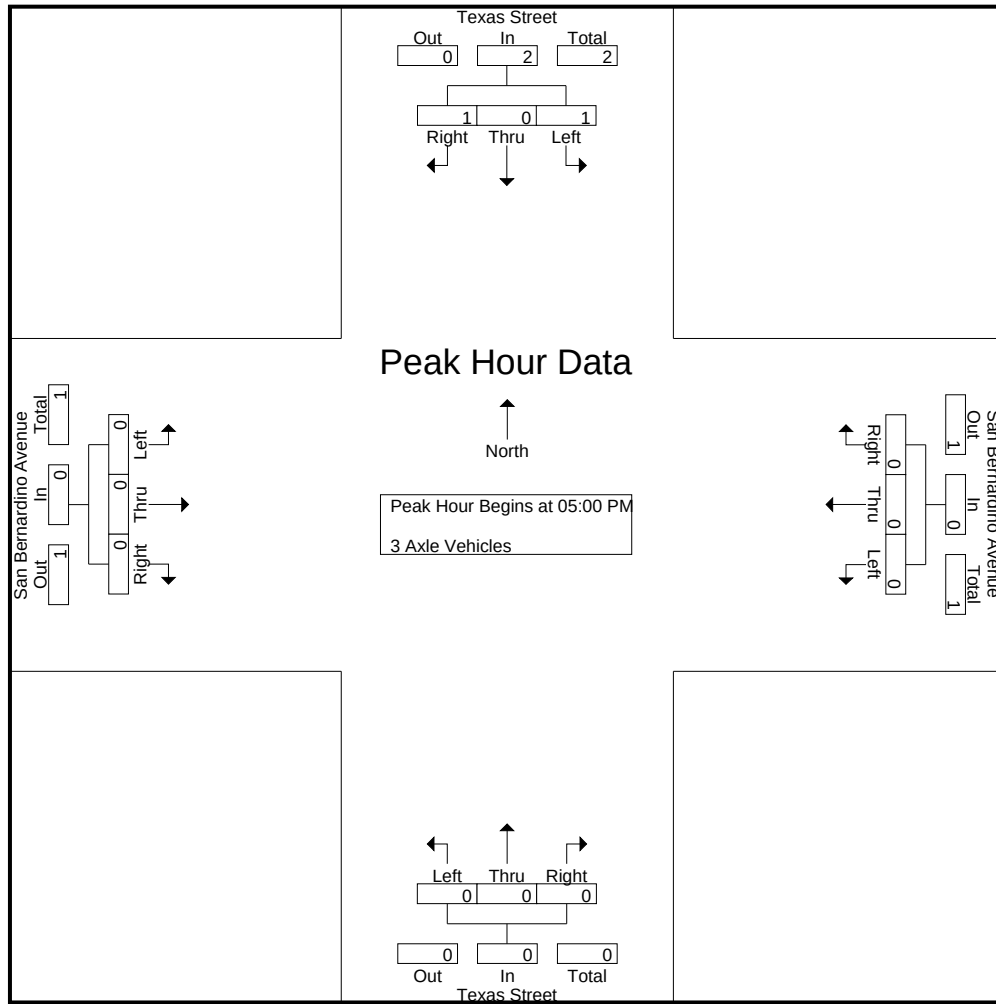
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	2	3	0	0	0	0	0	0	0	0	1	0	0	1	4
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	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
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	2	0	3	5	0	0	0	0	0	0	0	0	1	0	0	1	6
Apprch %	40	0	60		0	0	0		0	0	0		100	0	0		
Total %	33.3	0	50	83.3	0	0	0	0	0	0	0	0	16.7	0	0	16.7	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	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
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	50	0	50		0	0	0		0	0	0		0	0	0		
PHF	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	50	0	50		0	0	0		0	0	0		0	0	0	
PHF	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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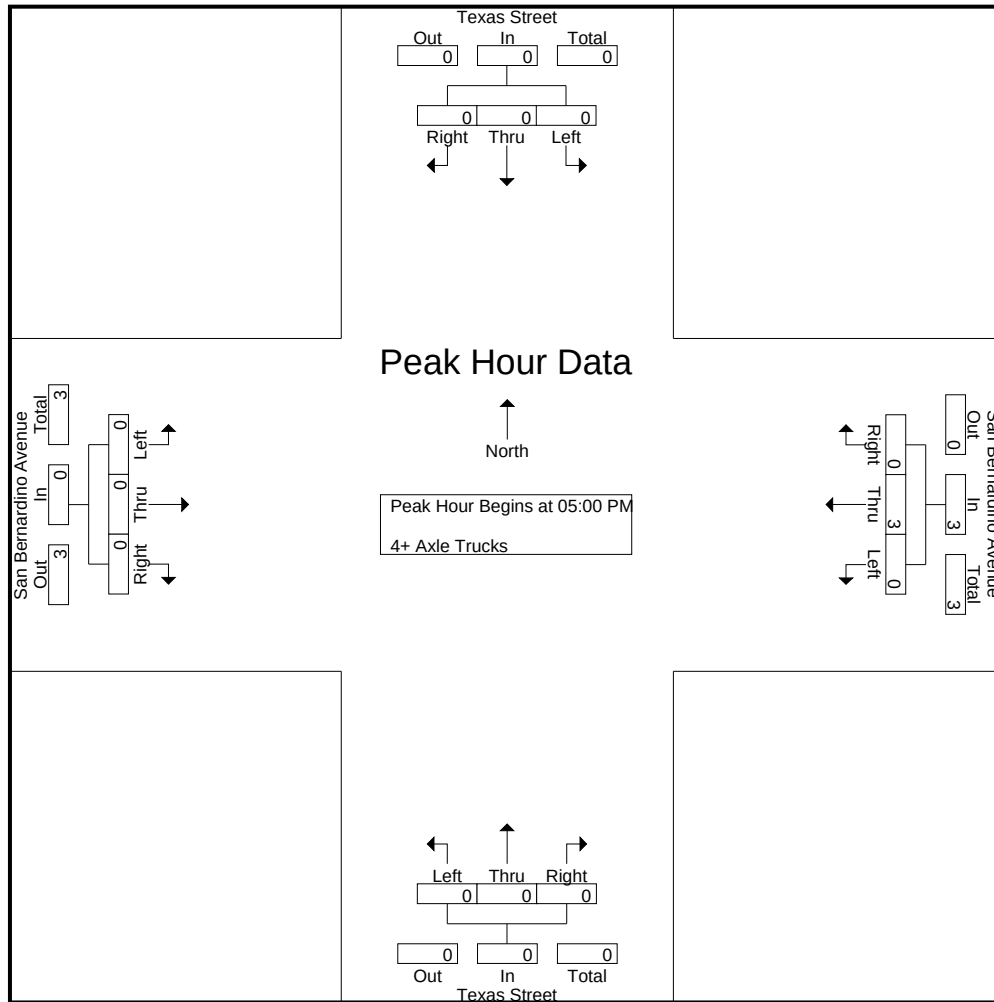
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
05:00 PM	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
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	6
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

