

APPENDIX I1

TRAFFIC STUDY

TRAFFIC STUDY
Tentative Tract Map No. 20528
Residential Development
City of Redlands

Prepared for:
City of Redlands
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September 26, 2023

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1 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The purpose of the Traffic Study is to document the traffic analysis findings of the proposed development of the Tentative Tract Map No. 20528 Project (Project) in the City of Redlands. Scenarios examined included Existing and Existing with Project. Key analysis measures evaluated included level of service (LOS) and vehicle delay. A separate memorandum documents the VMT Screening for this Project.

1.2 PROJECT DESCRIPTION

The Project proposes the construction of 117 single-family dwelling units. Regionally, the Project site is located within the City of Redlands (City), within the County of San Bernardino (County). Locally, the Project site location is along on the Northwest quadrant of the intersection of Pioneer Avenue and Tennessee Street. The Project will have access via two project driveways. One driveway will provide full access on Pioneer Avenue and the other driveway will provide full access on Domestic Avenue.

In accordance with the Measure U Growth Management Initiative, the analysis scenarios are anticipated as follows:

1. Existing Conditions
2. Existing With Project Conditions

The following study intersections within the City of Redlands and Caltrans jurisdiction were examined as part of this analysis:

1. W San Bernardino Avenue & I-210 Northbound Ramps/Tennessee Street
2. W San Bernardino Avenue & Tennessee Street
3. W Pioneer Avenue & Street A (future intersection)
4. W Pioneer Avenue & Tennessee Street
5. W Pioneer Avenue & Texas Street
6. Domestic Avenue & Texas Street

1.3 ANALYSIS FINDINGS

The operational analysis findings are as follows:

Existing Condition

The analysis results show all City intersections operate at overall acceptable LOS C or better during the AM Peak Hour and PM Peak Hour. The Caltrans intersection operates at overall acceptable LOS D or better during both the AM Peak Hour and PM Peak Hour.

Existing With Project

The analysis results show all City intersections operate at overall acceptable LOS C or better during the AM Peak Hour and PM Peak Hour. The Caltrans intersection operates at overall acceptable LOS D or better during both the AM Peak Hour and PM Peak Hour.

As there are no adverse effects at any of the study intersections with the addition of project-related traffic, no other improvements are needed or proposed.

Vehicle Miles Traveled

A VMT assessment was prepared for the Tentative Tract Map No. 20528 Project under a separate memorandum.

2 INTRODUCTION

The purpose of the Traffic Study is to document the traffic analysis findings of the proposed development of the Tentative Tract Map No. 20528 Project (Project) in the City of Redlands. Scenarios examined included Existing and Existing with Project. Key analysis measures evaluated included level of service (LOS) and vehicle delay. A separate memorandum documents the VMT Screening for this Project.

2.1 ROADWAY IMPROVEMENTS

While the LOS analysis indicates that off-site roadway operational improvements are not required, the proposed Project would construct roadway adjacent network improvements associated with the development operations including:

- Half-width construction along Pioneer Avenue Project frontage.
- Half-width construction along Domestic Avenue Project frontage.
- Construct a one-way-stop-controlled driveway to create a new T-intersection along Pioneer Avenue, west of the intersection of Pioneer Avenue and Tennessee Street. At the exiting driveway, allow right and left turns movements which are stop-controlled.
- Construct a driveway along Domestic Avenue, west of the intersection of Domestic Avenue and Texas Street.

For the purposes of this study, the Pioneer Avenue and Street A (#3) intersection was analyzed without turn lanes into the site (eastbound left turn lane and a westbound right turn lane) which is consistent with the proposed site plan. While this condition is anticipated to operate at acceptable level of service, the inclusion of turn lanes can be considered if determined to be required based on other City standards or concerns.

These improvements were assumed in the Existing With Project scenario traffic operations analysis. As there are no adverse effects at any of the study intersections with the addition of project related traffic, no other improvements are needed or proposed.

2.2 PROJECT DESCRIPTION

The Project proposes the construction of 117 single-family dwelling units. Regionally, the Project site is located within the City of Redlands (City), within the County of San Bernardino (County) as shown in **Exhibit 2-1**. Locally, the Project site location is along on the Northwest quadrant of the intersection of Pioneer Avenue and Tennessee Street, as shown in **Exhibit 2-2**. The Project will have access via two project driveways. One driveway will provide full access on Pioneer Avenue and the other driveway will provide full access on Domestic Avenue.

EXHIBIT 2-1: PROJECT LOCATION



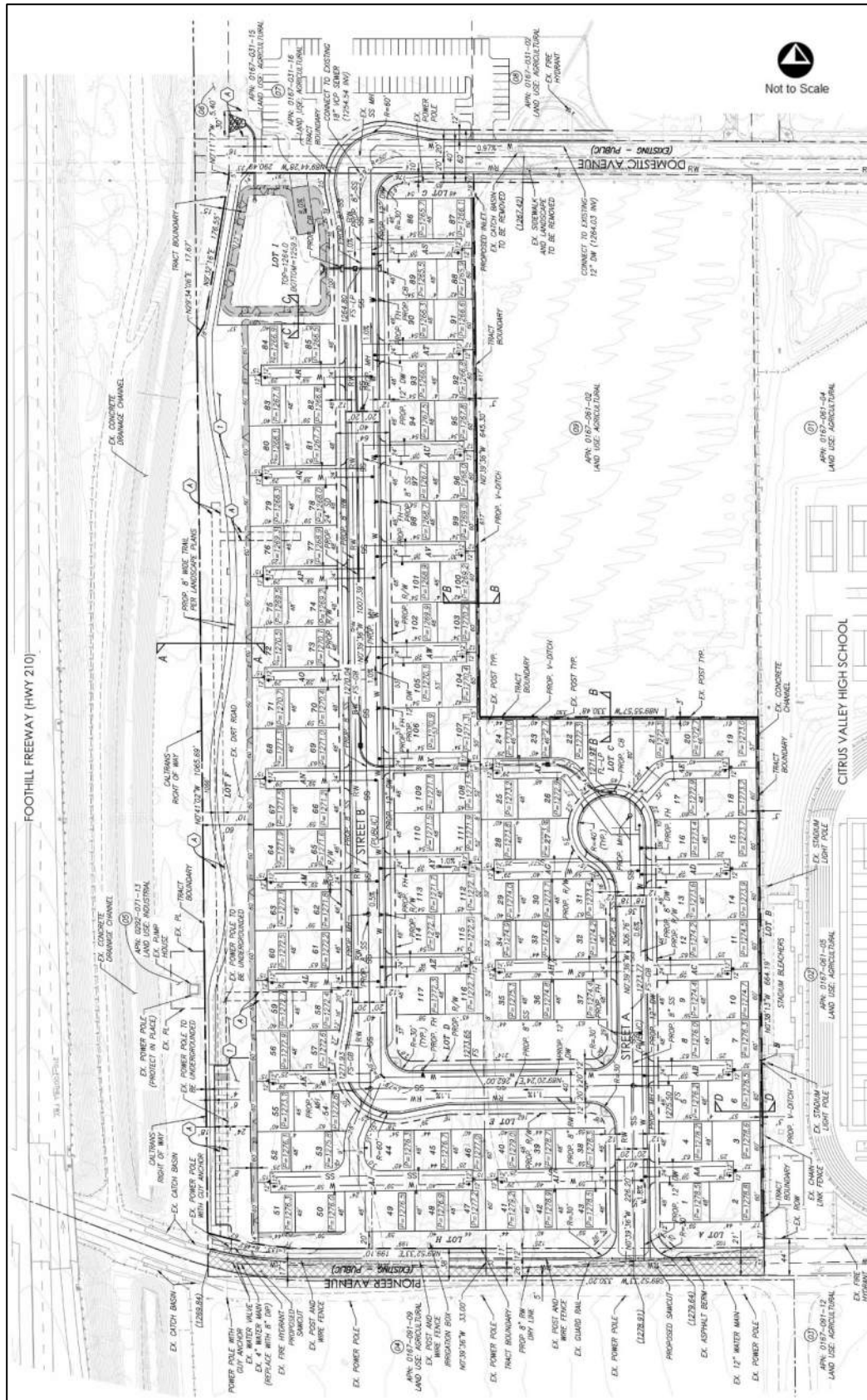
EXHIBIT 2-2: PROJECT SITE LOCATION



2.3 SITE PLAN

The Project condition site plan is shown in **Exhibit 2-3**. A total of 117 single family dwelling units are expected. Project access is provided via two site driveways. Along Pioneer Avenue, a full access driveway is planned. Along Domestic Avenue, a full access driveway is also planned.

EXHIBIT 2-3: PROJECT SITE PLAN



Note:

- 1) Sourced from Huitt-Zollars

2.4 ANALYSIS SCENARIOS

In accordance with the Measure U Growth Management Initiative, the analysis scenarios are defined as follows:

1. Existing Conditions
2. Existing With Project Conditions

Michael Baker International (Michael Baker) coordinated with City staff on the study assumptions such as trip generation, trip distribution, study intersection locations, scenarios, and study methodology. The approved scoping letter can be found in **Appendix A**.

2.5 STUDY INTERSECTIONS

The following study intersections were examined as part of this analysis:

1. W San Bernardino Avenue & I-210 Northbound Ramps/Tennessee Street
2. W San Bernardino Avenue & Tennessee Street
3. W Pioneer Avenue & Street A (future intersection)
4. W Pioneer Avenue & Tennessee Street
5. W Pioneer Avenue & Texas Street
6. Domestic Avenue & Texas Street

These six (6) intersections have been identified in coordination with City staff as potential locations impacted by the proposed Project. It should be noted that Intersection #3 does not exist without the Project and is not analyzed under the Existing condition.

3 ANALYSIS METHODOLOGY

3.1 LEVEL OF SERVICE ANALYSIS METHODOLOGIES

As required by City of Redlands, this traffic study has been prepared in accordance with the *City of Redlands CEQA Assessment VMT Analysis Guidelines* (June 2020), the *City of Redlands Measure U Growth Management Initiative*, and the *County of San Bernardino Transportation Impact Study Guidelines* (July 9, 2019). The key measures of effectiveness for this study are level of service (LOS) and average vehicle delay in seconds per vehicle.

LOS is commonly used as a qualitative description of intersection operation and is based on the type of traffic control and experienced delay at the intersection. The *Highway Capacity Manual* (HCM) 6th Edition published by the Transportation Research Board in 2016 was utilized in this analysis to determine the operating LOS at each of the study intersections. LOS can range from LOS A (free-flow conditions) to LOS F (severely congested conditions). Delay in average seconds per vehicle (sec/veh) passing through the intersection, is the primary measure of effectiveness for signalized, stop-controlled, and roundabout intersections. The corresponding average stopped delay experienced per vehicle by LOS is shown in **Table 3-1**.

TABLE 3-1: HCM INTERSECTION LEVEL OF SERVICE THRESHOLDS

Level of Service	Signalized Intersection Average Delay (seconds/vehicle)	Two-Way Stop-Controlled, All-Way Stop-Controlled, and Roundabout Control Delay (seconds/vehicle)
LOS A	$x \leq 10$	$x \leq 10$
LOS B	$10 < x \leq 20$	$10 < x \leq 15$
LOS C	$20 < x \leq 35$	$15 < x \leq 25$
LOS D	$35 < x \leq 55$	$25 < x \leq 35$
LOS E	$55 < x \leq 80$	$35 < x \leq 50$
LOS F	$80 < x$	$50 < x$

Notes:

- 1) If the volume-to-capacity ratio (v/c) > 1.0, LOS = F.
- 2) Sourced from *Highway Capacity Manual*, 6th Edition.

LOS is reported for the average stopped delay per vehicle for the overall intersection (all movements) for signalized intersections, all-way stop-controlled, and roundabout intersections. For one-way or two-way stop-controlled intersections, LOS is reported for the worst stop-controlled approach. LOS and delay for the intersection analysis was conducted with Synchro (version 11) software and HCM 6th Edition results were reported.

3.2 MEASURE U

Measure U is a local growth management initiative and contains policies for traffic LOS within the City of Redlands. As stated in Measure U, the City of Redlands has adopted LOS "C" or better as acceptable operating conditions for intersections during the peak hour. In accordance with the Measure U, the following guiding policies are used for level of service standards for traffic operations:

- "5.20a – Maintain LOS C or better as the standard at all intersections presently operating at LOS C or better."
- "5.20b – Within the area identified in GP Figure 5-1, including the unincorporated County area identified on GP Figure 5-1 as the "donut hole", maintain LOS C or better; however, accept a reduced LOS on a case-by-case basis upon approval by four-fifths (4/5ths) vote of the total authorized membership of the City Council."
- "5.20c – Where the current LOS 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 the location except as provided in Section 5.20b."

The Project is not located in the unincorporated County area known as the "donut hole" therefore 5.20b does not apply. Only 5.20a and 5.20c were considered for this Project.

3.3 CALTRANS FACILITIES

Within the study area, the intersection of W San Bernardino Avenue & I-210 Northbound Ramps/Tennessee Street (#1) falls under Caltrans jurisdiction.

3.4 PERFORMANCE CRITERIA

The various performance criteria are summarized in **Table 3-2**.

TABLE 3-2: PERFORMANCE CRITERIA

Jurisdiction	Acceptable Performance Criteria	Source
City of Redlands	Preferred: LOS C or better Minimum: Maintain existing LOS (if below LOS C)	City of Redlands Measure U Growth Management Initiative (December 1997)
County of San Bernardino	LOS D or better	San Bernardino County Transportation Impact Study Guidelines (July 2019)
Caltrans	Preferred: LOS C or better Minimum: LOS D or better (Maintain existing LOS if below LOS D)	Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002)

For the purpose of this evaluation, LOS D has been established as the minimum acceptable conditions for Caltrans facilities. For City facilities, the following thresholds would require improvements:

- If the addition of project related traffic causes an intersection's peak hour LOS to worsen from acceptable (LOS C or better) to unacceptable (LOS D, E, or F), the project shall identify improvements to improve operations to LOS C or better; or
- Where the current LOS is below the LOS C standard (LOS D, E, or F) without the project and the addition of project related traffic worsens the pre-project level of service grade, the project shall identify improvements to maintain the pre-project level of service grade.

4 EXISTING CONDITION

4.1 ROADWAY NETWORK

The analysis study area roadway network is described below.

Pioneer Avenue west of Tennessee Street is generally a two-lane undivided roadway in the City of Redlands. East of Tennessee Street, Pioneer is generally a 2-lane undivided roadway with 1 travel lane in the westbound direction and 1 travel lane in the eastbound direction. Regionally, it travels east-west from west of California Street to Judson Street in the east. The City of Redlands General Plan dated December 2017 (Redlands General Plan) identifies the section of Pioneer Avenue along the Project site frontage as a Collector road. To the west of the Project area, Alabama Street is classified as a Major Arterial. The posted speed limit on Pioneer Avenue within the Project vicinity is assumed to be 25 miles per hour (mph) due to the vicinity of a school.

W San Bernardino Ave west of Citrus Plaza Drive is a four-lane undivided roadway in the City of Redlands. East of Tennessee Avenue, W San Bernardino Avenue is a 2-lane undivided roadway. Regionally, it travels east-west from Tippecanoe Avenue in the west to Crafton Avenue in the east. Within the City, the roadway has an interchange with I-210. The Redlands General Plan identifies W San Bernardino Avenue as a Major Arterial. The current posted speed limit on W San Bernardino Avenue is 45 mph.

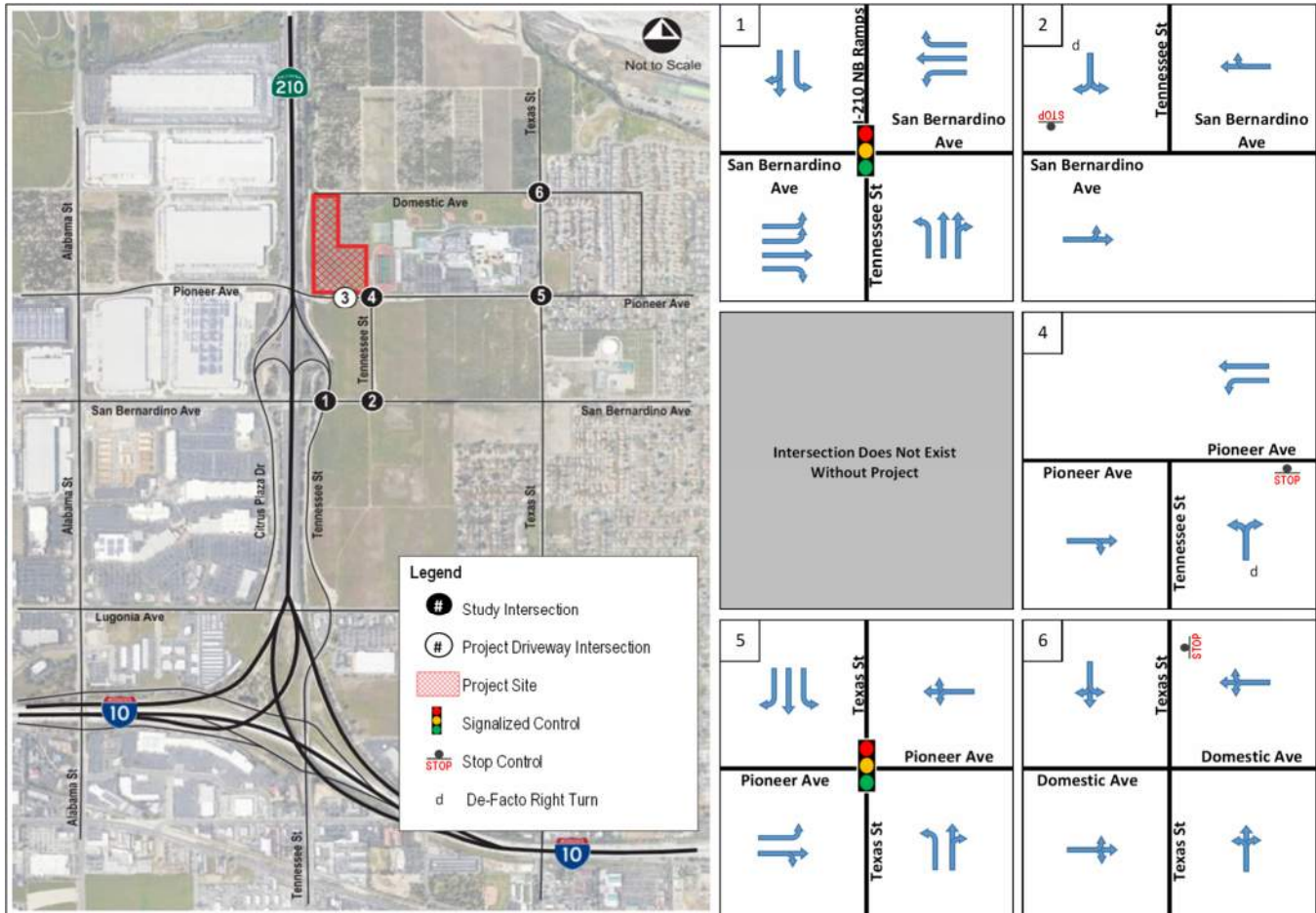
W Domestic Avenue is a two-lane undivided roadway in the City of Redlands. Regionally it travels east-west from Texas Street in the west to Furlow Drive in the east. The Redlands General Plan identifies Tennessee Street as a proposed Collector road. The prima facie speed limit is 25 mph. West of Texas Street, Domestic Avenue is currently unpaved and under construction.

Tennessee Street south of W Pioneer Avenue is a two-lane undivided roadway in the City of Redlands. Regionally it travels north-south from W San Bernardino Avenue in the north to Brookside Avenue in the south. Within the City, the roadway has an interchange with I-10. The Redlands General Plan identifies Tennessee Street as a Minor Arterial.

Texas Street is a two-lane undivided roadway within the Project limits in the City of Redlands. South of W Colton Avenue, it is a four-lane undivided roadway. It travels north-south from near Domestic Avenue in the north to W Redlands Boulevard in the south. The Redlands General Plan identifies Pennsylvania Avenue within the Project limits as a Minor Arterial. The posted speed limit is 40 mph.

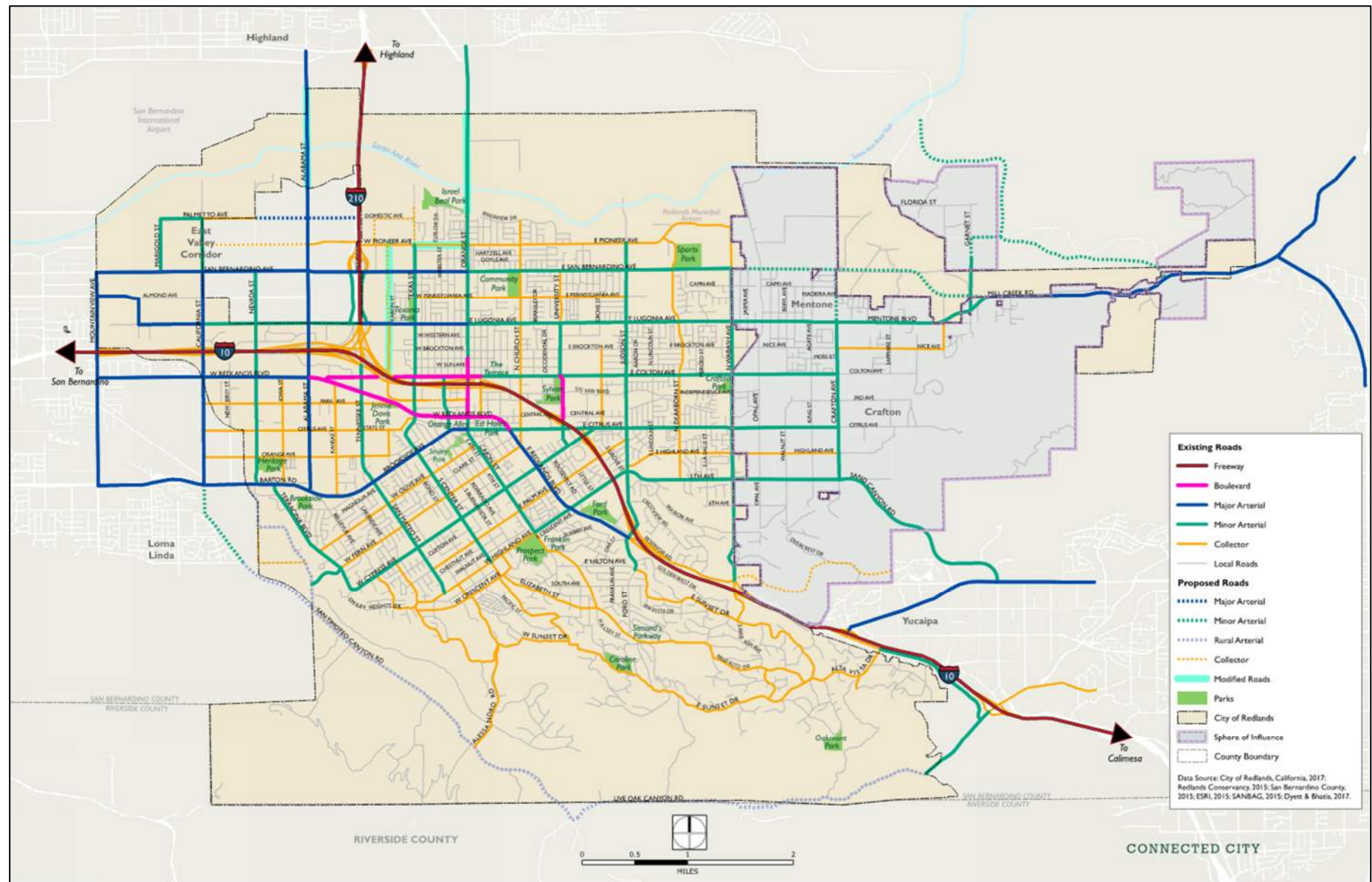
Exhibit 4-1 shows the Existing study intersection lane configuration. **Exhibit 4-2** shows the Redlands General Plan Circulation Element Roadway Classifications.