	Texas Street Southbound				San Bernardino Avenue Westbound				Texas Street Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 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
05:15 PM	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	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000	.375

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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	100	0		0	0	0	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000

APPENDIX B-II

ROADWAY SEGMENT COUNTS

Counts Unlimited, Inc.

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City of Redlands
Texas Street
B/ Pioneer Avenue - San Bernardino Avenue
24 Hour Directional Classification Count

PO Box 1178
Corona, CA 92878
(951) 268-6268
email: counts@countsunlimited.com

REDTEPISB
Site Code: 057-22809

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<6 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Non Trucks	Trucks
09/21/2																
2	0	12	9	0	0	0	0	0	0	0	0	0	0	21	21	0
01:00	0	6	2	0	0	0	0	0	2	0	0	0	0	10	8	2
02:00	0	9	0	0	1	0	0	0	0	0	0	0	0	10	10	0
03:00	0	10	2	1	0	0	0	0	0	0	0	0	0	13	12	1
04:00	0	12	5	1	1	0	0	0	0	0	0	0	0	19	18	1
05:00	1	11	4	0	4	0	0	0	0	0	0	1	0	21	20	1
06:00	1	44	24	0	6	0	0	1	0	0	0	1	0	77	75	2
07:00	1	140	53	2	20	0	0	2	2	1	0	1	0	222	214	8
08:00	1	244	64	4	24	0	0	1	1	1	0	1	0	341	333	8
09:00	0	54	17	0	6	0	0	0	3	0	0	0	0	80	77	3
10:00	0	58	10	1	6	1	0	1	3	0	0	0	0	80	74	6
11:00	1	64	22	2	10	1	0	0	3	1	0	1	0	105	97	8
12 PM	0	74	25	1	8	0	0	2	6	0	0	0	0	116	107	9
13:00	0	80	27	1	10	0	0	2	1	1	0	0	0	122	117	5
14:00	1	149	47	1	12	1	0	1	3	0	0	0	1	216	209	7
15:00	0	220	72	0	20	1	0	1	2	0	0	0	0	316	312	4
16:00	2	137	49	0	9	0	0	0	1	0	0	2	0	200	197	3
17:00	0	176	33	0	12	0	0	1	0	0	0	0	0	222	221	1
18:00	0	122	31	0	3	0	0	0	0	0	0	0	0	156	156	0
19:00	1	106	19	0	5	0	0	0	0	0	0	1	0	132	131	1
20:00	0	100	29	1	11	0	0	0	0	0	0	0	0	141	140	1
21:00	0	105	21	0	3	0	0	0	0	0	0	0	0	129	129	0
22:00	0	47	11	0	2	0	0	0	2	0	0	0	0	62	60	2
23:00	1	26	7	0	2	1	0	0	0	0	0	1	0	38	36	2
Percent	0.4%	70.4%	20.5%	0.5%	6.1%	0.2%	0.0%	0.4%	1.0%	0.1%	0.0%	0.3%	0.0%		97.4%	2.6%
AM Peak	05:00	08:00	08:00	08:00	08:00	10:00		07:00	09:00	07:00		05:00		08:00	08:00	07:00
Vol.	1	244	64	4	24	1		2	3	1		1		341	333	8
PM Peak	16:00	15:00	15:00	12:00	15:00	14:00		12:00	12:00	13:00		16:00	14:00	15:00	15:00	12:00
Vol.	2	220	72	1	20	1		2	6	1		2	1	316	312	9

City of Redlands
Texas Street
B/ Pioneer Avenue - San Bernardino Avenue
24 Hour Directional Classification Count

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
(951) 268-6268
email: counts@countsunlimited.com