EXHIBIT 4-1: EXISTING LANE CONFIGURATION

**Note:**

- 1) Domestic Avenue west of Texas Street is currently unpaved. The west leg approach at Intersection #6 is currently uncontrolled.

EXHIBIT 4-2: REDLANDS ROADWAY CLASSIFICATION



Note:

- 1) Sourced from City of Redlands General Plan (December 2017).

4.2 STUDY INTERSECTIONS CHARACTERISTICS

Table 4-1 lists the study intersections examined as part of this analysis. The control type and jurisdiction are also provided.

TABLE 4-1: STUDY INTERSECTIONS

ID	Intersection	Existing Control Type	Jurisdiction
1	W San Bernardino Avenue & I-210 Northbound Ramps/Tennessee Street	SIG	Caltrans
2	W San Bernardino Avenue & Tennessee Street	OWSC	City of Redlands
3	W Pioneer Avenue & Street A	--	City of Redlands
4	W Pioneer Avenue & Tennessee Street	OWSC	City of Redlands
5	W Pioneer Avenue & Texas Street	SIG	City of Redlands
6	Domestic Avenue & Texas Street	TWSC	City of Redlands

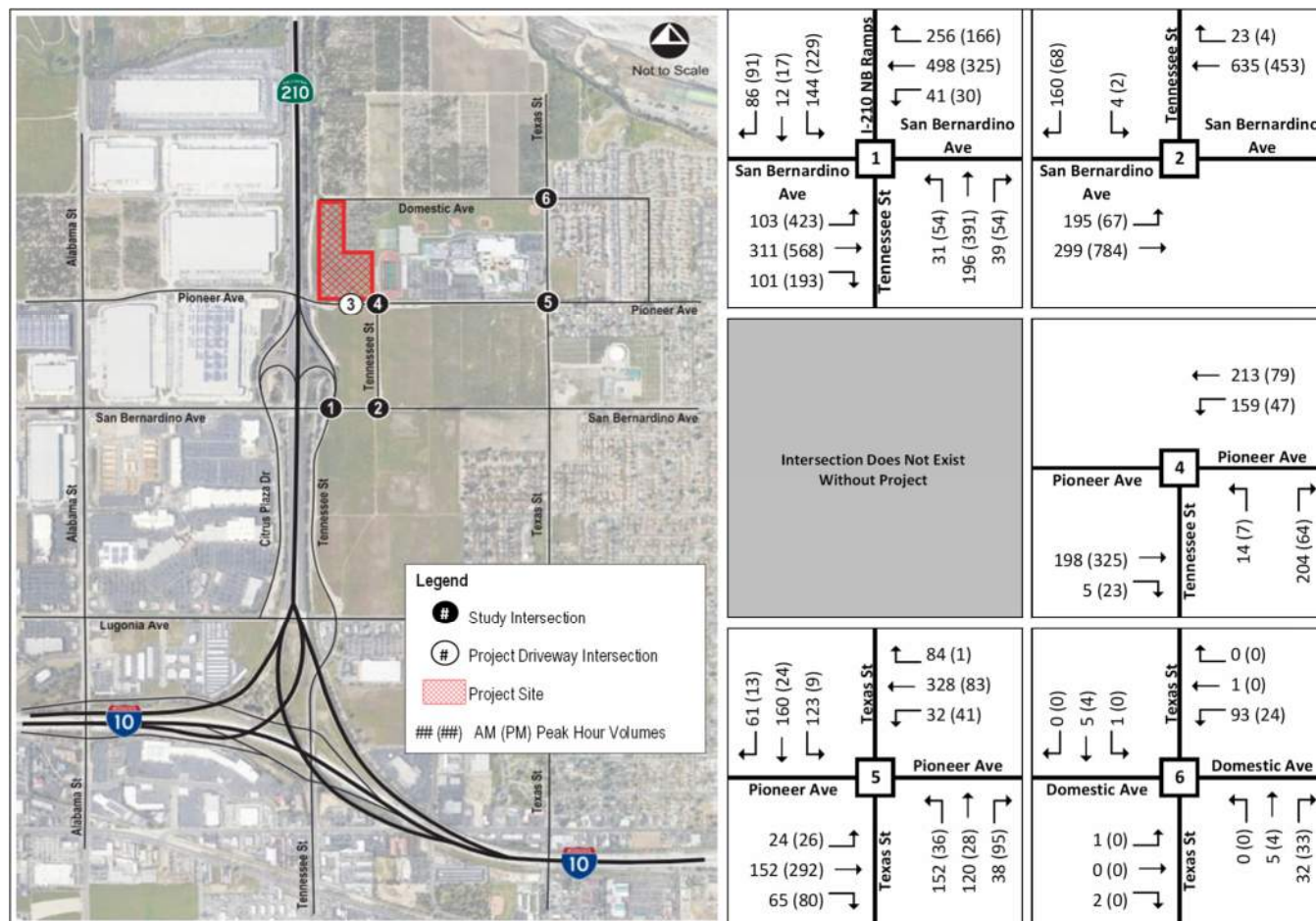
Notes:

- 1) SIG = Signalized; OWSC = One-Way Stop-Controlled.

4.3 EXISTING TRAFFIC VOLUMES

Traffic counts were collected on Wednesday June 7th, 2023 from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. Data collected included pedestrian, bicycle, passenger cars, and heavy vehicle counts. The counts used in this analysis represent the peak hour of each period (AM Peak Hour and PM Peak Hour). **Appendix B** contains detailed volume development information. **Appendix C** contains detailed volume development information. **Exhibit 4-3** shows the Existing Peak Hour traffic volumes.

EXHIBIT 4-3: EXISTING PEAK HOUR VOLUMES



4.4 EXISTING LOS ANALYSIS

Table 4-2 summarizes the Existing Year Peak Hour Synchro intersection analysis results. The analysis results show all City intersections operate at overall acceptable LOS C or better during the AM Peak Hour and the PM Peak Hour. The Caltrans intersection operates at overall acceptable LOS D or better during both the AM Peak Hour and the PM Peak Hour. The Existing Year AM Peak Hour analysis worksheets are contained in **Appendix D** and the Existing Year PM Peak Hour analysis worksheets are contained in **Appendix E**.

TABLE 4-2: EXISTING INTERSECTION ANALYSIS RESULTS

ID	Intersection	Control Type	Jurisdiction	Existing Year			
				AM Peak Hour		PM Peak Hour	
				LOS	Delay	LOS	Delay
1	W San Bernardino Avenue & I-210 Northbound Ramps/Tennessee Street	SIG	Caltrans	C	26.6	D	41.7
2	W San Bernardino Avenue & Tennessee Street	OWSC	Redlands	C	20.1	B	12.7
3	W Pioneer Avenue & Street A	Intersection Does Not Exist Without Project					
4	W Pioneer Avenue & Tennessee Street	OWSC	Redlands	C	15.2	B	11.3
5	W Pioneer Avenue & Texas Street	SIG	Redlands	C	23.3	B	10.8
6	Domestic Avenue & Texas Street	TWSC	Redlands	A	9.7	A	8.8

Notes:

- 1) SIG = Signalized; AWSC = All-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; OWSC = One-Way Stop-Controlled.
- 2) Overall intersection LOS provided for signalized and AWSC intersections. Worst-approach LOS provided for TWSC and OWSC intersections.
- 3) City Intersections – LOS C or better is the preferred acceptable operation at City intersections. Bold text with yellow highlight indicates LOS D, E, or F.
- 4) Caltrans Intersections – LOS D or better is the acceptable operation at Caltrans intersections. No intersections operate at LOS E or F.
- 5) Delay shown in average seconds per vehicle.

5 PROPOSED PROJECT

The Project proposes to construct 117 single-family dwelling unit on the Northwest quadrant of the intersection of Pioneer Avenue and Tennessee Street. The Project is anticipated to be built out by Year 2027.

5.1 PROJECT FORECAST TRIP GENERATION

The Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition) was used to calculate the forecast vehicle trips generated by the proposed Project. **Table 5-1** shows the trip generation equation for the proposed project. **Table 5-2** summarizes the vehicular trips forecast to be generated by the Project. As shown, the Project is anticipated to generate approximately 1,166 daily trips with 86 AM Peak Hour trips and 115 PM Peak Hour trips.

TABLE 5-1: TRIP GENERATION EQUATION

Land Use	ITE Code	Daily Trips Equation	AM Peak Hour			PM Peak Hour		
			Equation	In	/ Out	Equation	In	/ Out
Single-Family Detached	210	$\ln(T) = 0.92 \ln(X) + 2.68$	$\ln(T) = 0.91 \ln(X) + 0.12$	25%	/ 75%	$\ln(T) = 0.94 \ln(X) + 0.27$	63%	/ 37%

Note:

- 1) Sourced from ITE *Trip Generation Manual*, 11th Edition.

TABLE 5-2: ESTIMATED SITE TRIPS

Land Use	ITE Code	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
				Volume	In	Out	Volume	In	Out
Single-Family Detached	210	117 DU	1,166	86	21	65	115	73	42
Total		117 DU	1,166	86	21	65	115	73	42

Notes:

- 1) DU = Dwelling Units.

5.2 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The regional distribution trends for the estimated project trips are as follows:

- 10% to the North via I-210
- 30% to the West via I-10
- 10% to the East Via I-10
- 15% toward East Redlands
- 10% toward South Redlands
- 30% toward West Redlands

Exhibits 5-1 show the project trip distribution by turning movement at the proposed study intersections. The project trip assignment by turning movement for the Project are shown in **Exhibits 5-2**. The With Project lane configurations are shown in **Exhibit 5-3**.

EXHIBIT 5-1: INTERSECTION PROJECT TRIP DISTRIBUTION



EXHIBIT 5-2: INTERSECTION PROJECT TRIPS

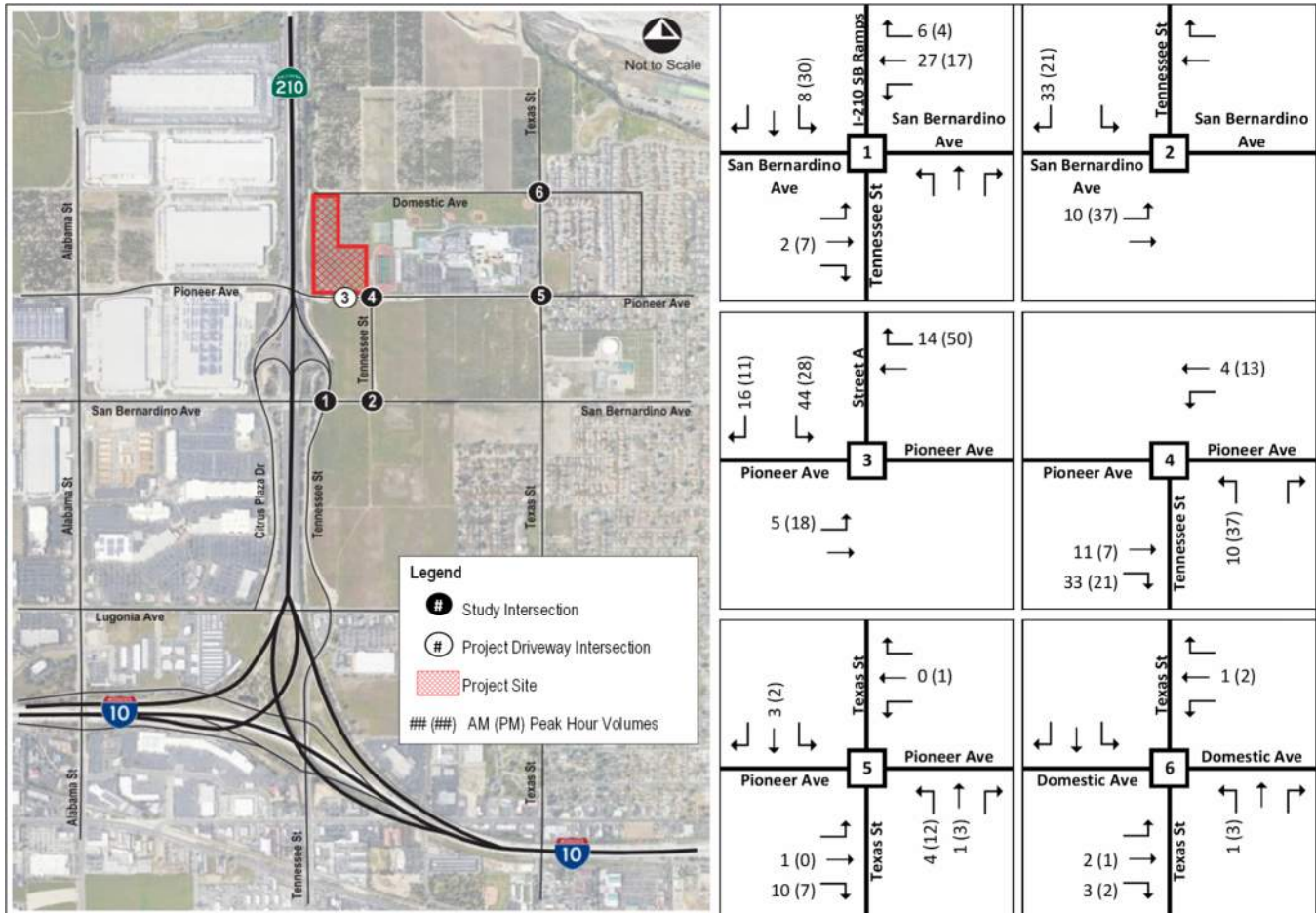
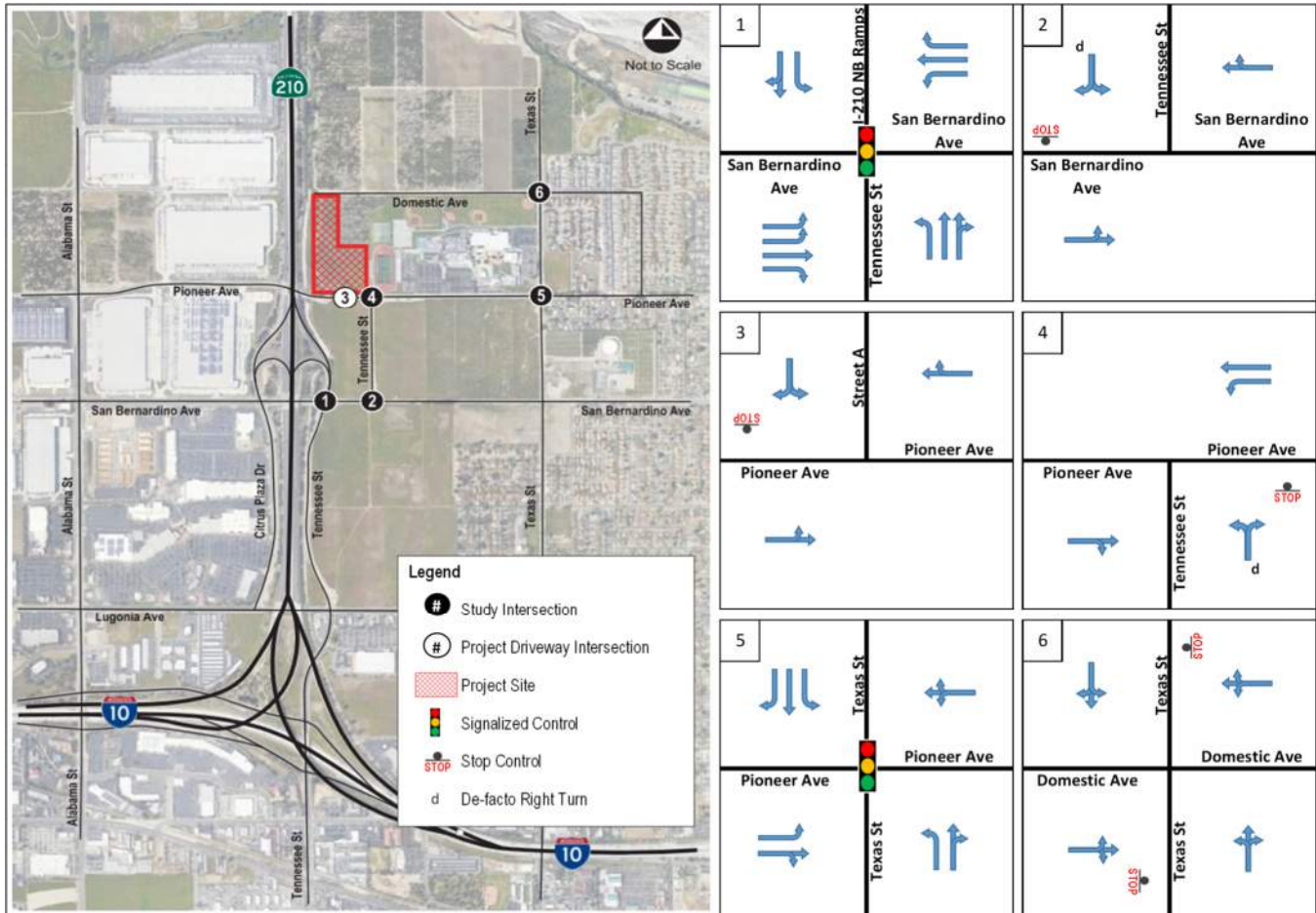


EXHIBIT 5-3: PROPOSED LANE CONFIGURATION WITH PROJECT



6 EXISTING WITH PROJECT

6.1 EXISTING WITH PROJECT TRAFFIC VOLUMES

The Existing with Project traffic volumes were developed by adding the forecast Project trips to the Existing traffic volumes. **Exhibit 6-1** shows the Existing with Peak Hour traffic volumes. Under the With Project scenario, both the intersection of Pioneer Avenue and Street A (#3) and Domestic Avenue west of Texas Street are expected to be constructed, providing access to the site. **Appendix C** contains detailed volume development information.

6.2 EXISTING YEAR WITH PROJECT LOS ANALYSIS

Table 6-1 summarizes the Existing Year With Project Peak Hour Synchro intersection analysis results. The analysis results show all City intersections operate at overall acceptable LOS C or better during the AM Peak Hour and PM Peak Hour. The Caltrans intersection operates at overall acceptable LOS D or better during both the AM and PM peak hours. The Existing Year With Project AM Peak Hour analysis worksheets are contained in **Appendix F** and the Existing Year With Project PM Peak Hour analysis worksheets are contained in **Appendix G**.