REDTEPISB
Site Code: 057-22809

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Non Trucks	Trucks
09/21/2																
2	0	3	2	0	0	0	0	0	0	0	0	0	0	5	5	0
01:00	0	4	1	0	0	0	0	0	1	0	0	0	0	6	5	1
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4	4	0
03:00	0	5	2	1	1	0	0	0	0	0	0	0	0	9	8	1
04:00	0	16	0	0	2	0	0	0	0	0	0	0	0	18	18	0
05:00	0	28	4	0	3	0	0	0	0	0	0	0	0	35	35	0
06:00	0	57	12	0	4	0	0	1	0	0	0	0	0	74	73	1
07:00	0	168	27	1	6	0	0	0	1	0	0	0	0	203	201	2
08:00	2	237	55	2	6	0	0	0	3	0	0	2	0	307	300	7
09:00	0	58	14	1	4	1	0	1	1	0	0	0	0	80	76	4
10:00	0	66	16	1	5	0	0	1	2	0	0	0	0	91	87	4
11:00	0	74	17	2	6	1	0	1	2	0	0	0	0	103	97	6
12 PM	0	78	20	0	5	0	0	0	4	0	0	0	0	107	103	4
13:00	1	71	13	1	8	0	0	2	2	0	0	1	0	99	93	6
14:00	0	106	40	1	6	0	1	1	4	0	0	0	0	159	152	7
15:00	0	240	59	1	15	0	1	5	0	0	0	0	0	321	314	7
16:00	0	124	33	1	7	0	0	0	2	0	0	0	0	167	164	3
17:00	0	142	26	1	5	2	0	0	0	0	0	0	0	176	173	3
18:00	0	107	24	0	8	0	0	0	0	0	0	0	0	139	139	0
19:00	0	67	13	0	1	0	0	0	0	0	0	0	0	81	81	0
20:00	0	52	8	0	2	0	0	0	0	0	0	0	0	62	62	0
21:00	0	41	5	0	0	0	0	0	0	0	0	0	0	46	46	0
22:00	0	25	3	0	1	0	0	0	0	0	0	0	0	29	29	0
23:00	1	9	4	0	0	0	0	0	0	0	0	1	0	15	14	1
Percent	0.2%	76.3%	17.0%	0.6%	4.1%	0.2%	0.1%	0.5%	0.9%	0.0%	0.0%	0.2%	0.0%		97.6%	2.4%
AM Peak	08:00	08:00	08:00	08:00	07:00	09:00		06:00	08:00			08:00		08:00	08:00	08:00
Vol.	2	237	55	2	6	1		1	3			2		307	300	7
PM Peak	13:00	15:00	15:00	13:00	15:00	17:00	14:00	15:00	12:00			13:00		15:00	15:00	14:00
Vol.	1	240	59	1	15	2	1	5	4			1		321	314	7

City of Redlands
Texas Street
B/ Pioneer Avenue - San Bernardino Avenue
24 Hour Directional Classification Count

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REDTEPISB
Site Code: 057-22809

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Non Trucks	Trucks
09/21/2																
2	0	15	11	0	0	0	0	0	0	0	0	0	0	26	26	0
01:00	0	10	3	0	0	0	0	0	3	0	0	0	0	16	13	3
02:00	0	13	0	0	1	0	0	0	0	0	0	0	0	14	14	0
03:00	0	15	4	2	1	0	0	0	0	0	0	0	0	22	20	2
04:00	0	28	5	1	3	0	0	0	0	0	0	0	0	37	36	1
05:00	1	39	8	0	7	0	0	0	0	0	0	1	0	56	55	1
06:00	1	101	36	0	10	0	0	2	0	0	0	1	0	151	148	3
07:00	1	308	80	3	26	0	0	2	3	1	0	1	0	425	415	10
08:00	3	481	119	6	30	0	0	1	4	1	0	3	0	648	633	15
09:00	0	112	31	1	10	1	0	1	4	0	0	0	0	160	153	7
10:00	0	124	26	2	11	1	0	2	5	0	0	0	0	171	161	10
11:00	1	138	39	4	16	2	0	1	5	1	0	1	0	208	194	14
12 PM	0	152	45	1	13	0	0	2	10	0	0	0	0	223	210	13
13:00	1	151	40	2	18	0	0	4	3	1	0	1	0	221	210	11
14:00	1	255	87	2	18	1	1	2	7	0	0	0	1	375	361	14
15:00	0	460	131	1	35	1	1	6	2	0	0	0	0	637	626	11
16:00	2	261	82	1	16	0	0	0	3	0	0	2	0	367	361	6
17:00	0	318	59	1	17	2	0	1	0	0	0	0	0	398	394	4
18:00	0	229	55	0	11	0	0	0	0	0	0	0	0	295	295	0
19:00	1	173	32	0	6	0	0	0	0	0	0	1	0	213	212	1
20:00	0	152	37	1	13	0	0	0	0	0	0	0	0	203	202	1
21:00	0	146	26	0	3	0	0	0	0	0	0	0	0	175	175	0
22:00	0	72	14	0	3	0	0	0	2	0	0	0	0	91	89	2
23:00	2	35	11	0	2	1	0	0	0	0	0	2	0	53	50	3
Percent	0.3%	73.1%	18.9%	0.5%	5.2%	0.2%	0.0%	0.5%	1.0%	0.1%	0.0%	0.3%	0.0%		97.5%	2.5%
AM Peak	08:00	08:00	08:00	08:00	08:00	11:00		06:00	10:00	07:00		08:00		08:00	08:00	08:00
Vol.	3	481	119	6	30	2		2	5	1		3		648	633	15
PM Peak	16:00	15:00	15:00	13:00	15:00	17:00	14:00	15:00	12:00	13:00		16:00	14:00	15:00	15:00	14:00
Vol.	2	460	131	2	35	2	1	6	10	1		2	1	637	626	14