EXHIBIT 6-1: EXISTING WITH PROJECT PEAK HOUR VOLUMES

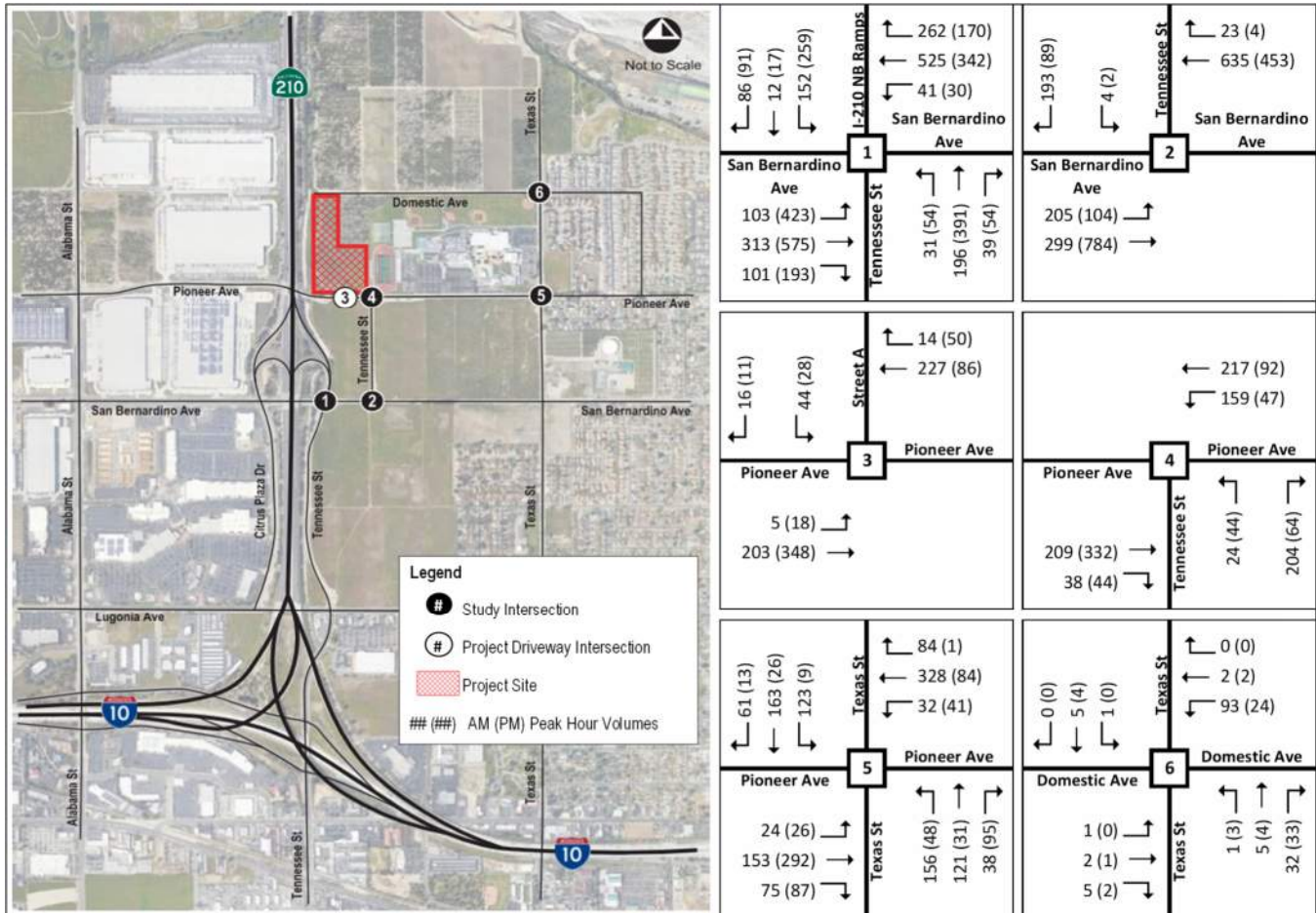


TABLE 6-1: EXISTING YEAR WITH PROJECT INTERSECTION ANALYSIS RESULTS

ID	Intersection	Control Type	Jurisdiction	Existing Year				Existing Year With Project				Adverse Effect?	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay		
1	W San Bernardino Avenue & I-210 Northbound Ramps/Tennessee Street	SIG	Caltrans	C	26.6	D	41.7	C	27.4	D	45.5	No	No
2	W San Bernardino Avenue & Tennessee Street	OWSC	Redlands	C	20.1	B	12.7	C	22.5	B	13.0	No	No
3	W Pioneer Avenue & Street A	OWSC	Redlands	Intersection Does Not Exist Without Project				B	12.2	B	12.1	No	No
4	W Pioneer Avenue & Tennessee Street	OWSC	Redlands	C	15.2	B	11.3	C	17.4	B	12.6	No	No
5	W Pioneer Avenue & Texas Street	SIG	Redlands	C	23.3	B	10.8	C	23.8	B	11.1	No	No
6	Domestic Avenue & Texas Street	TWSC	Redlands	A	9.7	A	8.8	A	9.8	A	8.9	No	No

Notes:

- 1) SIG = Signalized; AWSC = All-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; OWSC = One-Way Stop-Controlled.
- 2) Overall intersection LOS provided for signalized and AWSC intersections. Worst-approach LOS provided for TWSC and OWSC intersections.
- 3) City Intersections – LOS C or better is the preferred acceptable operation at City intersections. Bold text with yellow highlight indicates LOS D, E, or F.
- 4) Caltrans Intersections – LOS D or better is the acceptable operation at Caltrans intersections. No intersections operate at LOS E or F.
- 5) Adverse effect determined if With Project scenario degrades operations below the Existing Conditions without Project level of service grade.
- 6) Delay shown in average seconds per vehicle.

7 PROJECT RELATED IMPROVEMENTS

While the LOS analysis indicates that off-site roadway operational improvements are not required, the proposed Project would construct roadway network improvements associated with the development operations including:

- Half-width construction along Pioneer Avenue Project frontage.
- Half-width construction along Domestic Avenue Project frontage.
- Construct a one-way-stop-controlled driveway to create a new T-intersection along Pioneer Avenue, west of the intersection of Pioneer Avenue and Tennessee Street (#4). At exiting driveway, allow right and left turns movements which are stop-controlled.
- Construct a driveway along Domestic Avenue, west of the intersection of Domestic Avenue and Texas Street (#6).

The Project would widen Pioneer Avenue along the Project frontage to a total width of approximately 44 feet from centerline to right-of-way. On the north side of the street, this width would provide a 5-foot sidewalk and approximate 6-foot landscape strip. On Domestic Avenue, along the Project frontage, a total width of approximately 30 feet from centerline to right-of-way will be provided. On the south side of the street, this width would provide a 6-foot sidewalk and 4-foot landscape strip. North of the Project frontage, on Domestic Avenue, a surface parking lot will be provided for guests. Domestic Avenue will be constructed, from the Project limits to the intersection of Domestic Avenue and Texas Street (#6), by a development to the north of the Project site.

For the purposes of this study, the Pioneer Avenue and Street A (#3) intersection was analyzed without turn lanes into the site (eastbound left turn lane and a westbound right turn lane) which is consistent with the proposed site plan. While this condition is anticipated to operate at acceptable level of service, the inclusion of turn lanes can be considered if determined to be required based on other City standards or concerns.

These improvements were assumed in the Existing With Project scenario traffic operations analysis. As shown in **Table 6-1**, there are no projected adverse effects at any of the study intersections with the addition of project-related traffic. Therefore, no other improvements are needed or proposed.

8 VMT ASSESSMENT

To satisfy California Environmental Quality Act (CEQA), a VMT assessment was prepared for the Tentative Tract Map No. 20528 Project under a separate memorandum. The VMT memorandum includes the project screening assumptions and methodologies.

9 FINDINGS AND RECOMMENDATIONS

Table 9-1 summarizes the intersection analysis results for all scenarios. The key findings are summarized below:

Existing Condition

The analysis results show all City intersections operate at overall acceptable LOS C or better during the AM Peak Hour and PM Peak Hour. The Caltrans intersection operates at overall acceptable LOS D or better during both the AM Peak Hour and PM Peak Hour.

Existing With Project

The analysis results show all City intersections operate at overall acceptable LOS C or better during the AM Peak Hour and PM Peak Hour. The Caltrans intersection operates at overall acceptable LOS D or better during both the AM Peak Hour and PM Peak Hour.

As there are no adverse effects at any of the study intersections with the addition of project-related traffic, no other improvements are needed or proposed.

Other Considerations

For the purposes of this study, the Pioneer Avenue and Street A (#3) intersection was analyzed without turn lanes into the site (eastbound left turn lane and a westbound right turn lane) which is consistent with the proposed site plan. While this condition is anticipated to operate at acceptable level of service, the inclusion of turn lanes can be considered if determined to be required based on other City standards or concerns.

TABLE 9-1: INTERSECTION LOS SUMMARY TABLE

ID	Intersection	Control Type	Jurisdiction	Existing Year				Existing Year With Project				Adverse Effect?	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay		
1	W San Bernardino Avenue & I-210 Northbound Ramps/Tennessee Street	SIG	Caltrans	C	26.6	D	41.7	C	27.4	D	45.5	No	No
2	W San Bernardino Avenue & Tennessee Street	OWSC	Redlands	C	20.1	B	12.7	C	22.5	B	13.0	No	No
3	W Pioneer Avenue & Street A	OWSC	Redlands	Intersection Does Not Exist Without Project				B	12.2	B	12.1	No	No
4	W Pioneer Avenue & Tennessee Street	OWSC	Redlands	C	15.2	B	11.3	C	17.4	B	12.6	No	No
5	W Pioneer Avenue & Texas Street	SIG	Redlands	C	23.3	B	10.8	C	23.8	B	11.1	No	No
6	Domestic Avenue & Texas Street	TWSC	Redlands	A	9.7	A	8.8	A	9.8	A	8.9	No	No

Notes:

- 1) SIG = Signalized; AWSC = All-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; OWSC = One-Way Stop-Controlled.
- 2) Overall intersection LOS provided for signalized and AWSC intersections. Worst-approach LOS provided for TWSC and OWSC intersections.
- 3) City Intersections – LOS C or better is the preferred acceptable operation at City intersections. Bold text with yellow highlight indicates LOS D, E, or F.
- 4) Caltrans Intersections – LOS D or better is the acceptable operation at Caltrans intersections. No intersections operate at LOS E or F.
- 5) Adverse effect determined if With Project scenario degrades operations below the Existing Conditions without Project level of service grade.
- 6) Delay shown in average seconds per vehicle

Appendix A:

Scoping Memorandum



May 16, 2023

City of Redlands
35 Cajon Street, Suite 15A
Redlands, CA 92373

Attn: Donald Young

Subject: Redlands TTM No. 20528 - Traffic Impact Study Scope of Work

Michael Baker International (Michael Baker) is preparing a Transportation Impact Study (TIS) for the TTM No. 20528 development project located in the northwest quadrant of the intersection of West Pioneer Avenue and Tennessee Street in the City of Redlands. The TIS will analyze project-related traffic associated with the construction of 117 single family detached dwelling units including an analysis of vehicle miles travelled (VMT) and level of service (LOS). The project is anticipated to generate approximately 1,166 daily trips with 86 AM peak hour trips and 115 PM peak hour trips.

The TIS will be prepared consistent with the City of Redlands *CEQA Assessment VMT Analysis Guidelines*, the County of San Bernardino *Transportation Impact Study Guidelines*, and the provisions of the City's Growth Management Initiative, Measure U. The TIS will consist of two documents, a VMT Screening Memorandum and a Traffic Study. The VMT Screening assessment will be conducted in support of the transportation component of the California Environmental Quality Act (CEQA) process. It is anticipated the project will screen out of a detailed VMT analysis under the Project Type criteria. The Traffic Study will document the LOS analysis, to be conducted in compliance with the City's Measure U.

The following scope of work provides additional information for the proposed project and outlines the proposed approach that Michael Baker plans to take in the preparation of the traffic study. Please review this scoping agreement and let us know if you would like any adjustments to be made to the proposed analysis approach or the assumptions.

Sincerely,

A handwritten signature in black ink, appearing to read "Carla R Dietrich".

Carla Dietrich, P.E. (PA), PTOE
Transportation Planner

1. Project Information

Project Location:	West Pioneer Avenue / Tennessee Street, Redlands, CA
Project Description:	117 Single Family Detached Residential units
Project Opening Year:	2027
Location:	North-west quadrant of West Pioneer Avenue / Tennessee Street (See Exhibit 1)
Engineer	
Company:	Michael Baker International
Name:	Carla Dietrich
Address:	3536 Conours
City, State, Zip Code:	Ontario, CA 91764
Phone #:	(909) 974-4908
Email:	cdietrich@mbakerintl.com

2. Trip Generation

Trip Credit:

No trip generation credits are being proposed for this project.

Trip Credit Type	Taken?	Explanation
Existing Active Land Use	No	Vacant Land
Previous Land Use	No	Undeveloped
Internal Trip Reduction	No	Not Applicable
Pass-by Trip Reduction	No	Not Applicable

Trip Generation:

See **Table 1** for the trip generation equations and **Table 2** for the project trip summary. The trip generation rates are taken from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. The proposed project will construct 117 single family detached dwelling units. As shown, the project is anticipated to generate approximately 1,166 daily trips with 86 AM peak hour trips and 115 PM peak hour trips.

Table 1 – Trip Generation Rates

Land Use	ITE Code	Daily Trips Equation	AM Peak Hour			PM Peak Hour		
			Equation	In	Out	Equation	In	Out
Single-Family Detached	210	$\text{Ln}(T) = 0.92 \text{Ln}(X) + 2.68$	$\text{Ln}(T) = 0.91 \text{Ln}(X) + 0.12$	25%	75%	$\text{Ln}(T) = 0.94 \text{Ln}(X) + 0.27$	63%	37%

Source: ITE Trip Generation Manual, 11th Edition

Table 2 – Trip Generation

Land Use	ITE Code	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
				Volume	In	Out	Volume	In	Out
Single-Family Detached	210	117 DU	1,166	86	21	65	115	73	42
Total		117 DU	1,166	86	21	65	115	73	42

Notes: 1) DU = Dwelling Unit

3. Analysis Scenarios

In accordance with the Measure U Growth Management Initiative, the traffic operations analysis scenarios are anticipated as follows:

1. Existing Conditions
2. Existing With Project Conditions

4. Traffic Distribution

Exhibit 1 shows the proposed project site plan. The regional distribution trends are as follows:

- 10% to the North via I-210
- 30% to the West via I-10
- 10% to the East Via I-10
- 15% towards East Redlands
- 10% towards South Redlands
- 25% towards West Redlands

As shown in the site plan, the project has two access driveways, one along West Pioneer Avenue and one along West Domestic Avenue. However, the West Domestic Avenue access is via an uncontrolled/non-intersection location; therefore, one site access driveway intersection is being proposed. **Exhibit 2** shows the roadway segment trip distributions for the project. **Exhibit 3** shows the trip distribution by turning movement at the proposed study intersections. The trip assignment by turning movement is shown in **Exhibits 4**.

5. Study Area

The study will include the following intersections:

1. W San Bernardino Avenue & I-210 Northbound Ramps/Tennessee Street
2. W San Bernardino Avenue & Tennessee Street
3. W Pioneer Avenue & Site Driveway
4. W Pioneer Avenue & Tennessee Street
5. W Pioneer Avenue & Texas Street
6. Domestic Avenue & Texas Street

Table 3 lists the entering trips at each study intersection by peak hour. More than 50 project trips are not anticipated to enter intersections beyond those included in the study area. Two of the six locations are anticipated to experience less than 50 project trips; however, they were included as potential study intersections as they may be areas of concern. Those intersections are W Pioneer Avenue & Texas Street (#5) and Domestic Avenue & Texas Street (#6). Input from City staff confirmed that these locations are to be included in the analysis.

Table 3 – Anticipated Project Trips Entering Intersection

	Intersection	Existing Traffic Control	Project Trips Entering Intersection	
			AM Peak Hour	PM Peak Hour
1	W San Bernardino Avenue & I-210 Northbound	Signal	43	58
2	W San Bernardino Avenue & Tennessee Street	One-Way Stop	43	58
3	W Pioneer Avenue & Site Driveway	--	79	107
4	W Pioneer Avenue & Tennessee Street	One-Way Stop	58	78
5	W Pioneer Avenue & Texas Street	All-Way Stop	19	25
6	Domestic Avenue & Texas Street	One-Way Stop	7	8

Note: Intersections #5 and #6 are included in the study as areas of concern.

Note (Post-Scoping Agreement Review): Intersection #5 Existing Traffic Control is currently Signalized, not an All-Way Stop. The report and analysis have been prepared with this discrepancy addressed.

6. Study Guidelines & Methodologies

- The following guidelines will be utilized:
 - City of Redlands CEQA Assessment VMT Analysis Guidelines (June 2020)
 - City of Redlands Measure U Growth Management Initiative
 - San Bernardino County Transportation Impact Study Guidelines (July 2019)
- The Highway Capacity Manual (6th Edition) and Synchro Software (Version 11) will be used

Measure U is a local growth management initiative and contains several guiding policies for traffic Levels of Service within the City of Redlands. The TIA will include detailed discussion regarding Measure U and will adhere to its guiding policies.

7. Traffic Counts

New traffic counts will be obtained at all the study intersections and will adhere to the following guidelines:

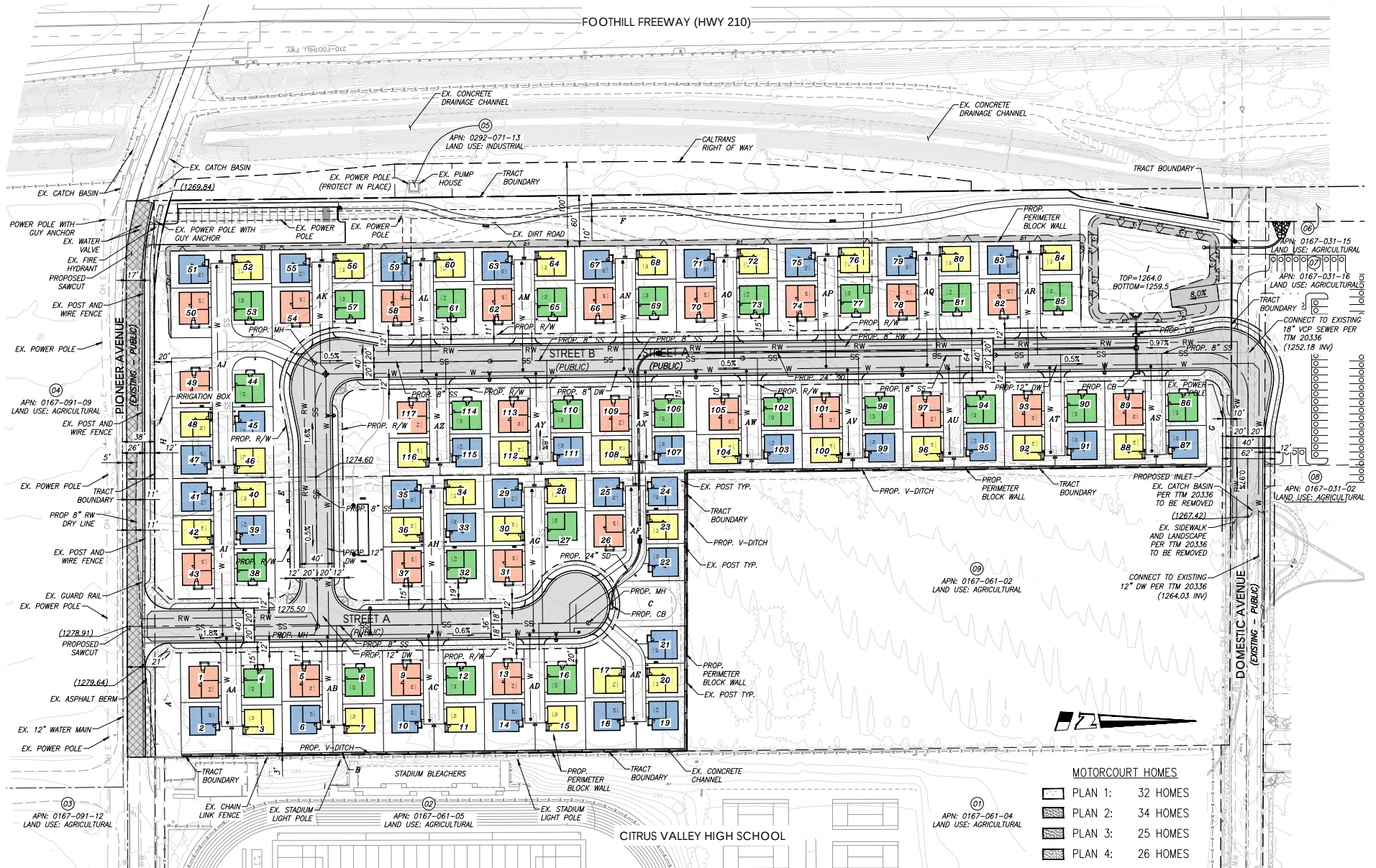
- Must be taken on a Tuesday, Wednesday, or Thursday
- Must exclude holidays
- Must be taken when local schools are in session
- Must be taken on days of good weather, and avoid atypical conditions (e.g. road construction, detours, or major traffic incidents)
- Count time periods
 - 7:00 AM – 9:00 AM
 - 4:00 PM – 6:00 PM

8. Vehicle Miles Travelled (VMT) Analysis

A VMT screening memorandum will be prepared to determine if a detailed project specific VMT analysis is required. The VMT screening memorandum will be based on the *City of Redlands CEQA Assessment VMT Analysis Guidelines* (June 2020) (*City Guidelines*). If certain screening thresholds are met, projects are presumed to result in a less-than-significant transportation impact under CEQA and do not require a detailed quantitative VMT assessment.

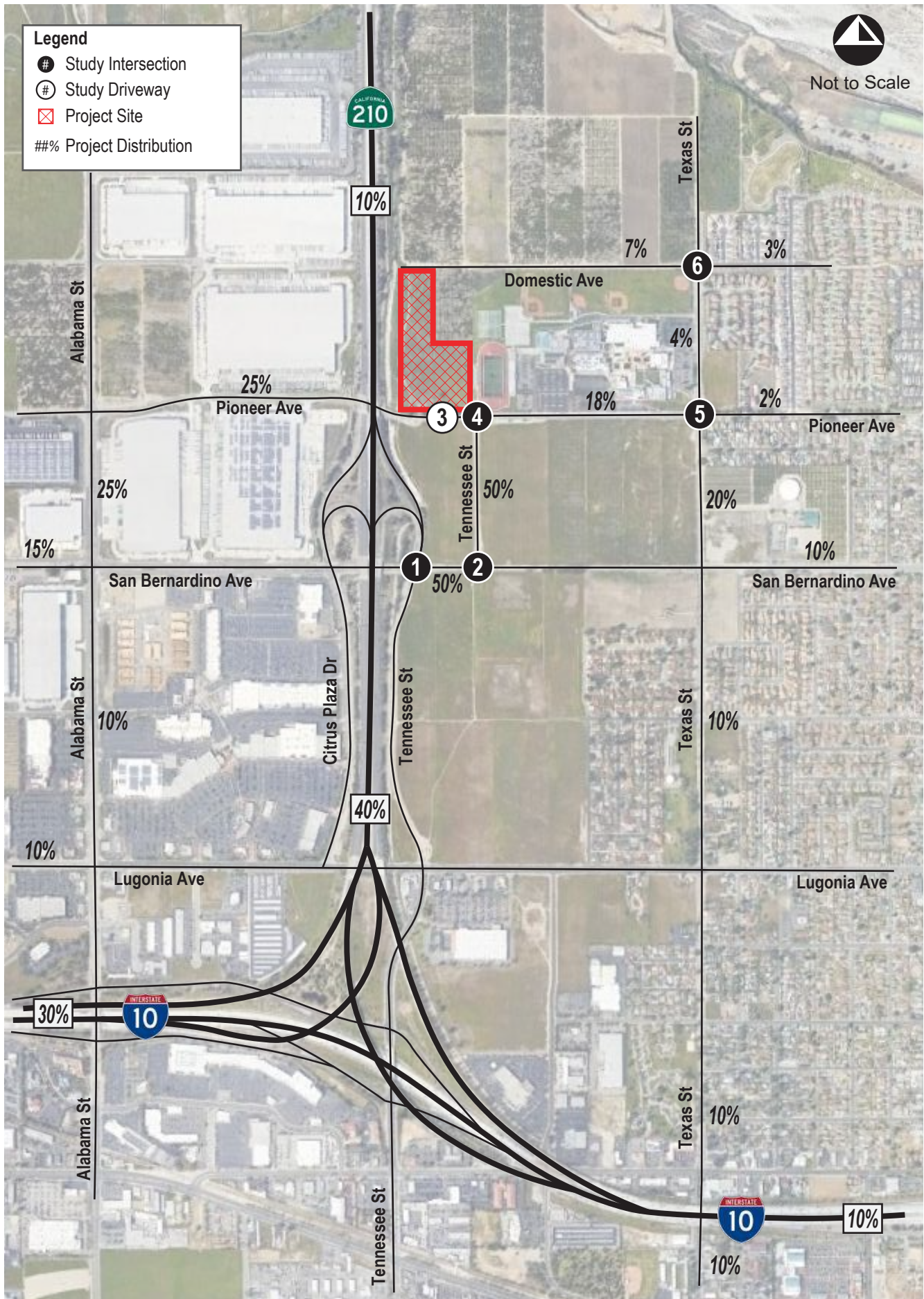
Based on an initial review, the project (with 117 dwelling units) is expected to meet the VMT screening criteria for Project Type, where a project size of 167 dwelling units or fewer can be presumed to have a less than significant impact on VMT. Therefore, it is expected that a detailed VMT analysis with VMT calculation and development of mitigation measures will be not required. A VMT screening analysis technical memorandum will document the full screening evaluation.

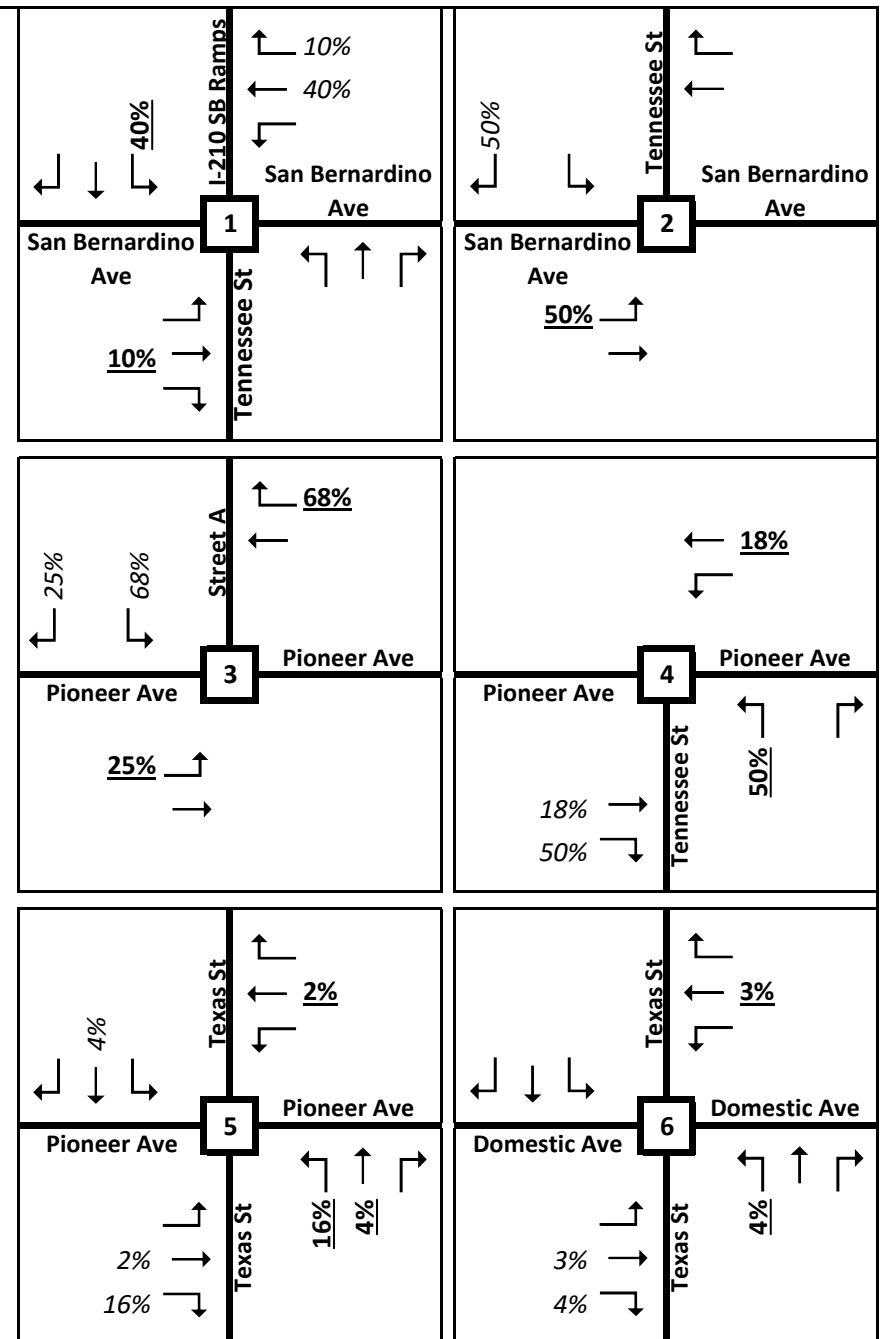
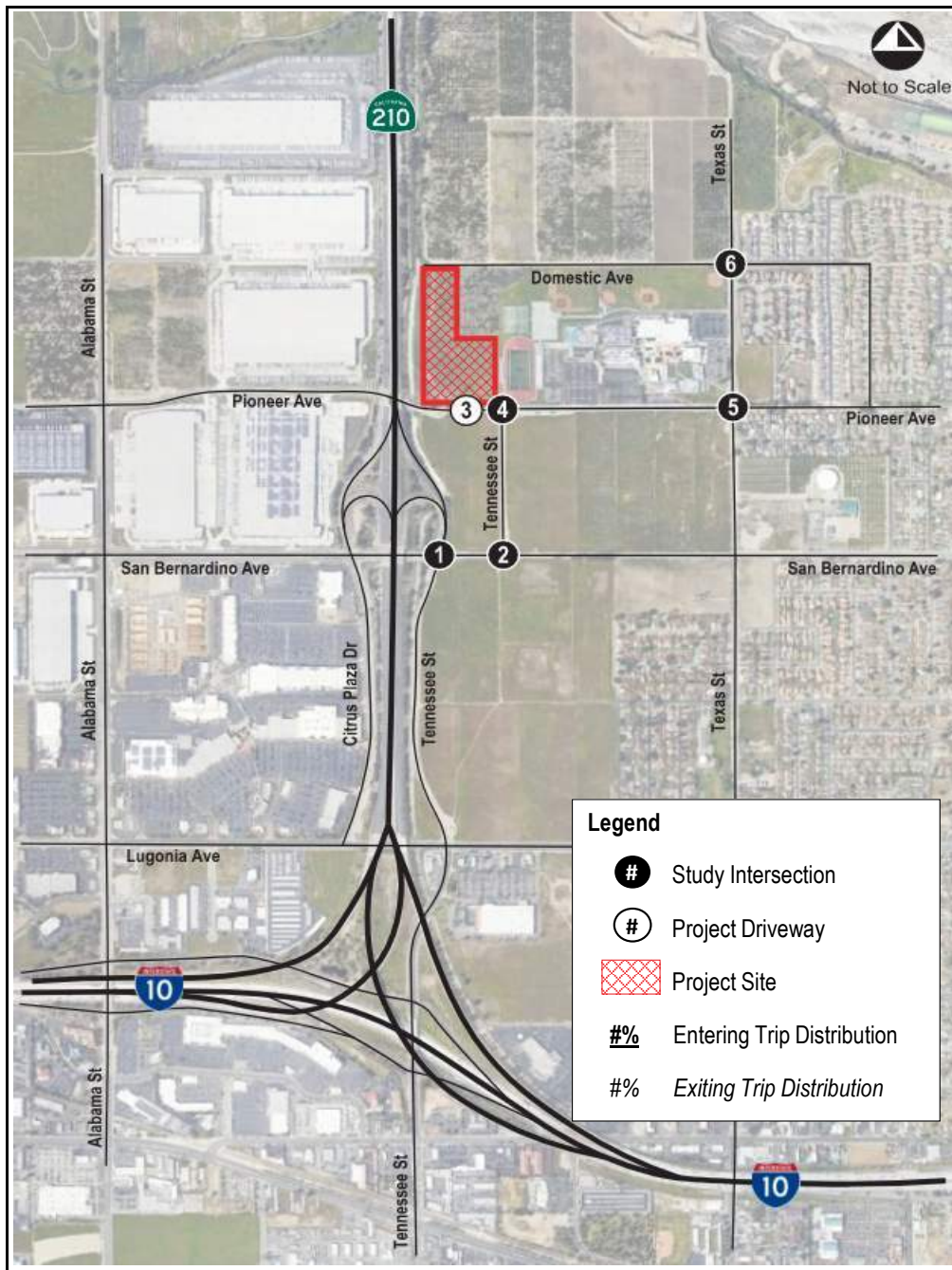
FOOTHILL FREEWAY (HWY 210)



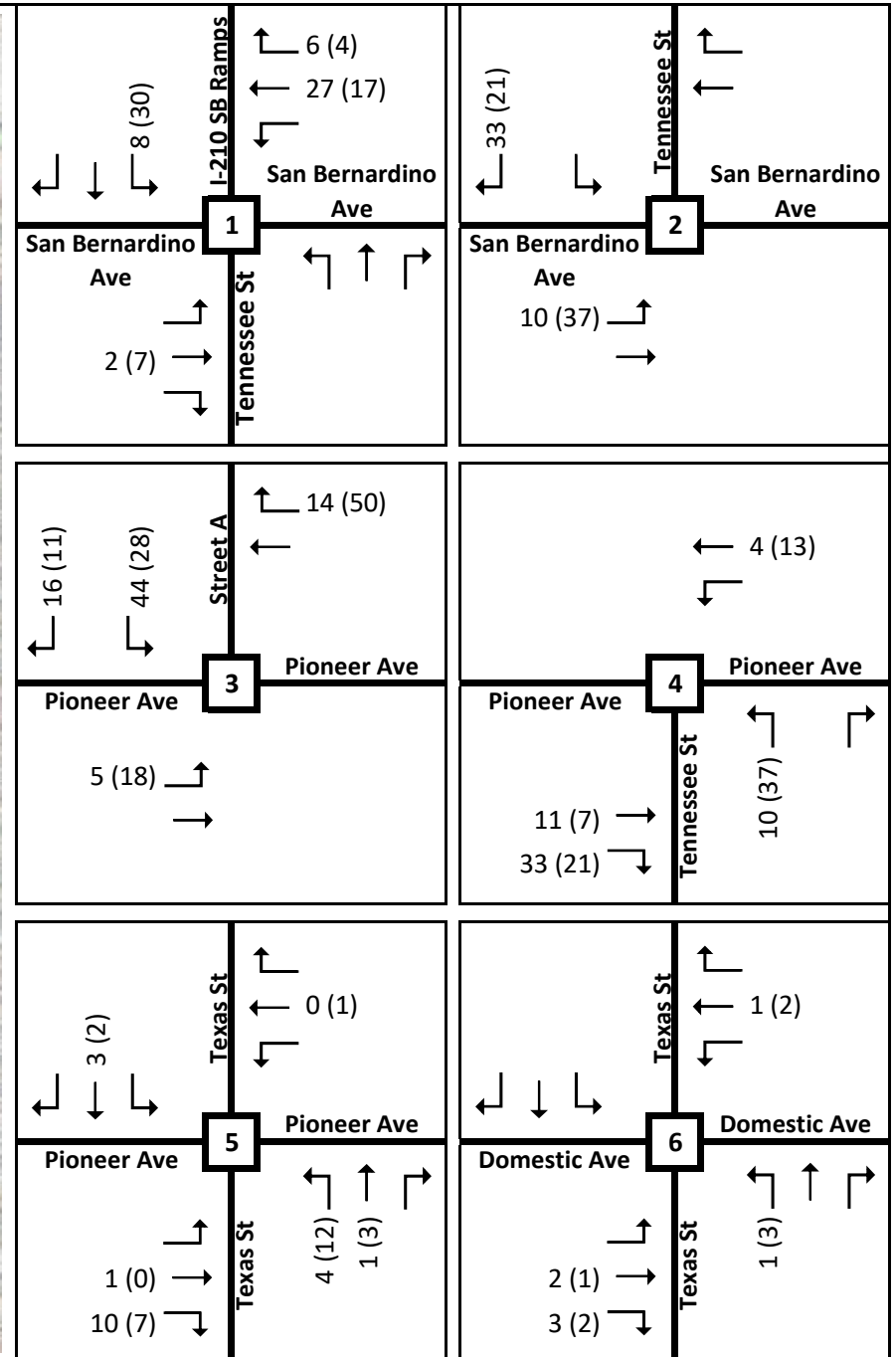
MOTORCOURT HOMES

	PLAN 1:	32 HOMES
	PLAN 2:	34 HOMES
	PLAN 3:	25 HOMES
	PLAN 4:	26 HOMES





Note: 93% of site traffic is anticipated to utilize the site driveway (intersection #3) while the remaining 7% is anticipated to use the uncontrolled access to/from Domestic Avenue.



Appendix B: Traffic Counts

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

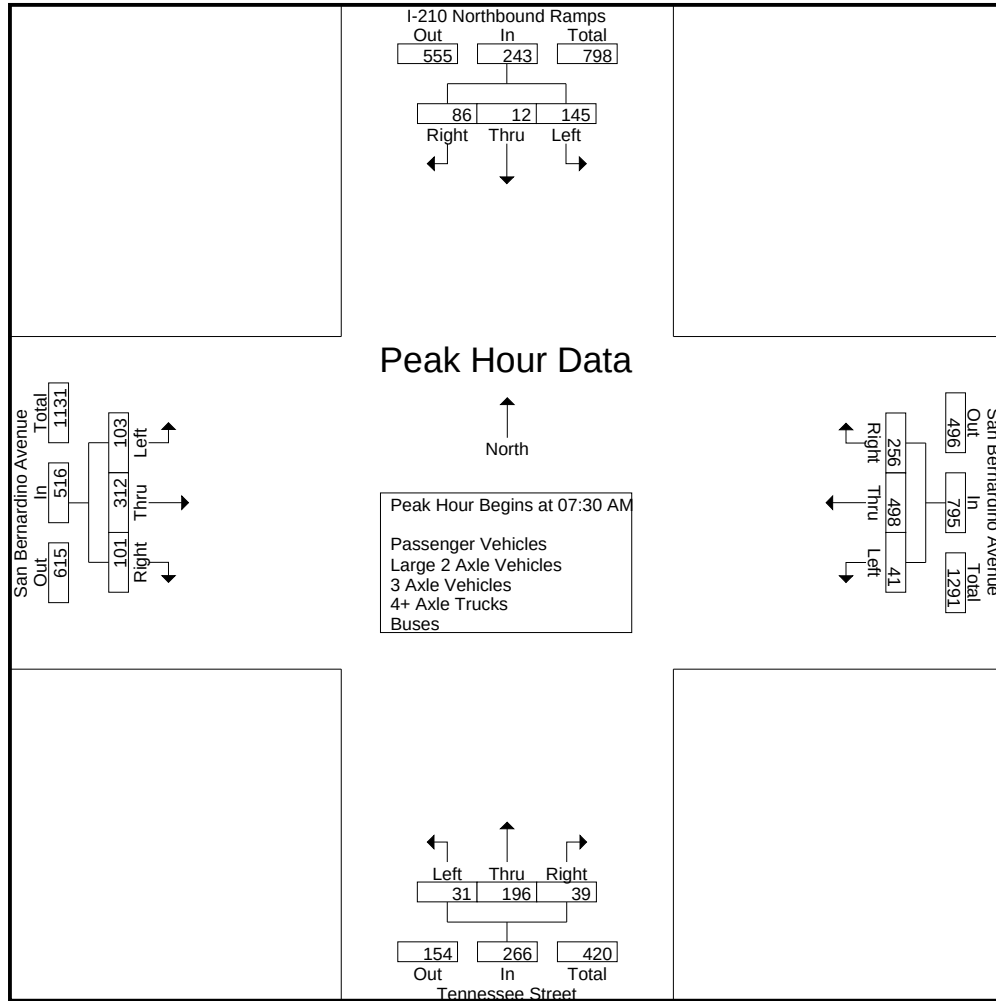
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	19	1	35	55	5	100	37	142	9	51	0	60	24	42	17	83	340
07:15 AM	25	0	29	54	5	125	62	192	6	49	3	58	12	61	17	90	394
07:30 AM	34	1	26	61	8	130	62	200	5	53	9	67	15	60	24	99	427
07:45 AM	35	2	23	60	5	146	57	208	9	49	8	66	27	61	32	120	454
Total	113	4	113	230	23	501	218	742	29	202	20	251	78	224	90	392	1615
08:00 AM	33	5	15	53	8	103	56	167	6	48	7	61	25	99	21	145	426
08:15 AM	43	4	22	69	20	119	81	220	11	46	15	72	36	92	24	152	513
08:30 AM	25	6	12	43	12	106	44	162	10	62	6	78	32	65	37	134	417
08:45 AM	29	3	13	45	4	87	40	131	7	61	4	72	28	41	30	99	347
Total	130	18	62	210	44	415	221	680	34	217	32	283	121	297	112	530	1703
Grand Total	243	22	175	440	67	916	439	1422	63	419	52	534	199	521	202	922	3318
Apprch %	55.2	5	39.8		4.7	64.4	30.9		11.8	78.5	9.7		21.6	56.5	21.9		
Total %	7.3	0.7	5.3	13.3	2	27.6	13.2	42.9	1.9	12.6	1.6	16.1	6	15.7	6.1	27.8	
Passenger Vehicles	232	19	165	416	65	890	429	1384	61	404	51	516	185	497	198	880	3196
% Passenger Vehicles	95.5	86.4	94.3	94.5	97	97.2	97.7	97.3	96.8	96.4	98.1	96.6	93	95.4	98	95.4	96.3
Large 2 Axle Vehicles	3	2	1	6	0	5	2	7	0	10	0	10	1	5	2	8	31
% Large 2 Axle Vehicles	1.2	9.1	0.6	1.4	0	0.5	0.5	0.5	0	2.4	0	1.9	0.5	1	1	0.9	0.9
3 Axle Vehicles	2	1	2	5	2	11	2	15	0	1	0	1	6	6	0	12	33
% 3 Axle Vehicles	0.8	4.5	1.1	1.1	3	1.2	0.5	1.1	0	0.2	0	0.2	3	1.2	0	1.3	1
4+ Axle Trucks	5	0	7	12	0	6	5	11	2	4	0	6	4	7	2	13	42
% 4+ Axle Trucks	2.1	0	4	2.7	0	0.7	1.1	0.8	3.2	1	0	1.1	2	1.3	1	1.4	1.3
Buses	1	0	0	1	0	4	1	5	0	0	1	1	3	6	0	9	16
% Buses	0.4	0	0	0.2	0	0.4	0.2	0.4	0	0	1.9	0.2	1.5	1.2	0	1	0.5

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	34	1	26	61	8	130	62	200	5	53	9	67	15	60	24	99	427
07:45 AM	35	2	23	60	5	146	57	208	9	49	8	66	27	61	32	120	454
08:00 AM	33	5	15	53	8	103	56	167	6	48	7	61	25	99	21	145	426
08:15 AM	43	4	22	69	20	119	81	220	11	46	15	72	36	92	24	152	513
Total Volume	145	12	86	243	41	498	256	795	31	196	39	266	103	312	101	516	1820
% App. Total	59.7	4.9	35.4		5.2	62.6	32.2		11.7	73.7	14.7		20	60.5	19.6		
PHF	.843	.600	.827	.880	.513	.853	.790	.903	.705	.925	.650	.924	.715	.788	.789	.849	.887

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
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:

	07:30 AM				07:30 AM				08:00 AM				07:45 AM			
+0 mins.	34	1	26	61	8	130	62	200	6	48	7	61	27	61	32	120
+15 mins.	35	2	23	60	5	146	57	208	11	46	15	72	25	99	21	145
+30 mins.	33	5	15	53	8	103	56	167	10	62	6	78	36	92	24	152
+45 mins.	43	4	22	69	20	119	81	220	7	61	4	72	32	65	37	134
Total Volume	145	12	86	243	41	498	256	795	34	217	32	283	120	317	114	551
% App. Total	59.7	4.9	35.4		5.2	62.6	32.2		12	76.7	11.3		21.8	57.5	20.7	
PHF	.843	.600	.827	.880	.513	.853	.790	.903	.773	.875	.533	.907	.833	.801	.770	.906

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
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Page No : 1