APPENDIX C

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-1

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Texas Street at Pioneer Avenue

Control Type:	Signalized	Delay (sec / veh):	34.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.803

Intersection Setup

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Base Volume Input [veh/h]	224	156	44	164	170	75	15	142	73	24	344	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	224	156	44	164	170	75	15	142	73	24	344	94
Peak Hour Factor	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	55	15	57	59	26	5	50	26	8	120	33
Total Analysis Volume [veh/h]	313	218	62	229	238	105	21	199	102	34	481	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	25	21	0	26	22	0	0	43	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	28	14	24	24	36	36	36
g / C, Green / Cycle	0.20	0.31	0.16	0.26	0.26	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.16	0.13	0.13	0.06	0.01	0.17	0.38
s, saturation flow rate [veh/h]	1700	1800	1700	1800	1800	1700	1800	1700
c, Capacity [veh/h]	349	557	268	472	472	95	719	722
d1, Uniform Delay [s]	34.89	25.44	36.94	28.27	26.06	16.44	19.49	26.18
k, delay calibration	0.12	0.50	0.11	0.50	0.50	0.11	0.11	0.37
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.24	3.22	7.64	3.82	1.09	1.15	0.39	12.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.50	0.85	0.50	0.22	0.22	0.42	0.90
d, Delay for Lane Group [s/veh]	44.12	28.65	44.59	32.10	27.15	17.59	19.88	38.68
Lane Group LOS	D	C	D	C	C	B	B	D
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.42	5.26	5.39	4.77	1.88	0.29	4.46	15.15
50th-Percentile Queue Length [ft/ln]	185.49	131.58	134.63	119.22	46.95	7.21	111.61	378.76
95th-Percentile Queue Length [veh/ln]	11.89	9.03	9.19	8.35	3.38	0.52	7.93	21.53
95th-Percentile Queue Length [ft/ln]	297.17	225.64	229.78	208.76	84.51	12.98	198.24	538.34

Movement, Approach, & Intersection Results

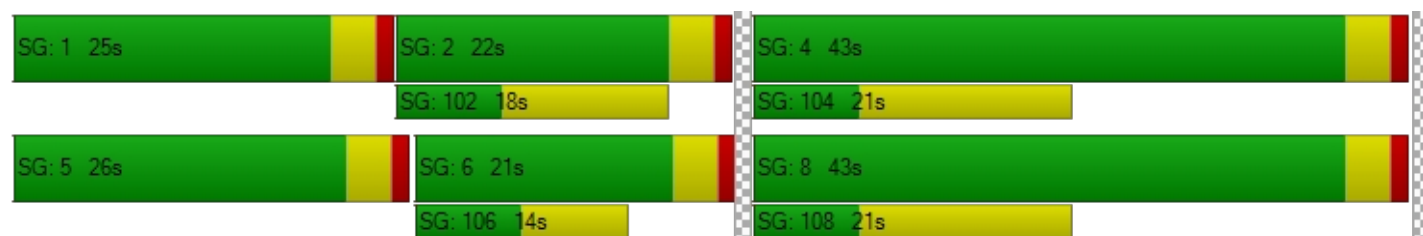
d_M, Delay for Movement [s/veh]	44.12	28.65	28.65	44.59	32.10	27.15	17.59	19.88	19.88	38.68	38.68	38.68
Movement LOS	D	C	C	D	C	C	B	B	B	D	D	D
d_A, Approach Delay [s/veh]	36.82			36.19			19.73			38.68		
Approach LOS	D			D			B			D		
d_I, Intersection Delay [s/veh]	34.63											
Intersection LOS	C											
Intersection V/C	0.803											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.70			34.70			34.70			34.70		
I_p,int, Pedestrian LOS Score for Intersection	2.415			2.390			2.337			2.268		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	378			400			866			866		
d_b, Bicycle Delay [s]	29.63			28.82			14.47			14.47		
I_b,int, Bicycle LOS Score for Intersection	2.538			2.503			2.091			2.626		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Texas Street at San Bernardino Avenue

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

Intersection Setup

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Base Volume Input [veh/h]	62	186	22	52	168	97	79	198	25	91	574	152
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	186	22	52	168	97	79	198	25	91	574	152
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	54	6	15	48	28	23	57	7	26	165	44
Total Analysis Volume [veh/h]	71	214	25	60	194	112	91	228	29	105	661	175
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	94	25	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	0	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	46	46	46	46	36	36	36	36	36
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.04	0.11	0.06	0.05	0.14	0.06	0.37	0.10
s, saturation flow rate [veh/h]	1700	1700	1800	1800	1700	1800	1700	1800	1800
c, Capacity [veh/h]	922	736	924	924	120	716	539	716	716
d1, Uniform Delay [s]	13.02	11.04	11.93	11.35	17.23	19.03	17.38	25.78	18.07
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.13	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	0.22	0.52	0.27	9.41	0.30	0.17	6.48	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.08	0.21	0.12	0.76	0.36	0.19	0.92	0.24
d, Delay for Lane Group [s/veh]	14.01	11.25	12.45	11.62	26.64	19.33	17.56	32.25	18.24
Lane Group LOS	B	B	B	B	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.77	0.62	2.15	1.18	1.48	3.71	1.39	13.99	2.39
50th-Percentile Queue Length [ft/ln]	94.31	15.54	53.78	29.44	37.06	92.64	34.67	349.72	59.79
95th-Percentile Queue Length [veh/ln]	6.79	1.12	3.87	2.12	2.67	6.67	2.50	20.12	4.31
95th-Percentile Queue Length [ft/ln]	169.75	27.98	96.81	53.00	66.70	166.75	62.41	503.07	107.63

Movement, Approach, & Intersection Results

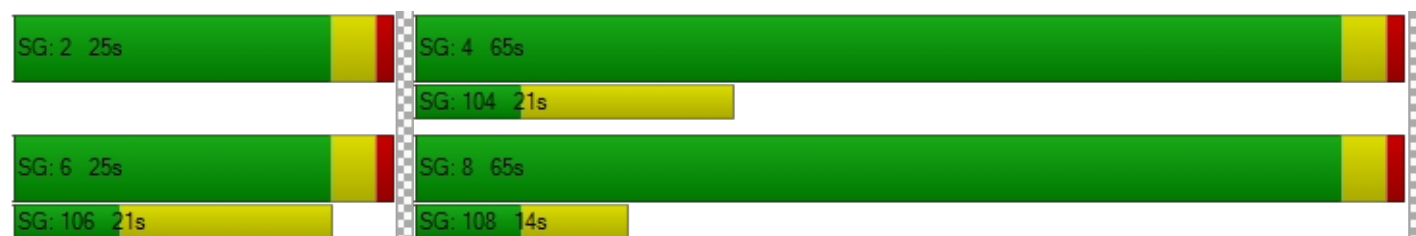
d_M, Delay for Movement [s/veh]	14.01	14.01	14.01	11.25	12.45	11.62	26.64	19.33	19.33	17.56	32.25	18.24
Movement LOS	B	B	B	B	B	B	C	B	B	B	C	B
d_A, Approach Delay [s/veh]	14.01			12.00			21.24			28.01		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.62											
Intersection LOS	C											
Intersection V/C	0.603											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			0.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.65			34.65			0.00			34.65		
I_p,int, Pedestrian LOS Score for Intersection	2.175			2.466			0.000			2.522		
Crosswalk LOS	B			B			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	467			467			1356			1356		
d_b, Bicycle Delay [s]	26.43			26.43			4.66			4.66		
I_b,int, Bicycle LOS Score for Intersection	2.071			2.164			2.134			3.112		
Bicycle LOS	B			B			B			C		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Texas Street at Pioneer Avenue

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

Intersection Setup

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Base Volume Input [veh/h]	70	34	79	24	31	30	38	308	71	53	119	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	34	79	24	31	30	38	308	71	53	119	26
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	10	22	7	9	8	11	87	20	15	34	7
Total Analysis Volume [veh/h]	79	38	89	27	35	34	43	347	80	60	134	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	22	0	10	22	0	0	58	0	0	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	51	3	49	49	24	24	24
g / C, Green / Cycle	0.06	0.57	0.03	0.54	0.54	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.05	0.07	0.02	0.02	0.02	0.03	0.24	0.13
s, saturation flow rate [veh/h]	1700	1800	1700	1800	1800	1700	1800	1700
c, Capacity [veh/h]	101	1024	58	978	978	304	475	499
d1, Uniform Delay [s]	41.76	9.01	42.70	9.58	9.58	25.03	31.98	28.08
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.09	0.25	5.78	0.07	0.07	0.21	6.38	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.12	0.47	0.04	0.03	0.14	0.90	0.45
d, Delay for Lane Group [s/veh]	53.84	9.25	48.47	9.65	9.64	25.24	38.36	28.70
Lane Group LOS	D	A	D	A	A	C	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.05	1.15	0.68	0.32	0.31	0.70	9.53	4.07
50th-Percentile Queue Length [ft/ln]	51.27	28.68	16.92	8.07	7.84	17.57	238.32	101.80
95th-Percentile Queue Length [veh/ln]	3.69	2.07	1.22	0.58	0.56	1.26	14.60	7.33
95th-Percentile Queue Length [ft/ln]	92.28	51.63	30.45	14.53	14.10	31.62	364.91	183.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.84	9.25	9.25	48.47	9.65	9.64	25.24	38.36	38.36	28.70	28.70	28.70
Movement LOS	D	A	A	D	A	A	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	26.35			20.57			37.16			28.70		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.42											
Intersection LOS	C											
Intersection V/C	0.373											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.68			34.68			34.68			34.68		
I_p,int, Pedestrian LOS Score for Intersection	2.309			2.242			2.173			2.049		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	400			400			1200			1200		
d_b, Bicycle Delay [s]	28.81			28.81			7.21			7.21		
I_b,int, Bicycle LOS Score for Intersection	1.900			1.718			2.335			1.928		
Bicycle LOS	A			A			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Texas Street at San Bernardino Avenue

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Base Volume Input [veh/h]	63	140	85	24	110	45	57	663	69	43	294	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	140	85	24	110	45	57	663	69	43	294	25
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	39	24	7	31	13	16	186	19	12	82	7
Total Analysis Volume [veh/h]	71	157	95	27	123	50	64	742	77	48	329	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	94	26	0	0	64	0	0	64	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	0	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	39	39	39	39	43	43	43	43	43
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.19	0.02	0.07	0.03	0.04	0.46	0.03	0.18	0.02
s, saturation flow rate [veh/h]	1700	1700	1800	1800	1700	1800	1700	1800	1800
c, Capacity [veh/h]	780	571	774	774	635	866	106	866	866
d1, Uniform Delay [s]	18.03	14.84	15.68	15.02	12.58	22.22	12.46	14.82	12.30
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.23	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	0.16	0.44	0.16	0.07	11.52	3.02	0.28	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.05	0.16	0.06	0.10	0.95	0.45	0.38	0.03
d, Delay for Lane Group [s/veh]	19.65	15.00	16.12	15.18	12.65	33.74	15.48	15.09	12.32
Lane Group LOS	B	B	B	B	B	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	4.88	0.34	1.60	0.62	0.68	17.91	0.59	4.12	0.29
50th-Percentile Queue Length [ft/ln]	122.11	8.42	39.88	15.48	17.05	447.75	14.66	103.04	7.25
95th-Percentile Queue Length [veh/ln]	8.51	0.61	2.87	1.11	1.23	24.85	1.06	7.42	0.52
95th-Percentile Queue Length [ft/ln]	212.72	15.15	71.78	27.86	30.69	621.26	26.38	185.48	13.06