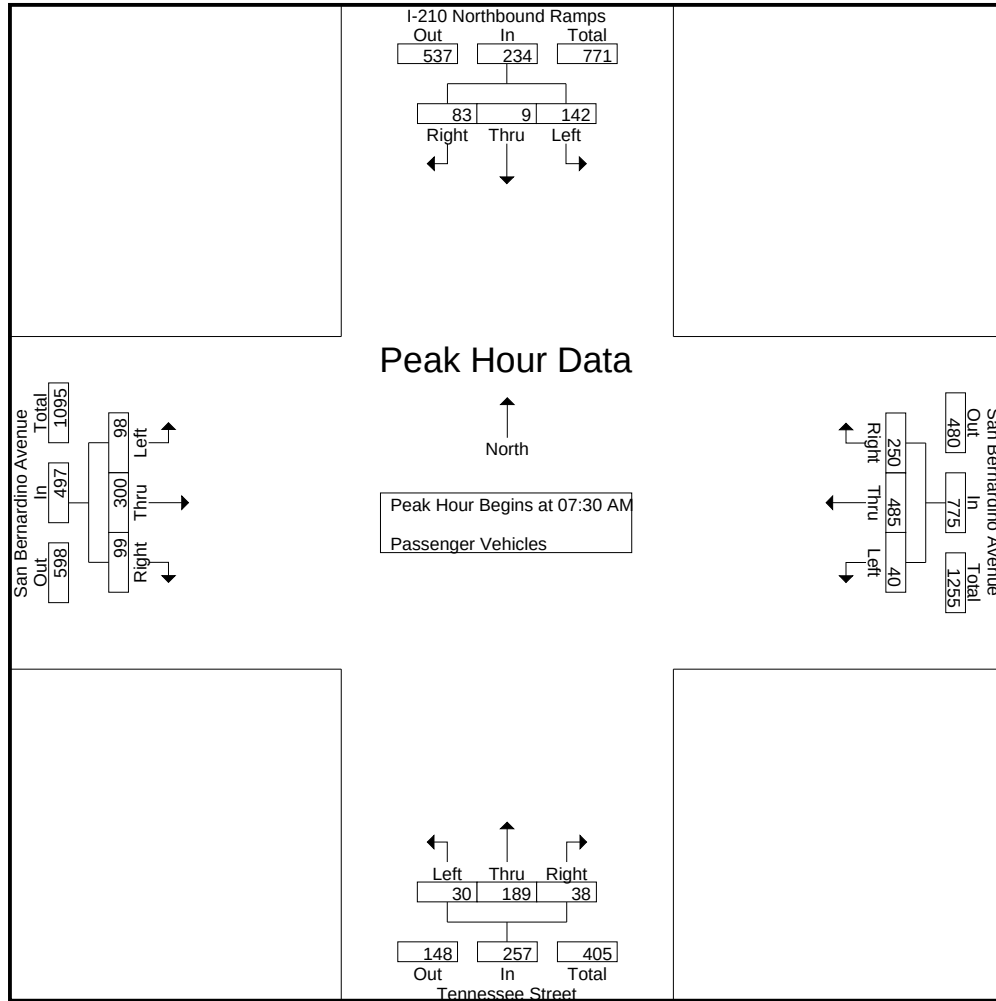
Groups Printed- Passenger Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	17	1	31	49	4	97	37	138	9	49	0	58	24	39	17	80	325
07:15 AM	23	0	28	51	5	122	61	188	6	47	3	56	11	56	16	83	378
07:30 AM	34	0	26	60	7	127	60	194	5	50	9	64	14	55	24	93	411
07:45 AM	34	2	22	58	5	142	56	203	8	49	7	64	26	59	30	115	440
Total	108	3	107	218	21	488	214	723	28	195	19	242	75	209	87	371	1554
08:00 AM	33	4	15	52	8	97	54	159	6	47	7	60	25	97	21	143	414
08:15 AM	41	3	20	64	20	119	80	219	11	43	15	69	33	89	24	146	498
08:30 AM	23	6	11	40	12	103	43	158	9	58	6	73	27	63	37	127	398
08:45 AM	27	3	12	42	4	83	38	125	7	61	4	72	25	39	29	93	332
Total	124	16	58	198	44	402	215	661	33	209	32	274	110	288	111	509	1642
Grand Total	232	19	165	416	65	890	429	1384	61	404	51	516	185	497	198	880	3196
Apprch %	55.8	4.6	39.7		4.7	64.3	31		11.8	78.3	9.9		21	56.5	22.5		
Total %	7.3	0.6	5.2	13	2	27.8	13.4	43.3	1.9	12.6	1.6	16.1	5.8	15.6	6.2	27.5	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	34	0	26	60	7	127	60	194	5	50	9	64	14	55	24	93	411
07:45 AM	34	2	22	58	5	142	56	203	8	49	7	64	26	59	30	115	440
08:00 AM	33	4	15	52	8	97	54	159	6	47	7	60	25	97	21	143	414
08:15 AM	41	3	20	64	20	119	80	219	11	43	15	69	33	89	24	146	498
Total Volume	142	9	83	234	40	485	250	775	30	189	38	257	98	300	99	497	1763
% App. Total	60.7	3.8	35.5		5.2	62.6	32.3		11.7	73.5	14.8		19.7	60.4	19.9		
PHF	.866	.563	.798	.914	.500	.854	.781	.885	.682	.945	.633	.931	.742	.773	.825	.851	.885

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 2



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.	34	0	26	60	7	127	60	194	5	50	9	64	14	55	24	93
+15 mins.	34	2	22	58	5	142	56	203	8	49	7	64	26	59	30	115
+30 mins.	33	4	15	52	8	97	54	159	6	47	7	60	25	97	21	143
+45 mins.	41	3	20	64	20	119	80	219	11	43	15	69	33	89	24	146
Total Volume	142	9	83	234	40	485	250	775	30	189	38	257	98	300	99	497
% App. Total	60.7	3.8	35.5		5.2	62.6	32.3		11.7	73.5	14.8		19.7	60.4	19.9	
PHF	.866	.563	.798	.914	.500	.854	.781	.885	.682	.945	.633	.931	.742	.773	.825	.851

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
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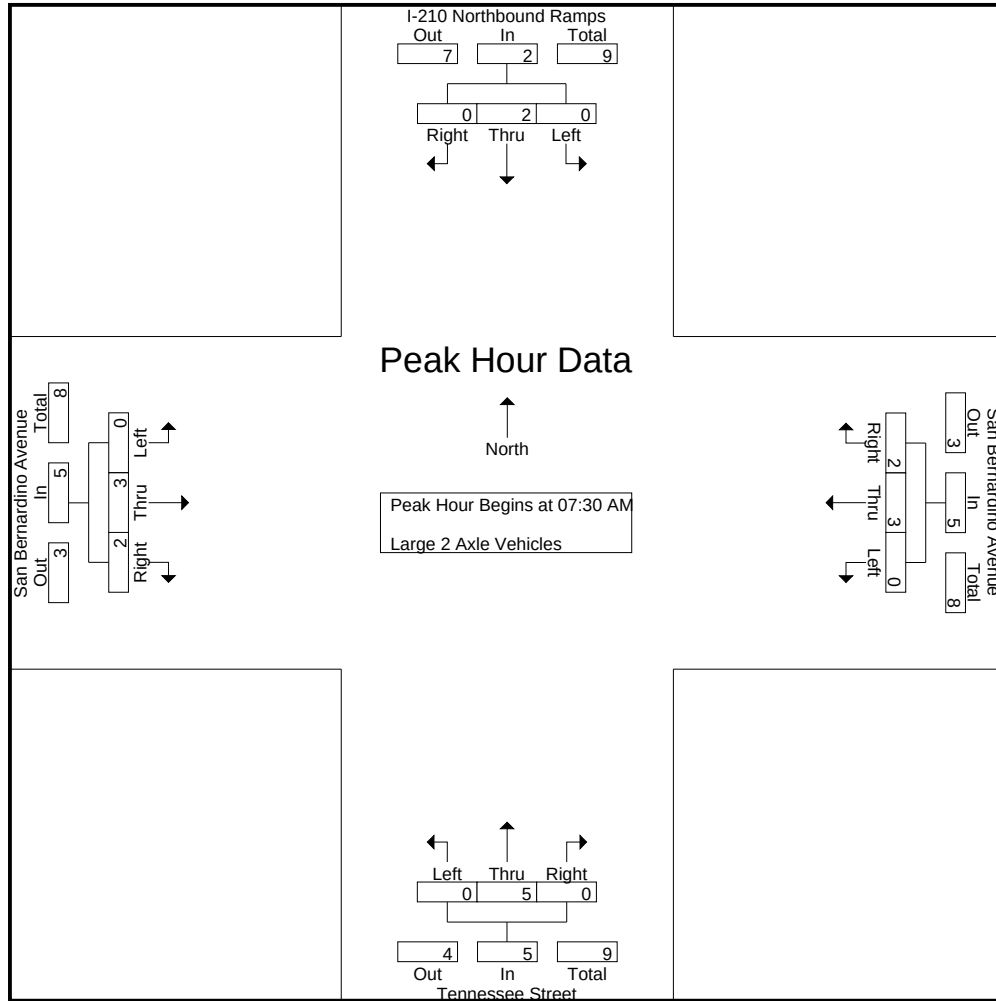
Groups Printed- Large 2 Axle Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	0	1	2	0	0	0	0	0	1	0	1	0	1	0	1	4
07:15 AM	0	0	0	0	0	1	0	1	0	2	0	2	0	1	0	1	4
07:30 AM	0	0	0	0	0	0	1	1	0	2	0	2	0	1	0	1	4
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	2	3
Total	1	0	1	2	0	2	1	3	0	5	0	5	0	3	2	5	15
08:00 AM	0	1	0	1	0	2	1	3	0	1	0	1	0	0	0	0	5
08:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	2	0	2	5
08:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:45 AM	1	0	0	1	0	1	0	1	0	0	0	0	1	0	0	1	3
Total	2	2	0	4	0	3	1	4	0	5	0	5	1	2	0	3	16
Grand Total	3	2	1	6	0	5	2	7	0	10	0	10	1	5	2	8	31
Apprch %	50	33.3	16.7		0	71.4	28.6		0	100	0		12.5	62.5	25		
Total %	9.7	6.5	3.2	19.4	0	16.1	6.5	22.6	0	32.3	0	32.3	3.2	16.1	6.5	25.8	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	1	0	2	0	2	0	1	0	1	4
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	2	3
08:00 AM	0	1	0	1	0	2	1	3	0	1	0	1	0	0	0	0	5
08:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	2	0	2	5
Total Volume	0	2	0	2	0	3	2	5	0	5	0	5	0	3	2	5	17
% App. Total	0	100	0		0	60	40		0	100	0		0	60	40		
PHF	.000	.500	.000	.500	.000	.375	.500	.417	.000	.625	.000	.625	.000	.375	.250	.625	.850

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
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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	1	1	0	2	0	2	0	1	0	1
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	2
+30 mins.	0	1	0	1	0	2	1	3	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	2	0	2
Total Volume	0	2	0	2	0	3	2	5	0	5	0	5	0	3	2	5
% App. Total	0	100	0		0	60	40		0	100	0		0	60	40	
PHF	.000	.500	.000	.500	.000	.375	.500	.417	.000	.625	.000	.625	.000	.375	.250	.625

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

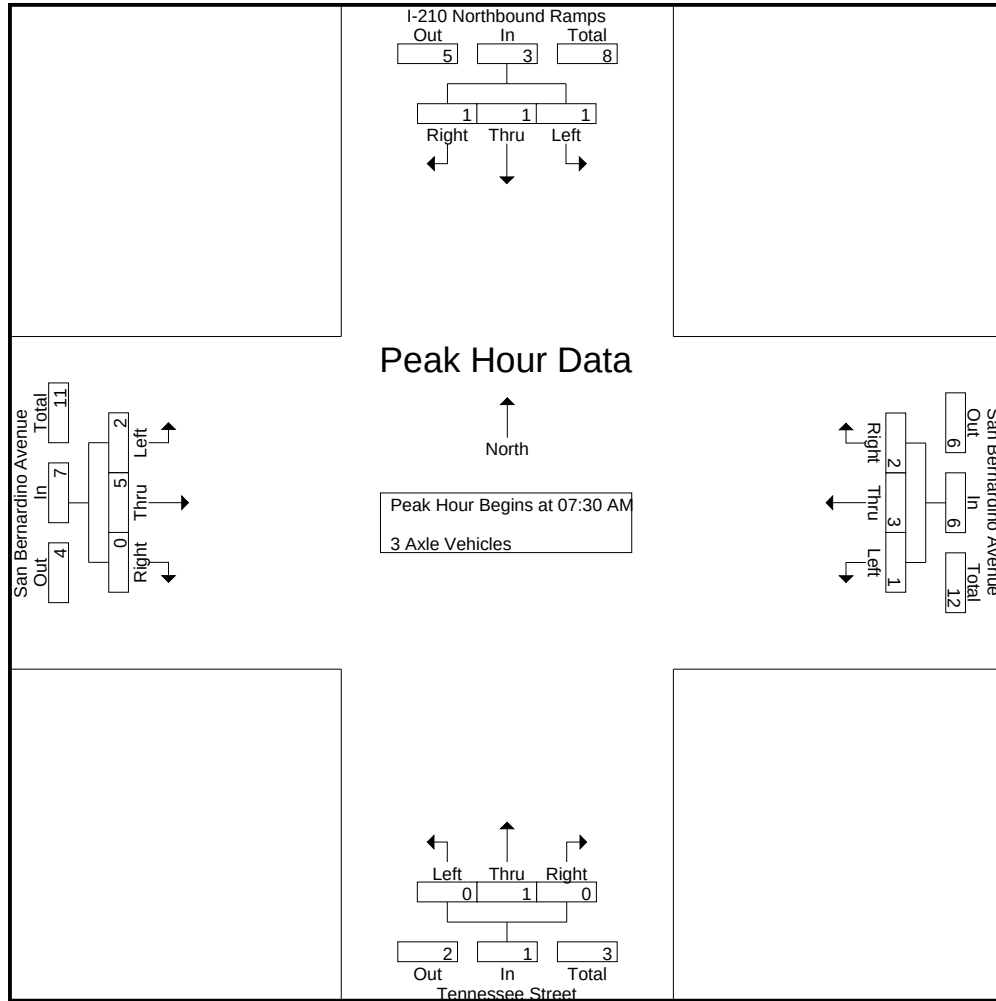
Groups Printed- 3 Axle Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	1	1	3	0	4	0	0	0	0	0	0	0	0	5
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
07:30 AM	0	1	0	1	1	1	1	3	0	0	0	0	1	3	0	4	8
07:45 AM	1	0	0	1	0	1	0	1	0	0	0	0	1	2	0	3	5
Total	1	1	1	3	2	6	1	9	0	0	0	0	3	6	0	9	21
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	1	1	0	0	1	1	0	1	0	1	0	0	0	0	3
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	2	0	0	2	4
08:45 AM	1	0	0	1	0	2	0	2	0	0	0	0	1	0	0	1	4
Total	1	0	1	2	0	5	1	6	0	1	0	1	3	0	0	3	12
Grand Total	2	1	2	5	2	11	2	15	0	1	0	1	6	6	0	12	33
Apprch %	40	20	40		13.3	73.3	13.3		0	100	0		50	50	0		
Total %	6.1	3	6.1	15.2	6.1	33.3	6.1	45.5	0	3	0	3	18.2	18.2	0	36.4	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	0	1	1	1	1	3	0	0	0	0	1	3	0	4	8
07:45 AM	1	0	0	1	0	1	0	1	0	0	0	0	1	2	0	3	5
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	1	1	0	0	1	1	0	1	0	1	0	0	0	0	3
Total Volume	1	1	1	3	1	3	2	6	0	1	0	1	2	5	0	7	17
% App. Total	33.3	33.3	33.3		16.7	50	33.3		0	100	0		28.6	71.4	0		
PHF	.250	.250	.250	.750	.250	.750	.500	.500	.000	.250	.000	.250	.500	.417	.000	.438	.531

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
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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	1	0	1	1	1	1	3	0	0	0	0	1	3	0	4
+15 mins.	1	0	0	1	0	1	0	1	0	0	0	0	1	2	0	3
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	0	0	1	1	0	1	0	1	0	0	0	0
Total Volume	1	1	1	3	1	3	2	6	0	1	0	1	2	5	0	7
% App. Total	33.3	33.3	33.3		16.7	50	33.3		0	100	0		28.6	71.4	0	
PHF	.250	.250	.250	.750	.250	.750	.500	.500	.000	.250	.000	.250	.500	.417	.000	.438

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
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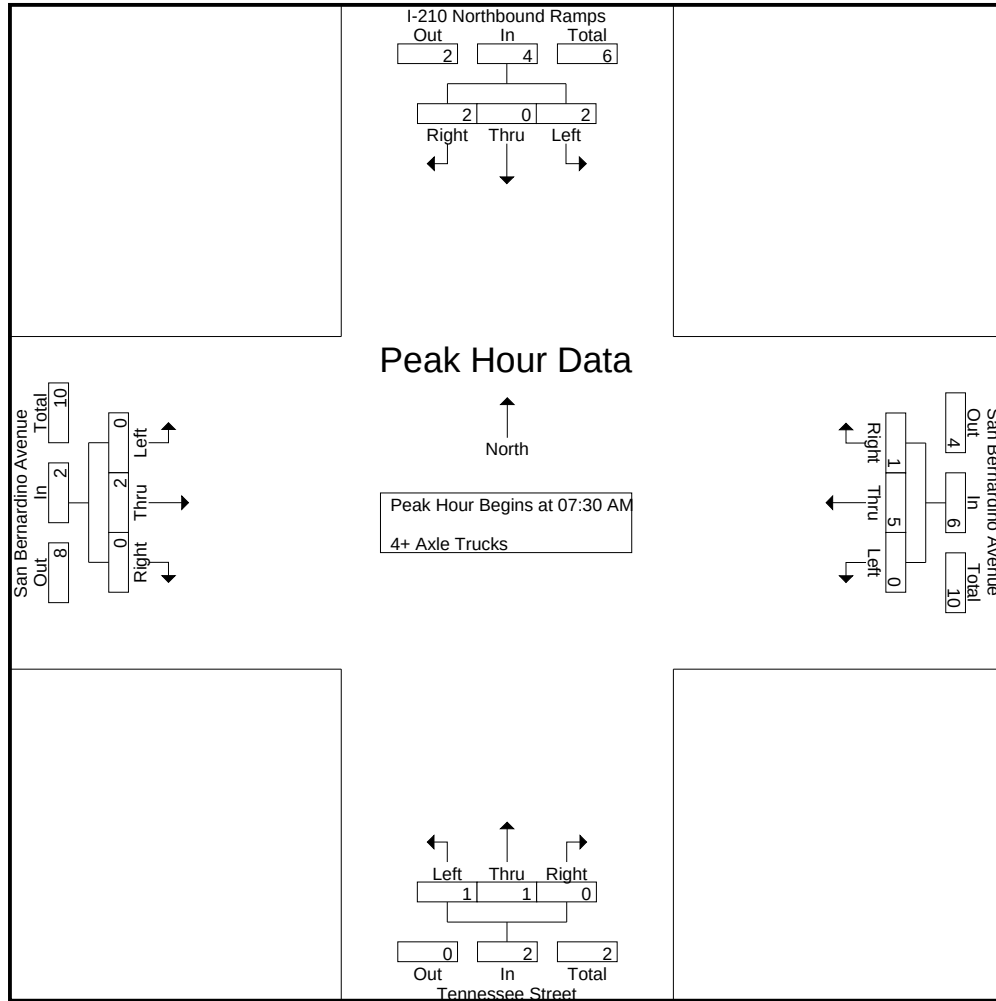
Groups Printed- 4+ Axle Trucks

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	0	2	3	0	0	0	0	0	1	0	1	0	1	0	1	5
07:15 AM	1	0	1	2	0	0	1	1	0	0	0	0	0	1	1	2	5
07:30 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
07:45 AM	0	0	1	1	0	2	0	2	1	0	0	1	0	0	0	0	4
Total	2	0	4	6	0	3	1	4	1	2	0	3	0	3	1	4	17
08:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
08:15 AM	2	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
08:30 AM	1	0	1	2	0	1	1	2	1	2	0	3	3	2	0	5	12
08:45 AM	0	0	1	1	0	0	2	2	0	0	0	0	1	1	1	3	6
Total	3	0	3	6	0	3	4	7	1	2	0	3	4	4	1	9	25
Grand Total	5	0	7	12	0	6	5	11	2	4	0	6	4	7	2	13	42
Apprch %	41.7	0	58.3		0	54.5	45.5		33.3	66.7	0		30.8	53.8	15.4		
Total %	11.9	0	16.7	28.6	0	14.3	11.9	26.2	4.8	9.5	0	14.3	9.5	16.7	4.8	31	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	0	1	0	1	0	1	0	1	0	1	3
07:45 AM	0	0	1	1	0	2	0	2	1	0	0	1	0	0	0	0	4
08:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
08:15 AM	2	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	2	0	2	4	0	5	1	6	1	1	0	2	0	2	0	2	14
% App. Total	50	0	50		0	83.3	16.7		50	50	0		0	100	0		
PHF	.250	.000	.500	.333	.000	.625	.250	.500	.250	.250	.000	.500	.000	.500	.000	.500	.875

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
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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	1	0	1	0	1	0	1	0	1	0	1
+15 mins.	0	0	1	1	0	2	0	2	1	0	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1
+45 mins.	2	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	2	4	0	5	1	6	1	1	0	2	0	2	0	2
% App. Total	50	0	50		0	83.3	16.7		50	50	0		0	100	0	
PHF	.250	.000	.500	.333	.000	.625	.250	.500	.250	.250	.000	.500	.000	.500	.000	.500