Movement, Approach, & Intersection Results

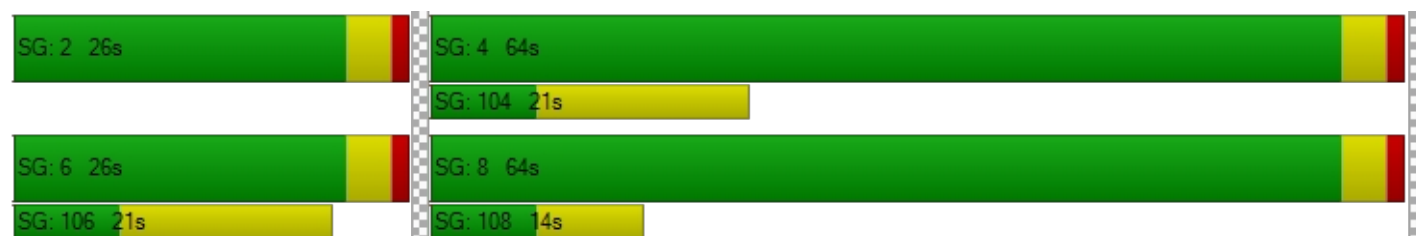
d_M, Delay for Movement [s/veh]	19.65	19.65	19.65	15.00	16.12	15.18	12.65	33.74	33.74	15.48	15.09	12.32
Movement LOS	B	B	B	B	B	B	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	19.65			15.73			32.21			14.95		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	24.29											
Intersection LOS	C											
Intersection V/C	0.708											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			0.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.65			34.65			0.00			34.65		
I_p,int, Pedestrian LOS Score for Intersection	2.061			2.331			0.000			2.478		
Crosswalk LOS	B			B			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	489			489			1334			1334		
d_b, Bicycle Delay [s]	25.67			25.67			4.99			4.99		
I_b,int, Bicycle LOS Score for Intersection	2.093			1.890			3.017			2.228		
Bicycle LOS	B			A			C			B		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



APPENDIX C-II

**EXISTING WITH PROJECT
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: Texas Street at Pioneer Avenue

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

Intersection Setup

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Base Volume Input [veh/h]	224	162	44	165	186	76	15	142	73	24	344	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	224	162	44	165	186	76	15	142	73	24	344	94
Peak Hour Factor	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150	0.7150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	57	15	58	65	27	5	50	26	8	120	33
Total Analysis Volume [veh/h]	313	227	62	231	260	106	21	199	102	34	481	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	25	22	0	25	22	0	0	43	0	0	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	28	14	24	24	36	36	36
g / C, Green / Cycle	0.20	0.31	0.16	0.26	0.26	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.16	0.14	0.14	0.06	0.01	0.17	0.38
s, saturation flow rate [veh/h]	1700	1800	1700	1800	1800	1700	1800	1700
c, Capacity [veh/h]	349	555	270	472	472	95	719	722
d1, Uniform Delay [s]	34.89	25.66	36.91	28.68	26.07	16.44	19.49	26.18
k, delay calibration	0.12	0.50	0.11	0.50	0.50	0.11	0.11	0.37
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.24	3.46	7.73	4.59	1.10	1.15	0.39	12.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.52	0.86	0.55	0.22	0.22	0.42	0.90
d, Delay for Lane Group [s/veh]	44.12	29.12	44.64	33.26	27.17	17.59	19.88	38.68
Lane Group LOS	D	C	D	C	C	B	B	D
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.42	5.49	5.44	5.33	1.90	0.29	4.46	15.15
50th-Percentile Queue Length [ft/ln]	185.49	137.23	135.94	133.25	47.43	7.21	111.61	378.76
95th-Percentile Queue Length [veh/ln]	11.89	9.33	9.26	9.12	3.42	0.52	7.93	21.53
95th-Percentile Queue Length [ft/ln]	297.17	233.30	231.54	227.90	85.38	12.98	198.24	538.34

Movement, Approach, & Intersection Results

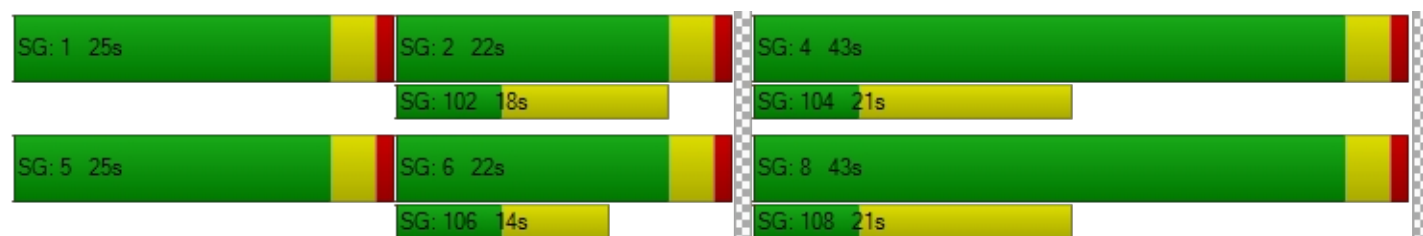
d_M, Delay for Movement [s/veh]	44.12	29.12	29.12	44.64	33.26	27.17	17.59	19.88	19.88	38.68	38.68	38.68
Movement LOS	D	C	C	D	C	C	B	B	B	D	D	D
d_A, Approach Delay [s/veh]	36.92			36.58			19.73			38.68		
Approach LOS	D			D			B			D		
d_I, Intersection Delay [s/veh]	34.80											
Intersection LOS	C											
Intersection V/C	0.818											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.70			34.70			34.70			34.70		
I_p,int, Pedestrian LOS Score for Intersection	2.422			2.398			2.337			2.269		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	400			400			866			866		
d_b, Bicycle Delay [s]	28.82			28.82			14.47			14.47		
I_b,int, Bicycle LOS Score for Intersection	2.553			2.545			2.091			2.626		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Texas Street at San Bernardino Avenue

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

Intersection Setup

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Base Volume Input [veh/h]	62	187	22	54	172	108	83	198	25	91	574	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	187	22	54	172	108	83	198	25	91	574	153
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	54	6	16	50	31	24	57	7	26	165	44
Total Analysis Volume [veh/h]	71	215	25	62	198	124	96	228	29	105	661	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	94	25	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	0	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	46	46	46	46	36	36	36	36	36
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.04	0.11	0.07	0.06	0.14	0.06	0.37	0.10
s, saturation flow rate [veh/h]	1700	1700	1800	1800	1700	1800	1700	1800	1800
c, Capacity [veh/h]	922	735	924	924	120	716	539	716	716
d1, Uniform Delay [s]	13.03	11.05	11.96	11.44	17.29	19.03	17.38	25.77	18.08
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.13	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	0.23	0.53	0.30	11.52	0.30	0.17	6.48	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.08	0.21	0.13	0.80	0.36	0.19	0.92	0.25
d, Delay for Lane Group [s/veh]	14.02	11.28	12.49	11.74	28.81	19.33	17.56	32.25	18.25
Lane Group LOS	B	B	B	B	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.79	0.64	2.20	1.31	1.62	3.71	1.39	13.99	2.41
50th-Percentile Queue Length [ft/ln]	94.69	16.09	55.04	32.85	40.52	92.63	34.67	349.69	60.17
95th-Percentile Queue Length [veh/ln]	6.82	1.16	3.96	2.36	2.92	6.67	2.50	20.12	4.33
95th-Percentile Queue Length [ft/ln]	170.44	28.96	99.07	59.12	72.94	166.74	62.40	503.03	108.31

Movement, Approach, & Intersection Results

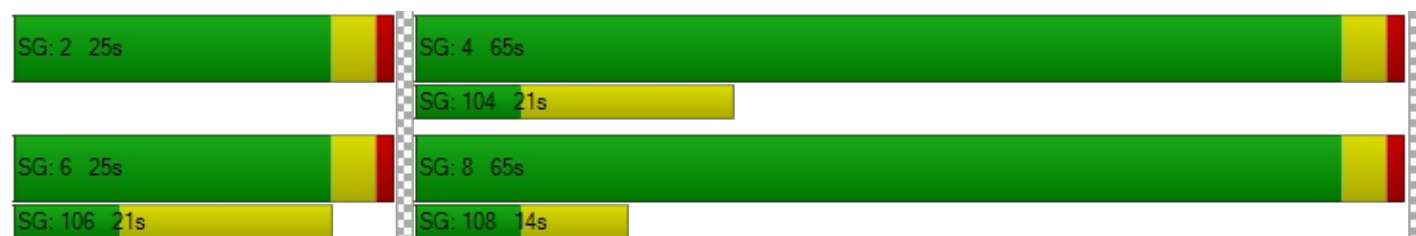
d_M, Delay for Movement [s/veh]	14.02	14.02	14.02	11.28	12.49	11.74	28.81	19.33	19.33	17.56	32.25	18.25
Movement LOS	B	B	B	B	B	B	C	B	B	B	C	B
d_A, Approach Delay [s/veh]	14.02			12.05			21.91			28.00		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.66											
Intersection LOS	C											
Intersection V/C	0.604											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			0.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.65			34.65			0.00			34.65		
I_p,int, Pedestrian LOS Score for Intersection	2.177			2.479			0.000			2.525		
Crosswalk LOS	B			B			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	467			467			1356			1356		
d_b, Bicycle Delay [s]	26.43			26.43			4.66			4.66		
I_b,int, Bicycle LOS Score for Intersection	2.073			2.193			2.142			3.114		
Bicycle LOS	B			B			B			C		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Texas Street at Pioneer Avenue