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

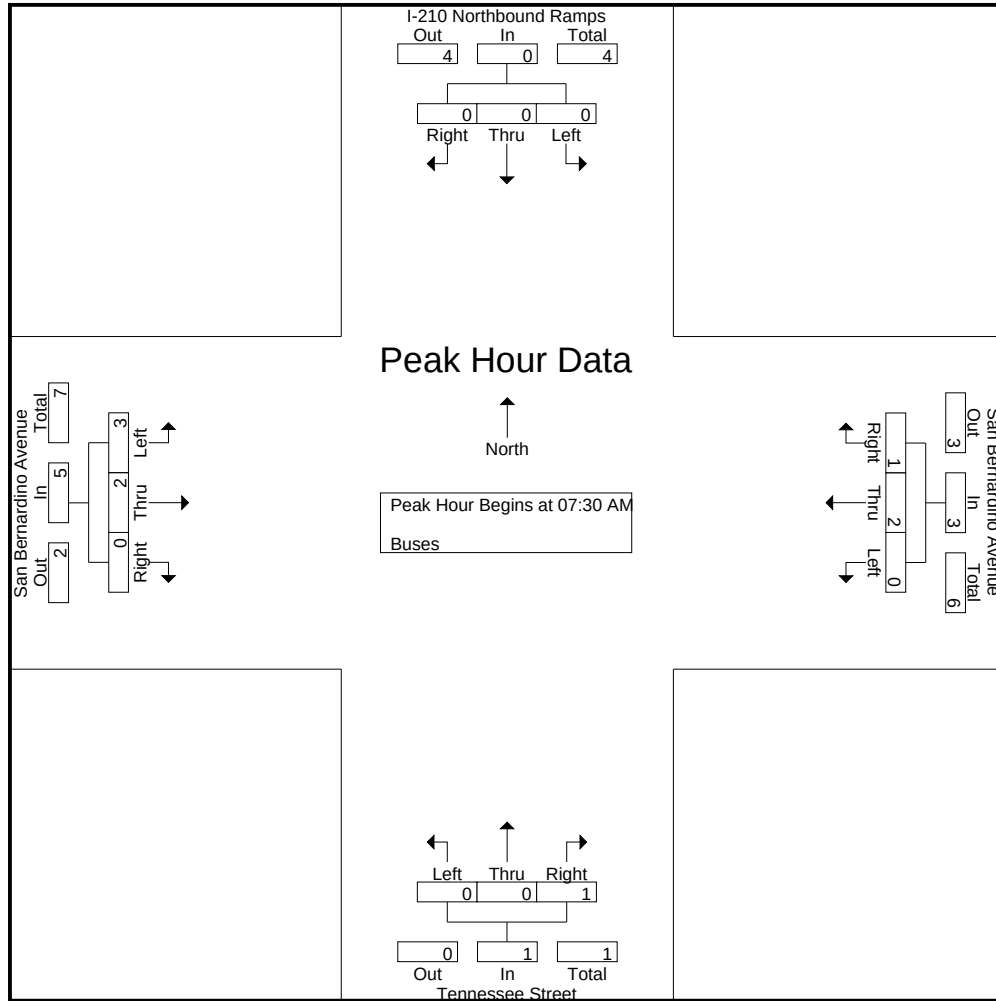
Groups Printed- Buses

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee Street Northbound				San Bernardino Avenue Eastbound				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	2	0	2	4
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	2
Total	1	0	0	1	0	2	1	3	0	0	1	1	0	3	0	3	8
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	4
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	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	2	0	2	0	0	0	0	3	3	0	6	8
Grand Total	1	0	0	1	0	4	1	5	0	0	1	1	3	6	0	9	16
Apprch %	100	0	0		0	80	20		0	0	100		33.3	66.7	0		
Total %	6.2	0	0	6.2	0	25	6.2	31.2	0	0	6.2	6.2	18.8	37.5	0	56.2	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	2
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	4
Total Volume	0	0	0	0	0	2	1	3	0	0	1	1	3	2	0	5	9
% App. Total	0	0	0		0	66.7	33.3		0	0	100		60	40	0		
PHF	.000	.000	.000	.000	.000	.500	.250	.750	.000	.000	.250	.250	.250	.500	.000	.313	.563

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B AM
Site Code : 12223608
Start Date : 6/7/2023
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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	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	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	3	1	0	4
Total Volume	0	0	0	0	0	2	1	3	0	0	1	1	3	2	0	5
% App. Total	0	0	0	0	0	66.7	33.3		0	0	100		60	40	0	
PHF	.000	.000	.000	.000	.000	.500	.250	.750	.000	.000	.250	.250	.250	.500	.000	.313

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
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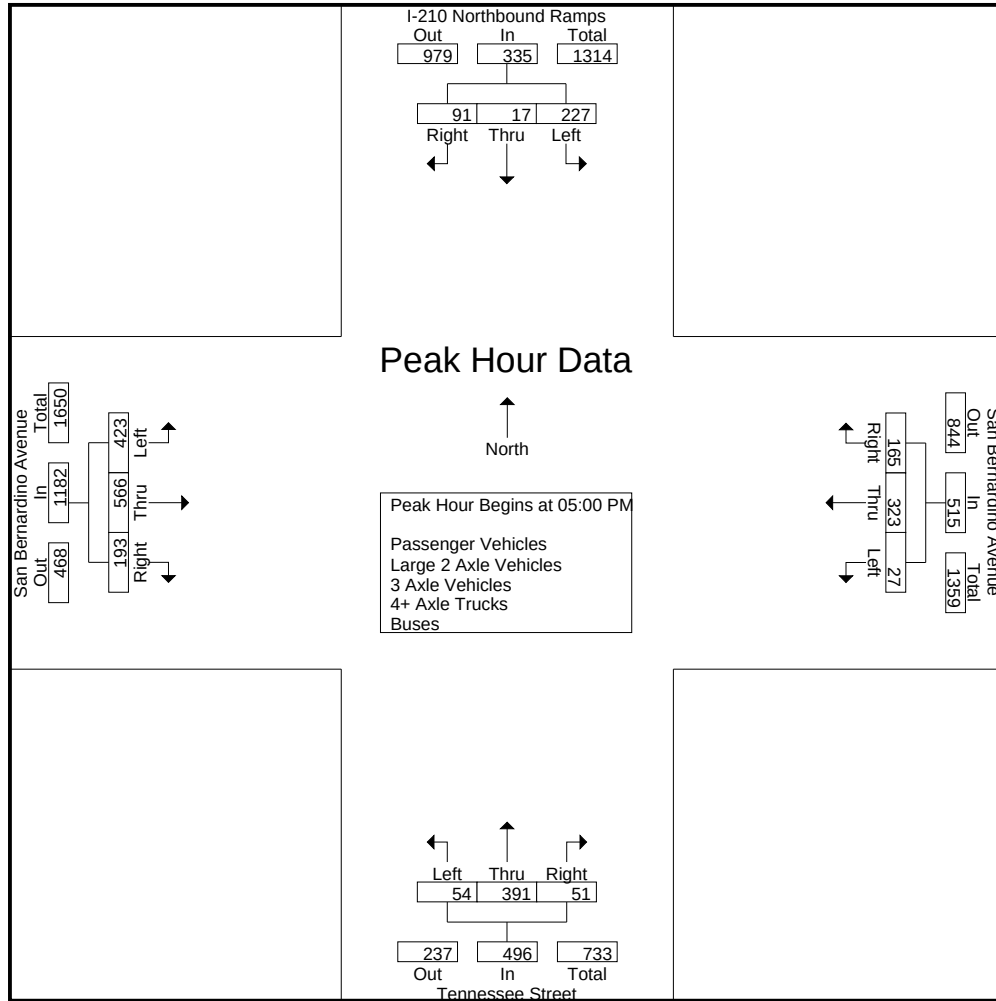
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	30	5	32	67	6	87	30	123	14	96	9	119	117	111	29	257	566
04:15 PM	36	3	23	62	6	98	58	162	11	81	8	100	88	118	44	250	574
04:30 PM	51	5	21	77	1	74	43	118	9	100	7	116	107	119	32	258	569
04:45 PM	61	5	25	91	4	83	42	129	10	89	8	107	86	118	32	236	563
Total	178	18	101	297	17	342	173	532	44	366	32	442	398	466	137	1001	2272
05:00 PM	65	1	27	93	4	68	39	111	10	106	15	131	82	131	43	256	591
05:15 PM	52	8	21	81	3	75	60	138	18	100	13	131	126	169	70	365	715
05:30 PM	54	5	17	76	13	89	38	140	13	90	11	114	109	154	34	297	627
05:45 PM	56	3	26	85	7	91	28	126	13	95	12	120	106	112	46	264	595
Total	227	17	91	335	27	323	165	515	54	391	51	496	423	566	193	1182	2528
Grand Total	405	35	192	632	44	665	338	1047	98	757	83	938	821	1032	330	2183	4800
Apprch %	64.1	5.5	30.4		4.2	63.5	32.3		10.4	80.7	8.8		37.6	47.3	15.1		
Total %	8.4	0.7	4	13.2	0.9	13.9	7	21.8	2	15.8	1.7	19.5	17.1	21.5	6.9	45.5	
Passenger Vehicles	392	33	189	614	44	647	337	1028	98	747	82	927	817	1019	324	2160	4729
% Passenger Vehicles	96.8	94.3	98.4	97.2	100	97.3	99.7	98.2	100	98.7	98.8	98.8	99.5	98.7	98.2	98.9	98.5
Large 2 Axle Vehicles	3	1	1	5	0	5	1	6	0	8	0	8	3	6	5	14	33
% Large 2 Axle Vehicles	0.7	2.9	0.5	0.8	0	0.8	0.3	0.6	0	1.1	0	0.9	0.4	0.6	1.5	0.6	0.7
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0.1	0	0	0	0
4+ Axle Trucks	10	1	2	13	0	10	0	10	0	2	1	3	0	5	1	6	32
% 4+ Axle Trucks	2.5	2.9	1	2.1	0	1.5	0	1	0	0.3	1.2	0.3	0	0.5	0.3	0.3	0.7
Buses	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
% Buses	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0.2	0	0.1	0.1

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	65	1	27	93	4	68	39	111	10	106	15	131	82	131	43	256	591
05:15 PM	52	8	21	81	3	75	60	138	18	100	13	131	126	169	70	365	715
05:30 PM	54	5	17	76	13	89	38	140	13	90	11	114	109	154	34	297	627
05:45 PM	56	3	26	85	7	91	28	126	13	95	12	120	106	112	46	264	595
Total Volume	227	17	91	335	27	323	165	515	54	391	51	496	423	566	193	1182	2528
% App. Total	67.8	5.1	27.2		5.2	62.7	32		10.9	78.8	10.3		35.8	47.9	16.3		
PHF	.873	.531	.843	.901	.519	.887	.688	.920	.750	.922	.850	.947	.839	.837	.689	.810	.884

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
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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:

	04:30 PM				04:00 PM				05:00 PM				05:00 PM			
+0 mins.	51	5	21	77	6	87	30	123	10	106	15	131	82	131	43	256
+15 mins.	61	5	25	91	6	98	58	162	18	100	13	131	126	169	70	365
+30 mins.	65	1	27	93	1	74	43	118	13	90	11	114	109	154	34	297
+45 mins.	52	8	21	81	4	83	42	129	13	95	12	120	106	112	46	264
Total Volume	229	19	94	342	17	342	173	532	54	391	51	496	423	566	193	1182
% App. Total	67	5.6	27.5		3.2	64.3	32.5		10.9	78.8	10.3		35.8	47.9	16.3	
PHF	.881	.594	.870	.919	.708	.872	.746	.821	.750	.922	.850	.947	.839	.837	.689	.810

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
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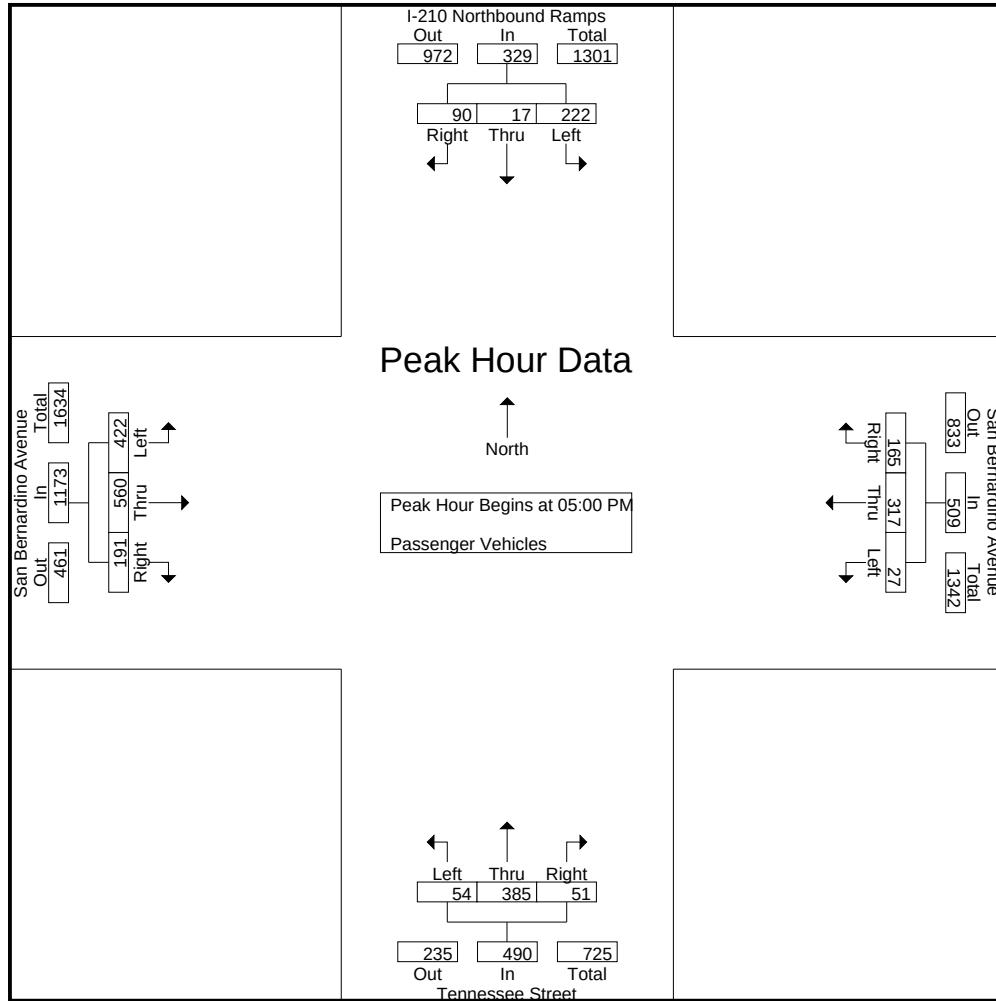
Groups Printed- Passenger Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	25	4	32	61	6	85	30	121	14	96	9	119	117	109	27	253	554
04:15 PM	34	3	22	59	6	96	58	160	11	81	8	100	87	117	43	247	566
04:30 PM	51	5	20	76	1	69	43	113	9	98	7	114	107	117	32	256	559
04:45 PM	60	4	25	89	4	80	41	125	10	87	7	104	84	116	31	231	549
Total	170	16	99	285	17	330	172	519	44	362	31	437	395	459	133	987	2228
05:00 PM	62	1	27	90	4	68	39	111	10	105	15	130	82	129	43	254	585
05:15 PM	52	8	20	80	3	74	60	137	18	97	13	128	125	168	68	361	706
05:30 PM	53	5	17	75	13	86	38	137	13	88	11	112	109	152	34	295	619
05:45 PM	55	3	26	84	7	89	28	124	13	95	12	120	106	111	46	263	591
Total	222	17	90	329	27	317	165	509	54	385	51	490	422	560	191	1173	2501
Grand Total	392	33	189	614	44	647	337	1028	98	747	82	927	817	1019	324	2160	4729
Apprch %	63.8	5.4	30.8		4.3	62.9	32.8		10.6	80.6	8.8		37.8	47.2	15		
Total %	8.3	0.7	4	13	0.9	13.7	7.1	21.7	2.1	15.8	1.7	19.6	17.3	21.5	6.9	45.7	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	62	1	27	90	4	68	39	111	10	105	15	130	82	129	43	254	585
05:15 PM	52	8	20	80	3	74	60	137	18	97	13	128	125	168	68	361	706
05:30 PM	53	5	17	75	13	86	38	137	13	88	11	112	109	152	34	295	619
05:45 PM	55	3	26	84	7	89	28	124	13	95	12	120	106	111	46	263	591
Total Volume	222	17	90	329	27	317	165	509	54	385	51	490	422	560	191	1173	2501
% App. Total	67.5	5.2	27.4		5.3	62.3	32.4		11	78.6	10.4		36	47.7	16.3		
PHF	.895	.531	.833	.914	.519	.890	.688	.929	.750	.917	.850	.942	.844	.833	.702	.812	.886

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
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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.	62	1	27	90	4	68	39	111	10	105	15	130	82	129	43	254
+15 mins.	52	8	20	80	3	74	60	137	18	97	13	128	125	168	68	361
+30 mins.	53	5	17	75	13	86	38	137	13	88	11	112	109	152	34	295
+45 mins.	55	3	26	84	7	89	28	124	13	95	12	120	106	111	46	263
Total Volume	222	17	90	329	27	317	165	509	54	385	51	490	422	560	191	1173
% App. Total	67.5	5.2	27.4		5.3	62.3	32.4		11	78.6	10.4		36	47.7	16.3	
PHF	.895	.531	.833	.914	.519	.890	.688	.929	.750	.917	.850	.942	.844	.833	.702	.812

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

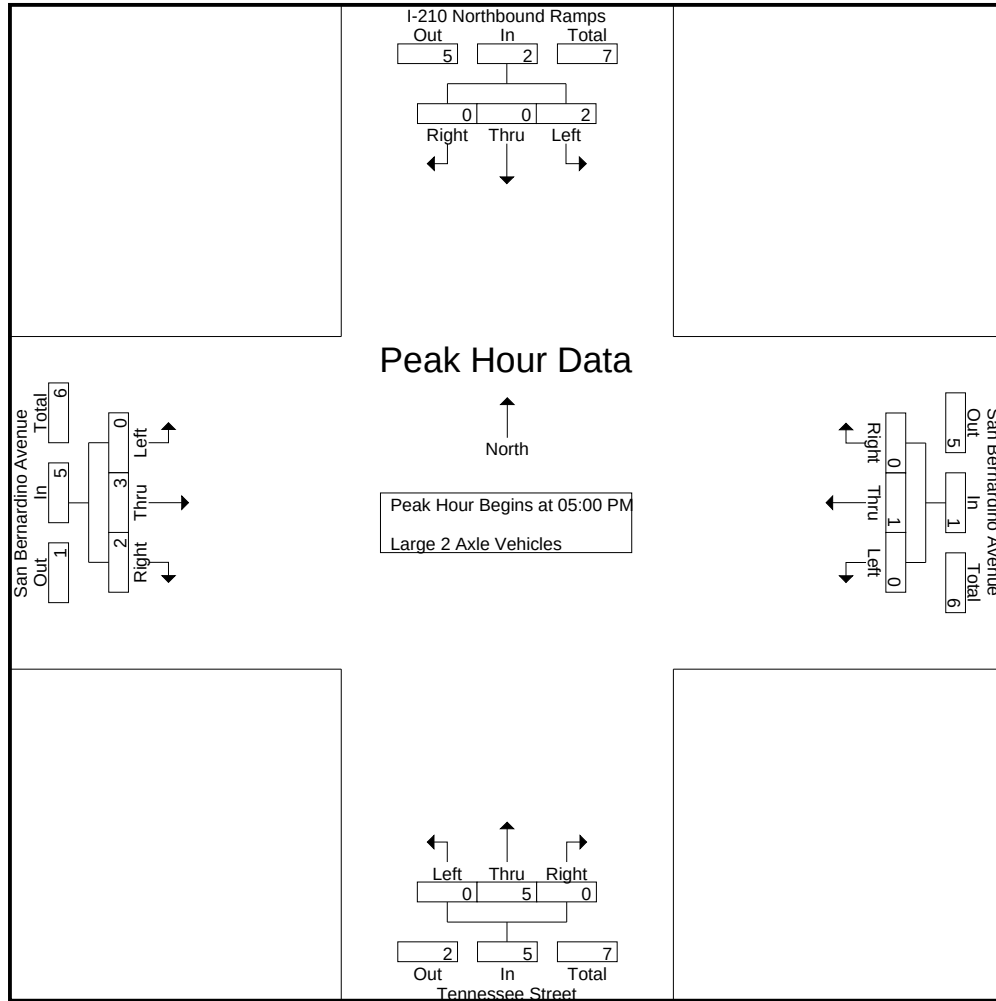
Groups Printed- Large 2 Axle Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	0	2	0	1	0	1	0	0	0	0	0	1	2	3	6
04:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	1	0	0	1	3
04:30 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	1	1	0	2	0	2	2	2	1	5	8
Total	1	1	1	3	0	4	1	5	0	3	0	3	3	3	3	9	20
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	2	2	5
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
05:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	2	0	0	2	0	1	0	1	0	5	0	5	0	3	2	5	13
Grand Total	3	1	1	5	0	5	1	6	0	8	0	8	3	6	5	14	33
Apprch %	60	20	20		0	83.3	16.7		0	100	0		21.4	42.9	35.7		
Total %	9.1	3	3	15.2	0	15.2	3	18.2	0	24.2	0	24.2	9.1	18.2	15.2	42.4	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	2	2	5
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
05:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total Volume	2	0	0	2	0	1	0	1	0	5	0	5	0	3	2	5	13
% App. Total	100	0	0		0	100	0		0	100	0		0	60	40		
PHF	.500	.000	.000	.500	.000	.250	.000	.250	.000	.417	.000	.417	.000	.375	.250	.625	.650

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
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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	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0	3	0	3	0	0	2	2
+30 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1
+45 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	2	0	0	2	0	1	0	1	0	5	0	5	0	3	2	5
% App. Total	100	0	0		0	100	0		0	100	0		0	60	40	
PHF	.500	.000	.000	.500	.000	.250	.000	.250	.000	.417	.000	.417	.000	.375	.250	.625

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

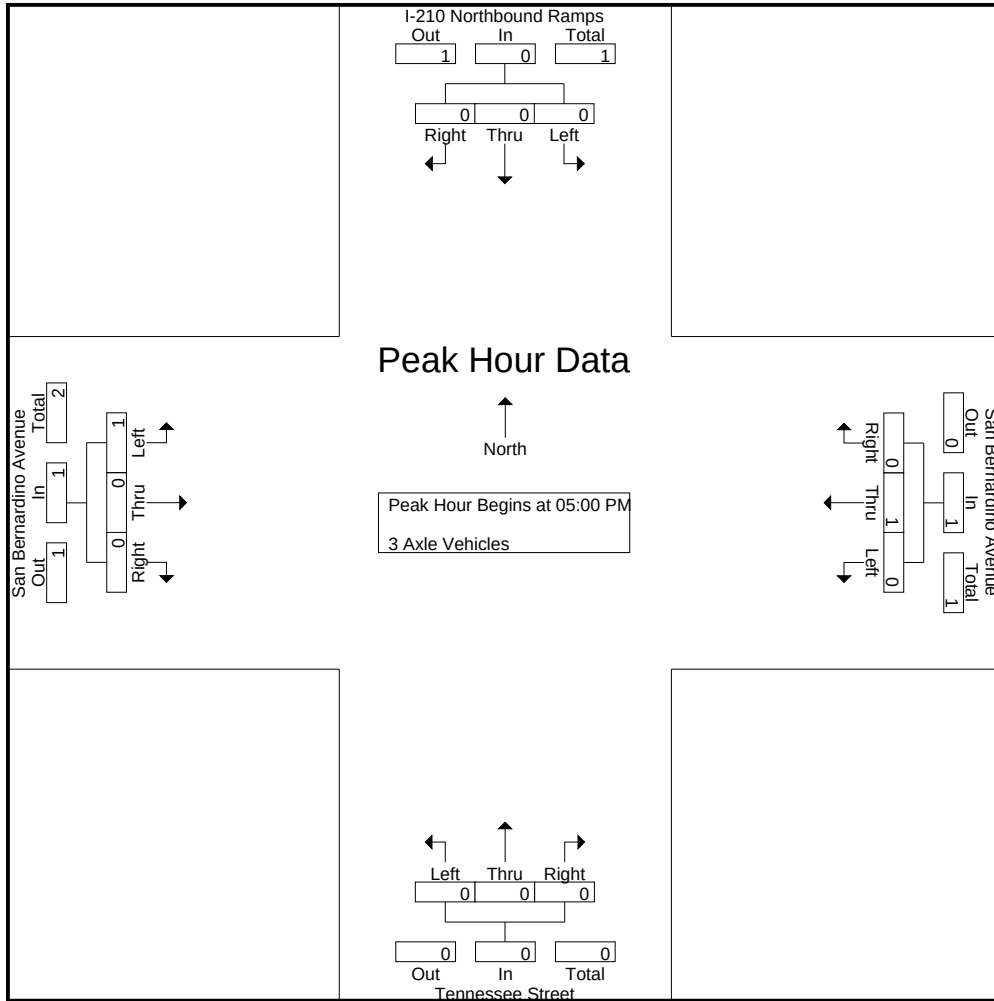
Groups Printed- 3 Axle Vehicles

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	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	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	1	0	0	1	1
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	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	1	0	0	1	2
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		100	0	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	50	0	0	50	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	0	0	1	1
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	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
% App. Total	0	0	0		0	100	0		0	0	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250	.500

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
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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	1	0	0	1
+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	1	0	1	0	0	0	0	1	0	0	1
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
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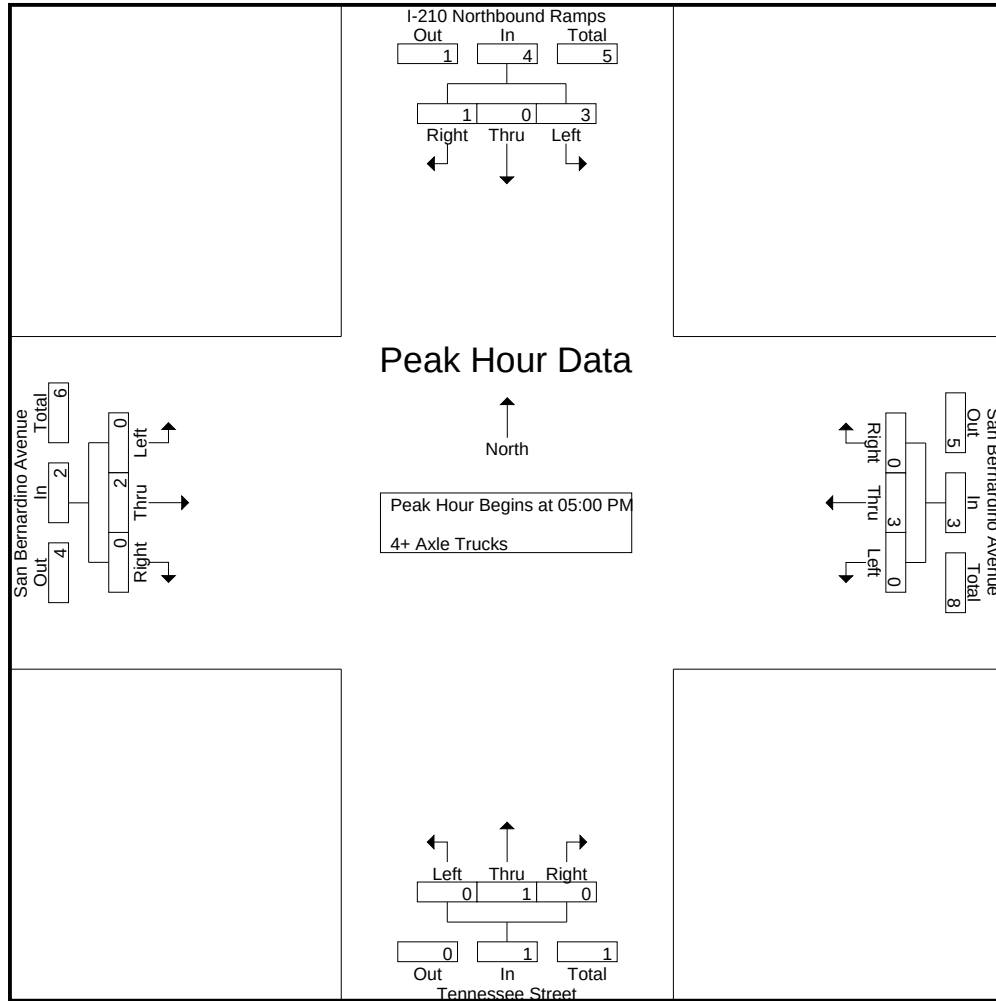
Groups Printed- 4+ Axle Trucks

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	0	0	4	0	1	0	1	0	0	0	0	0	1	0	1	6
04:15 PM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	1	1	4
04:30 PM	0	0	1	1	0	3	0	3	0	1	0	1	0	2	0	2	7
04:45 PM	1	1	0	2	0	2	0	2	0	0	1	1	0	0	0	0	5
Total	7	1	1	9	0	7	0	7	0	1	1	2	0	3	1	4	22
05:00 PM	2	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	3	0	1	4	0	3	0	3	0	1	0	1	0	2	0	2	10
Grand Total	10	1	2	13	0	10	0	10	0	2	1	3	0	5	1	6	32
Apprch %	76.9	7.7	15.4		0	100	0		0	66.7	33.3		0	83.3	16.7		
Total %	31.2	3.1	6.2	40.6	0	31.2	0	31.2	0	6.2	3.1	9.4	0	15.6	3.1	18.8	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	2	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	3	0	1	4	0	3	0	3	0	1	0	1	0	2	0	2	10
% App. Total	75	0	25		0	100	0		0	100	0		0	100	0		
PHF	.375	.000	.250	.500	.000	.750	.000	.750	.000	.250	.000	.250	.000	.500	.000	.500	.833

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
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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.	2	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	3	0	1	4	0	3	0	3	0	1	0	1	0	2	0	2
% App. Total	75	0	25		0	100	0		0	100	0		0	100	0	
PHF	.375	.000	.250	.500	.000	.750	.000	.750	.000	.250	.000	.250	.000	.500	.000	.500

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

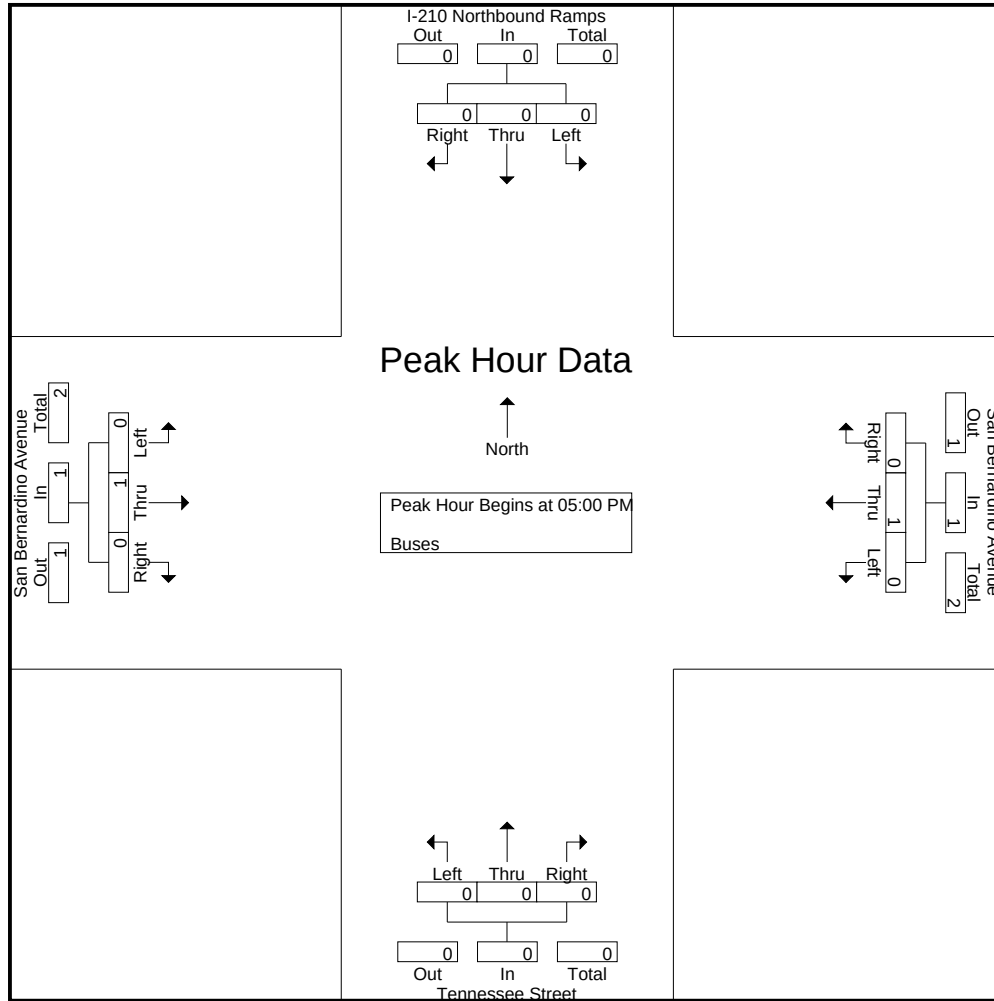
Groups Printed- Buses

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	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	1	0	1	1
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	1	0	1	0	0	0	0	0	1	0	1	2
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	1	0	1	2
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	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

	I-210 Northbound Ramps Southbound				San Bernardino Avenue Westbound				Tennessee 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	1	0	1	2
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	1	0	1	0	0	0	0	0	1	0	1	2
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.250

City of Redlands
N/S: I-210 NB Ramps/Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 01_RED_210N_San B PM
Site Code : 12223608
Start Date : 6/7/2023
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	1	0	1
+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	1	0	1	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	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

Location: San Bernardino
 N/S: I-210 NB Ramps/Tennessee St
 E/W: San Bernardino Avenue



Date: 6/7/2023
 Day: Wednesday

PEDESTRIANS

	North Leg I-210 NB Ramps	East Leg San Bernardino Avenue	South Leg Tennessee Street	West Leg San Bernardino Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg I-210 NB Ramps	East Leg San Bernardino Avenue	South Leg Tennessee Street	West Leg San Bernardino Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	2	0	2
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	1	0	2	0	3

Location: San Bernardino
 N/S: I-210 NB Ramps/Tennessee St
 E/W: San Bernardino Avenue



Date: 6/7/2023
 Day: Wednesday

BICYCLES

	Southbound I-210 NB Ramps			Westbound San Bernardino Avenue			Northbound Tennessee Street			Eastbound San Bernardino Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound I-210 NB Ramps			Westbound San Bernardino Avenue			Northbound Tennessee Street			Eastbound San Bernardino Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
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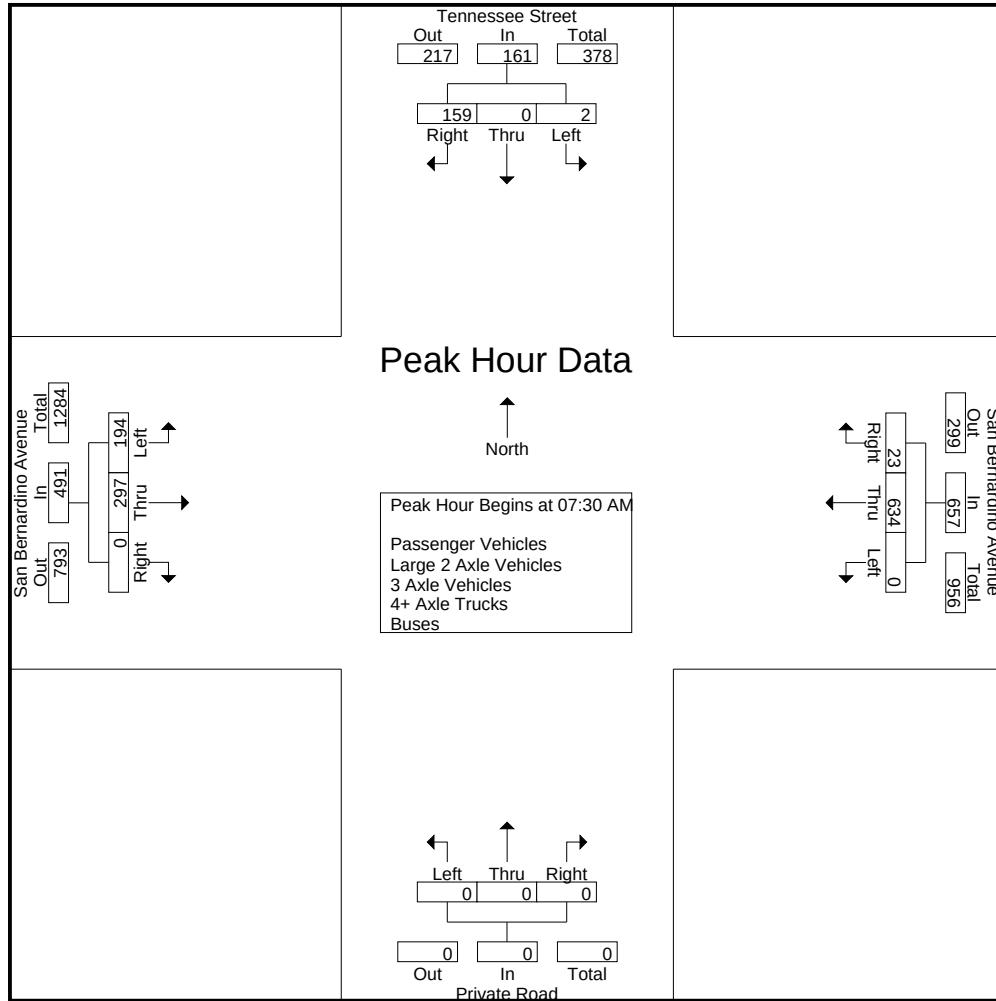
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	12	12	0	138	3	141	0	0	0	0	10	46	0	56	209
07:15 AM	2	0	20	22	0	166	4	170	0	0	0	0	27	65	0	92	284
07:30 AM	0	0	27	27	0	177	1	178	0	0	0	0	28	75	0	103	308
07:45 AM	1	0	25	26	0	179	4	183	0	0	0	0	36	65	0	101	310
Total	3	0	84	87	0	660	12	672	0	0	0	0	101	251	0	352	1111
08:00 AM	1	0	46	47	0	127	8	135	0	0	0	0	62	79	0	141	323
08:15 AM	0	0	61	61	0	151	10	161	0	0	0	0	68	78	0	146	368
08:30 AM	3	0	37	40	0	130	0	130	0	0	0	0	19	81	0	100	270
08:45 AM	0	0	9	9	0	118	2	120	0	0	0	0	11	64	0	75	204
Total	4	0	153	157	0	526	20	546	0	0	0	0	160	302	0	462	1165
Grand Total	7	0	237	244	0	1186	32	1218	0	0	0	0	261	553	0	814	2276
Apprch %	2.9	0	97.1		0	97.4	2.6		0	0	0		32.1	67.9	0		
Total %	0.3	0	10.4	10.7	0	52.1	1.4	53.5	0	0	0	0	11.5	24.3	0	35.8	
Passenger Vehicles	6	0	233	239	0	1152	32	1184	0	0	0	0	258	522	0	780	2203
% Passenger Vehicles	85.7	0	98.3	98	0	97.1	100	97.2	0	0	0	0	98.9	94.4	0	95.8	96.8
Large 2 Axle Vehicles	1	0	0	1	0	8	0	8	0	0	0	0	0	7	0	7	16
% Large 2 Axle Vehicles	14.3	0	0	0.4	0	0.7	0	0.7	0	0	0	0	0	1.3	0	0.9	0.7
3 Axle Vehicles	0	0	1	1	0	13	0	13	0	0	0	0	1	7	0	8	22
% 3 Axle Vehicles	0	0	0.4	0.4	0	1.1	0	1.1	0	0	0	0	0.4	1.3	0	1	1
4+ Axle Trucks	0	0	3	3	0	8	0	8	0	0	0	0	0	11	0	11	22
% 4+ Axle Trucks	0	0	1.3	1.2	0	0.7	0	0.7	0	0	0	0	0	2	0	1.4	1
Buses	0	0	0	0	0	5	0	5	0	0	0	0	2	6	0	8	13
% Buses	0	0	0	0	0	0.4	0	0.4	0	0	0	0	0.8	1.1	0	1	0.6

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	0	0	27	27	0	177	1	178	0	0	0	0	28	75	0	103	308
07:45 AM	1	0	25	26	0	179	4	183	0	0	0	0	36	65	0	101	310
08:00 AM	1	0	46	47	0	127	8	135	0	0	0	0	62	79	0	141	323
08:15 AM	0	0	61	61	0	151	10	161	0	0	0	0	68	78	0	146	368
Total Volume	2	0	159	161	0	634	23	657	0	0	0	0	194	297	0	491	1309
% App. Total	1.2	0	98.8		0	96.5	3.5		0	0	0		39.5	60.5	0		
PHF	.500	.000	.652	.660	.000	.885	.575	.898	.000	.000	.000	.000	.713	.940	.000	.841	.889

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

File Name : 02_RED_Ten_San B AM
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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				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	1	0	25	26	0	138	3	141	0	0	0	0	28	75	0	103
+15 mins.	1	0	46	47	0	166	4	170	0	0	0	0	36	65	0	101
+30 mins.	0	0	61	61	0	177	1	178	0	0	0	0	62	79	0	141
+45 mins.	3	0	37	40	0	179	4	183	0	0	0	0	68	78	0	146
Total Volume	5	0	169	174	0	660	12	672	0	0	0	0	194	297	0	491
% App. Total	2.9	0	97.1		0	98.2	1.8		0	0	0		39.5	60.5	0	
PHF	.417	.000	.693	.713	.000	.922	.750	.918	.000	.000	.000	.000	.713	.940	.000	.841

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
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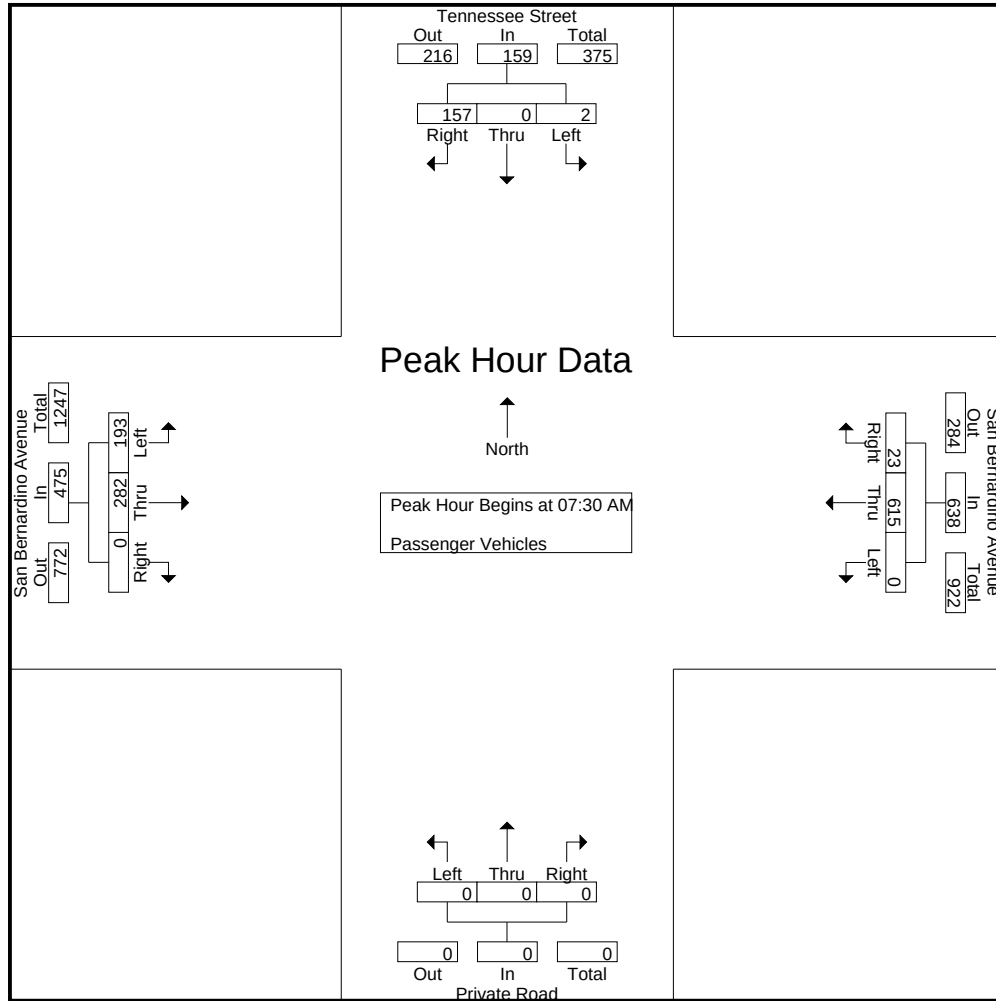
Groups Printed- Passenger Vehicles

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	11	11	0	136	3	139	0	0	0	0	9	44	0	53	203
07:15 AM	1	0	20	21	0	161	4	165	0	0	0	0	27	57	0	84	270
07:30 AM	0	0	27	27	0	171	1	172	0	0	0	0	28	70	0	98	297
07:45 AM	1	0	24	25	0	175	4	179	0	0	0	0	35	62	0	97	301
Total	2	0	82	84	0	643	12	655	0	0	0	0	99	233	0	332	1071
08:00 AM	1	0	45	46	0	120	8	128	0	0	0	0	62	77	0	139	313
08:15 AM	0	0	61	61	0	149	10	159	0	0	0	0	68	73	0	141	361
08:30 AM	3	0	37	40	0	126	0	126	0	0	0	0	19	78	0	97	263
08:45 AM	0	0	8	8	0	114	2	116	0	0	0	0	10	61	0	71	195
Total	4	0	151	155	0	509	20	529	0	0	0	0	159	289	0	448	1132
Grand Total	6	0	233	239	0	1152	32	1184	0	0	0	0	258	522	0	780	2203
Apprch %	2.5	0	97.5		0	97.3	2.7		0	0	0		33.1	66.9	0		
Total %	0.3	0	10.6	10.8	0	52.3	1.5	53.7	0	0	0	0	11.7	23.7	0	35.4	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	27	27	0	171	1	172	0	0	0	0	28	70	0	98	297
07:45 AM	1	0	24	25	0	175	4	179	0	0	0	0	35	62	0	97	301
08:00 AM	1	0	45	46	0	120	8	128	0	0	0	0	62	77	0	139	313
08:15 AM	0	0	61	61	0	149	10	159	0	0	0	0	68	73	0	141	361
Total Volume	2	0	157	159	0	615	23	638	0	0	0	0	193	282	0	475	1272
% App. Total	1.3	0	98.7		0	96.4	3.6		0	0	0		40.6	59.4	0		
PHF	.500	.000	.643	.652	.000	.879	.575	.891	.000	.000	.000	.000	.710	.916	.000	.842	.881