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.388

Intersection Setup

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Texas St			Texas St			Pioneer Ave			Pioneer Ave		
Base Volume Input [veh/h]	70	53	79	25	42	31	39	308	71	53	119	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	53	79	25	42	31	39	308	71	53	119	27
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	15	22	7	12	9	11	87	20	15	34	8
Total Analysis Volume [veh/h]	79	60	89	28	47	35	44	347	80	60	134	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	39	0	10	39	0	0	41	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	51	3	49	49	24	24	24
g / C, Green / Cycle	0.06	0.57	0.03	0.54	0.54	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.05	0.08	0.02	0.03	0.02	0.03	0.24	0.13
s, saturation flow rate [veh/h]	1700	1800	1700	1800	1800	1700	1800	1700
c, Capacity [veh/h]	101	1024	59	979	979	302	473	498
d1, Uniform Delay [s]	41.76	9.12	42.65	9.61	9.54	25.11	32.06	28.17
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.15	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.09	0.30	5.77	0.09	0.07	0.22	8.54	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.15	0.47	0.05	0.04	0.15	0.90	0.45
d, Delay for Lane Group [s/veh]	53.84	9.42	48.41	9.70	9.61	25.33	40.61	28.81
Lane Group LOS	D	A	D	A	A	C	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.05	1.36	0.70	0.44	0.32	0.72	9.83	4.10
50th-Percentile Queue Length [ft/ln]	51.27	34.11	17.51	10.88	8.05	18.02	245.71	102.51
95th-Percentile Queue Length [veh/ln]	3.69	2.46	1.26	0.78	0.58	1.30	14.97	7.38
95th-Percentile Queue Length [ft/ln]	92.28	61.40	31.51	19.59	14.49	32.44	374.24	184.51

Movement, Approach, & Intersection Results

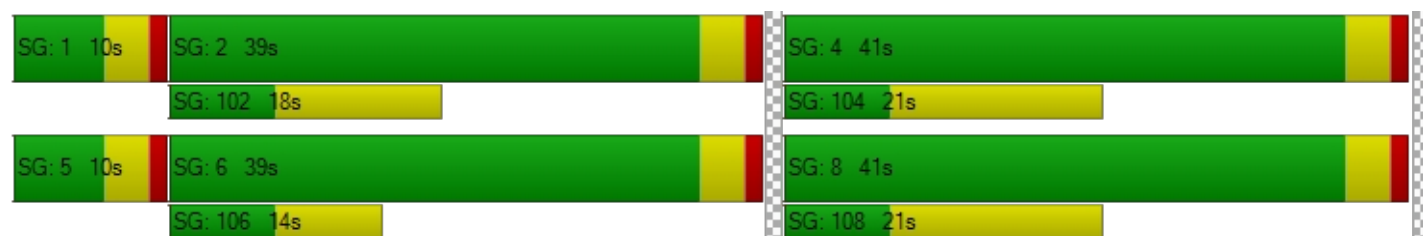
d_M, Delay for Movement [s/veh]	53.84	9.42	9.42	48.41	9.70	9.61	25.33	40.61	40.61	28.81	28.81	28.81
Movement LOS	D	A	A	D	A	A	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	24.81			19.53			39.18			28.81		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	31.67											
Intersection LOS	C											
Intersection V/C	0.388											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.68			34.68			34.68			34.68		
I_p,int, Pedestrian LOS Score for Intersection	2.317			2.253			2.173			2.050		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	778			778			822			822		
d_b, Bicycle Delay [s]	16.82			16.82			15.62			15.62		
I_b,int, Bicycle LOS Score for Intersection	1.936			1.741			2.337			1.929		
Bicycle LOS	A			A			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Texas Street at San Bernardino Avenue

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Texas Street			Texas Street			San Bernardino Ave			San Bernardino Ave		
Base Volume Input [veh/h]	63	144	85	25	112	52	70	663	69	43	294	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	144	85	25	112	52	70	663	69	43	294	27
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	40	24	7	31	15	20	186	19	12	82	8
Total Analysis Volume [veh/h]	71	161	95	28	125	58	78	742	77	48	329	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	6	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	28	0	94	28	0	0	62	0	0	62	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	0	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	39	39	39	39	43	43	43	43	43
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.19	0.02	0.07	0.03	0.05	0.46	0.03	0.18	0.02
s, saturation flow rate [veh/h]	1700	1700	1800	1800	1700	1800	1700	1800	1800
c, Capacity [veh/h]	780	562	774	774	641	866	109	866	866
d1, Uniform Delay [s]	18.08	14.84	15.69	15.09	12.70	22.23	12.47	14.82	12.32
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.25	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.66	0.17	0.45	0.19	0.08	12.18	2.76	0.28	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.05	0.16	0.07	0.12	0.95	0.44	0.38	0.03
d, Delay for Lane Group [s/veh]	19.73	15.01	16.14	15.27	12.78	34.41	15.23	15.10	12.34
Lane Group LOS	B	B	B	B	B	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	4.96	0.35	1.62	0.72	0.84	18.07	0.58	4.12	0.31
50th-Percentile Queue Length [ft/ln]	123.99	8.74	40.57	18.04	20.97	451.84	14.54	103.08	7.78
95th-Percentile Queue Length [veh/ln]	8.61	0.63	2.92	1.30	1.51	25.05	1.05	7.42	0.56
95th-Percentile Queue Length [ft/ln]	215.30	15.74	73.02	32.47	37.75	626.15	26.17	185.55	14.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.73	19.73	19.73	15.01	16.14	15.27	12.78	34.41	34.41	15.23	15.10	12.34
Movement LOS	B	B	B	B	B	B	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	19.73			15.75			32.53			14.91		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	24.44											
Intersection LOS	C											
Intersection V/C	0.711											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			0.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.65			34.65			0.00			34.65		
I_p,int, Pedestrian LOS Score for Intersection	2.064			2.359			0.000			2.480		
Crosswalk LOS	B			B			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	534			534			1290			1290		
d_b, Bicycle Delay [s]	24.18			24.18			5.68			5.68		
I_b,int, Bicycle LOS Score for Intersection	2.099			1.908			3.040			2.231		
Bicycle LOS	B			A			C			B		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