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
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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	27	27	0	171	1	172	0	0	0	0	28	70	0	98
+15 mins.	1	0	24	25	0	175	4	179	0	0	0	0	35	62	0	97
+30 mins.	1	0	45	46	0	120	8	128	0	0	0	0	62	77	0	139
+45 mins.	0	0	61	61	0	149	10	159	0	0	0	0	68	73	0	141
Total Volume	2	0	157	159	0	615	23	638	0	0	0	0	193	282	0	475
% App. Total	1.3	0	98.7		0	96.4	3.6		0	0	0		40.6	59.4	0	
PHF	.500	.000	.643	.652	.000	.879	.575	.891	.000	.000	.000	.000	.710	.916	.000	.842

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
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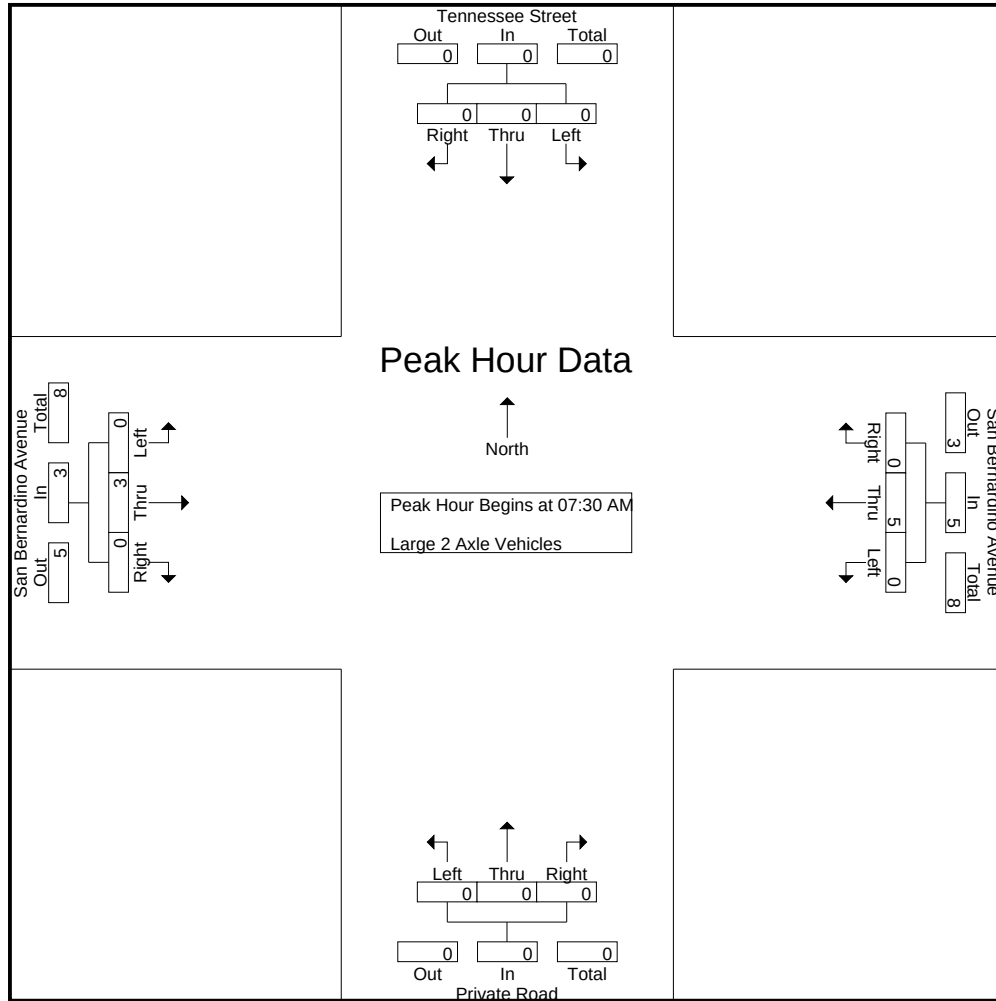
Groups Printed- Large 2 Axle Vehicles

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	1	0	0	1	0	2	0	2	0	0	0	0	0	2	0	2	5
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	4	0	4	0	0	0	0	0	4	0	4	9
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	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	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
Grand Total	1	0	0	1	0	8	0	8	0	0	0	0	0	7	0	7	16
Apprch %	100	0	0		0	100	0		0	0	0		0	100	0		
Total %	6.2	0	0	6.2	0	50	0	50	0	0	0	0	0	43.8	0	43.8	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	1	0	1	0	0	0	0	0	1	0	1	2
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	3	0	3	0	0	0	0	0	0	0	0	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	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.417	.000	.417	.000	.000	.000	.000	.000	.375	.000	.375	.667

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
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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	1	0	1	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	3	0	3	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.417	.000	.417	.000	.000	.000	.000	.000	.375	.000	.375

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
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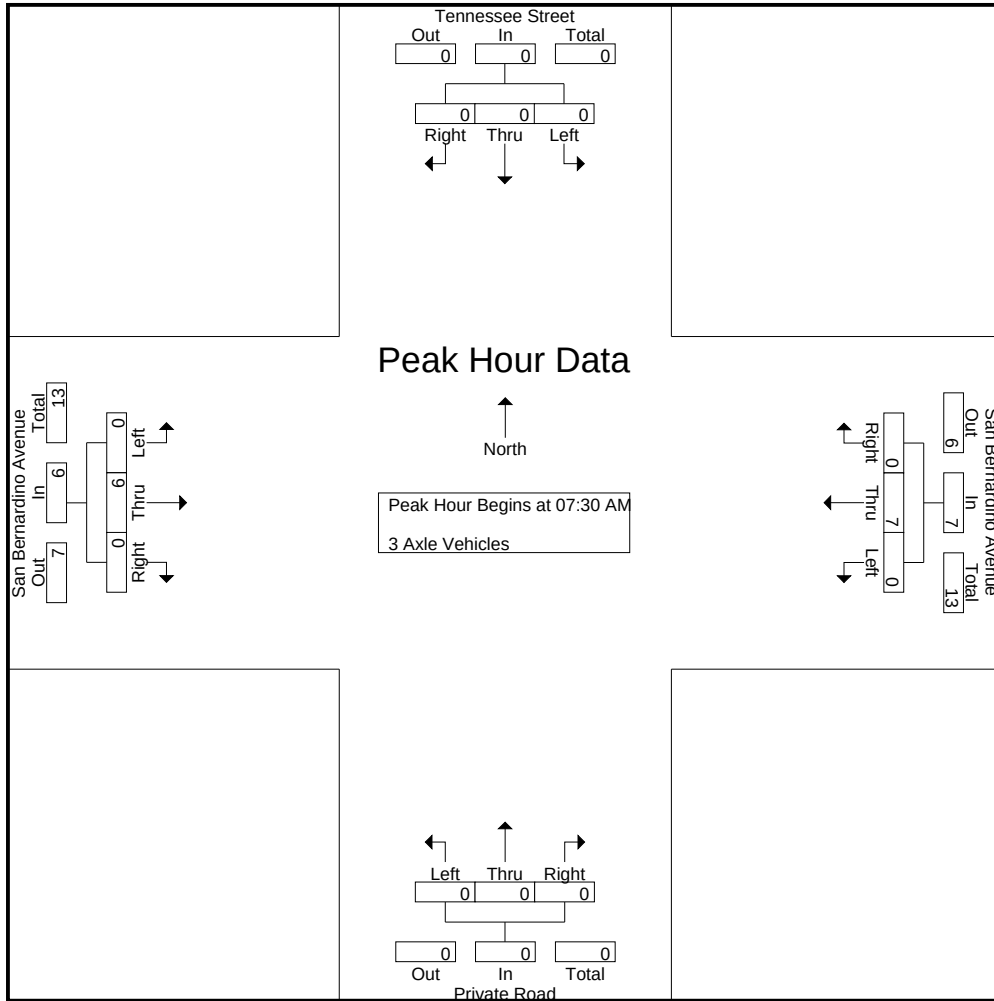
Groups Printed- 3 Axle Vehicles

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	1	1	0	2	0	2	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	1	1	0	7	0	7	0	0	0	0	0	7	0	7	15
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	2	0	2	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	1	3
Total	0	0	0	0	0	6	0	6	0	0	0	0	1	0	0	1	7
Grand Total	0	0	1	1	0	13	0	13	0	0	0	0	1	7	0	8	22
Apprch %	0	0	100		0	100	0		0	0	0		12.5	87.5	0		
Total %	0	0	4.5	4.5	0	59.1	0	59.1	0	0	0	0	4.5	31.8	0	36.4	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	3	0	3	0	0	0	0	0	3	0	3	6
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
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	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	7	0	7	0	0	0	0	0	6	0	6	13
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.583	.000	.583	.000	.000	.000	.000	.000	.500	.000	.500	.542

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
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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	3	0	3	0	0	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3
+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	7	0	7	0	0	0	0	0	6	0	6
% App. Total	0	0	0	0	0	100	0		0	0	0	0	0	100	0	
PHF	.000	.000	.000	.000	.000	.583	.000	.583	.000	.000	.000	.000	.000	.500	.000	.500

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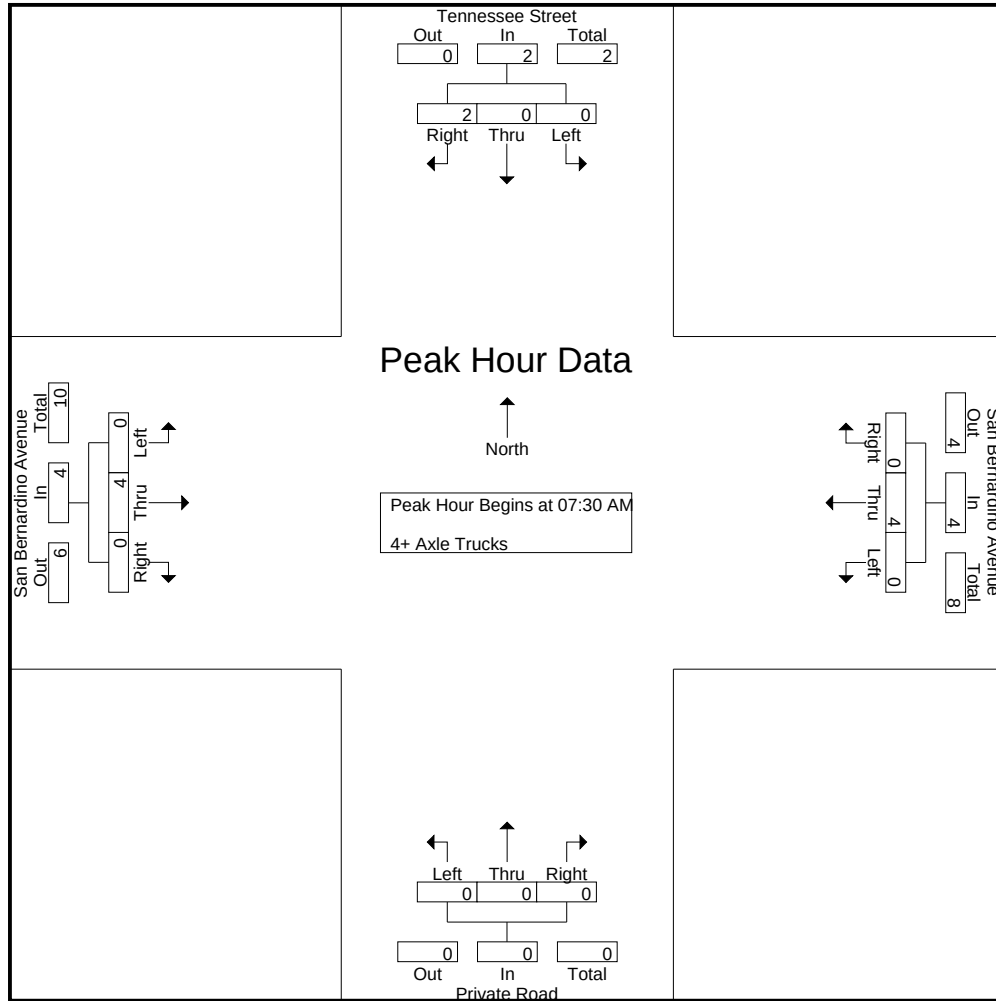
Groups Printed- 4+ Axle Trucks

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	0	0	1	1	0	3	0	3	0	0	0	0	0	4	0	4	8
08:00 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	1	0	1	4
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	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
08:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	0	2	2	0	5	0	5	0	0	0	0	0	7	0	7	14
Grand Total	0	0	3	3	0	8	0	8	0	0	0	0	0	11	0	11	22
Apprch %	0	0	100		0	100	0		0	0	0		0	100	0		
Total %	0	0	13.6	13.6	0	36.4	0	36.4	0	0	0	0	0	50	0	50	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	1	0	1	0	0	0	0	0	1	0	1	2
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	1	0	1	4
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	4	0	4	0	0	0	0	0	4	0	4	10
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.500	.500	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.625

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

File Name : 02_RED_Ten_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	1	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	1	1	0	2	0	2	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	4	0	4	0	0	0	0	0	4	0	4
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.500	.500	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

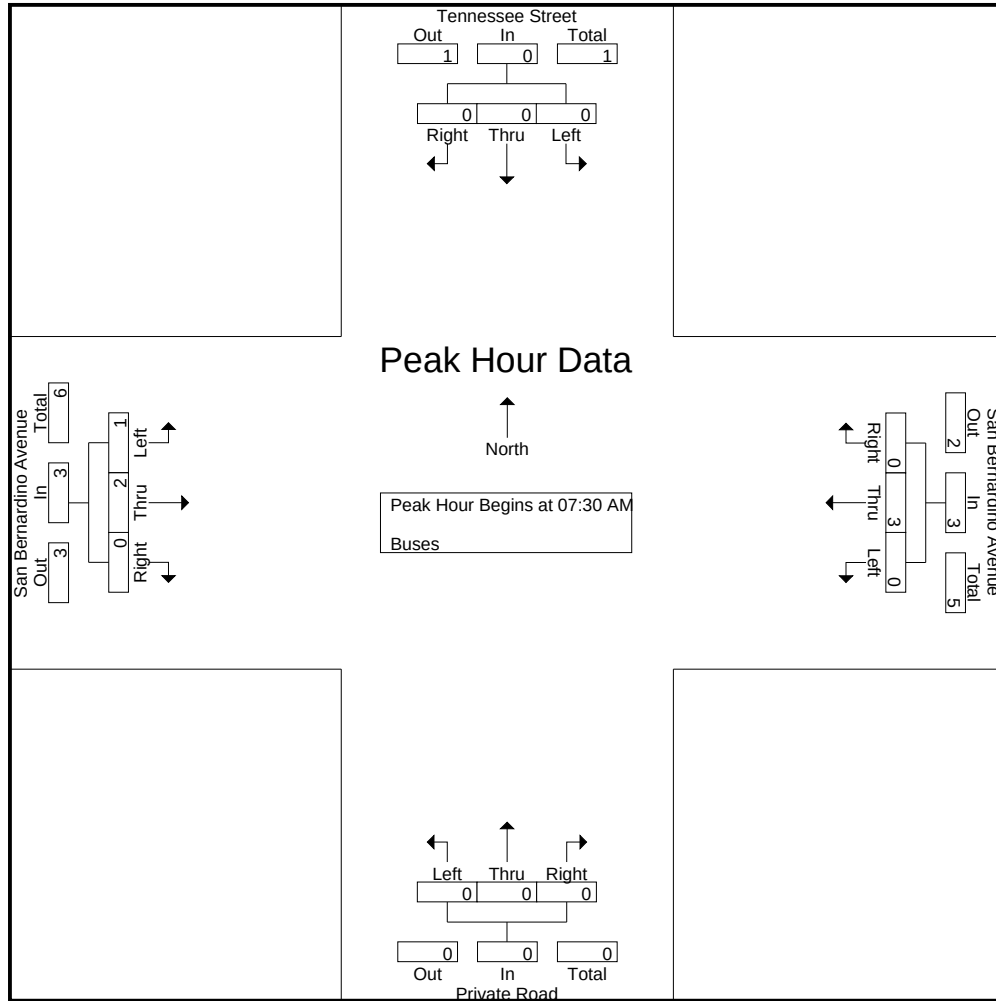
Groups Printed- Buses

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	1	0	0	1	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	3	0	3	0	0	0	0	2	3	0	5	8
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
Grand Total	0	0	0	0	0	5	0	5	0	0	0	0	2	6	0	8	13
Apprch %	0	0	0		0	100	0		0	0	0		25	75	0		
Total %	0	0	0	0	0	38.5	0	38.5	0	0	0	0	15.4	46.2	0	61.5	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	1	2	0	3	6
% App. Total	0	0	0		0	100	0		0	0	0		33.3	66.7	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.250	.500	.000	.750	.750

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

File Name : 02_RED_Ten_San B AM
Site Code : 12223608
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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	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	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	1	0	1
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	1	2	0	3
% App. Total	0	0	0	0	0	100	0		0	0	0	0	33.3	66.7	0	
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.250	.500	.000	.750

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

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
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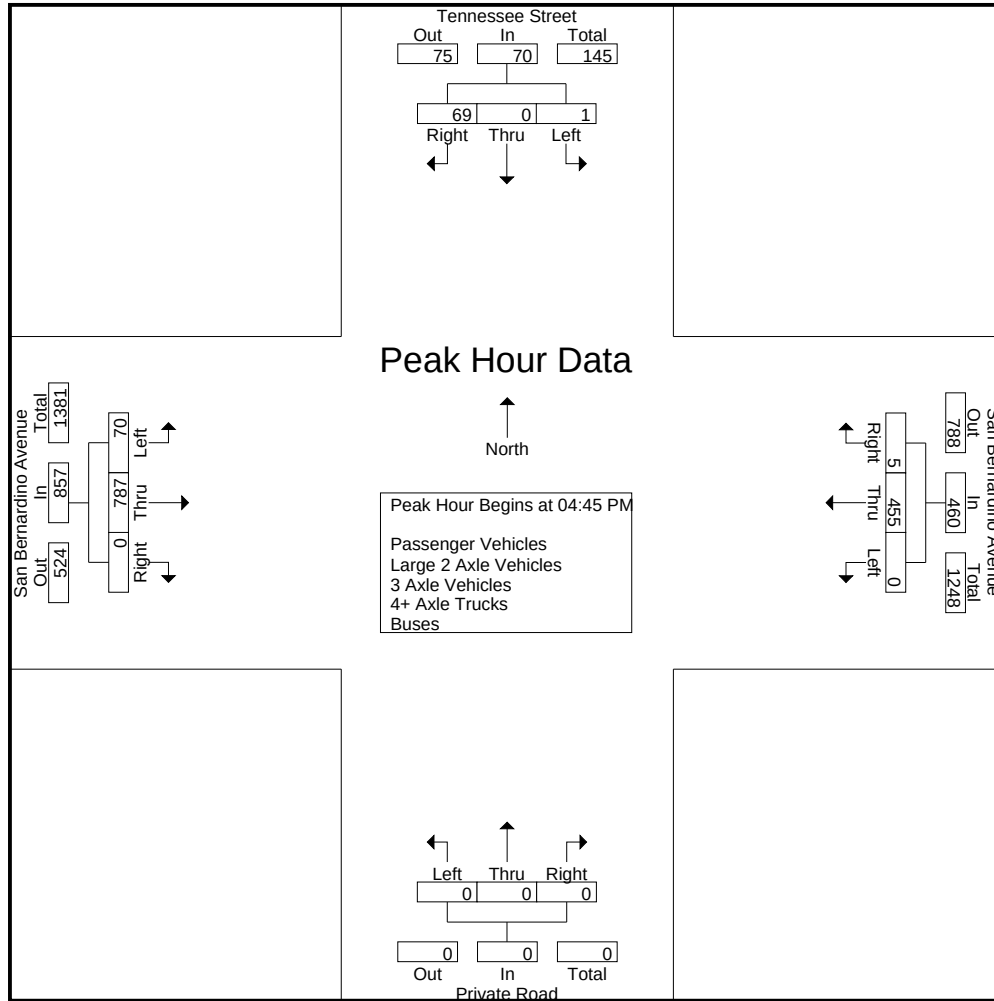
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	25	25	0	94	0	94	0	0	0	0	12	133	0	145	264
04:15 PM	0	0	17	17	0	138	2	140	0	0	0	0	14	151	0	165	322
04:30 PM	1	0	18	19	0	105	1	106	0	0	0	0	15	158	0	173	298
04:45 PM	1	0	13	14	0	114	1	115	0	0	0	0	21	173	0	194	323
Total	2	0	73	75	0	451	4	455	0	0	0	0	62	615	0	677	1207
05:00 PM	0	0	14	14	0	104	1	105	0	0	0	0	19	191	0	210	329
05:15 PM	0	0	18	18	0	119	1	120	0	0	0	0	14	219	0	233	371
05:30 PM	0	0	24	24	0	118	2	120	0	0	0	0	16	204	0	220	364
05:45 PM	0	0	19	19	0	103	2	105	0	0	0	0	8	171	0	179	303
Total	0	0	75	75	0	444	6	450	0	0	0	0	57	785	0	842	1367
Grand Total	2	0	148	150	0	895	10	905	0	0	0	0	119	1400	0	1519	2574
Apprch %	1.3	0	98.7		0	98.9	1.1		0	0	0		7.8	92.2	0		
Total %	0.1	0	5.7	5.8	0	34.8	0.4	35.2	0	0	0	0	4.6	54.4	0	59	
Passenger Vehicles	2	0	146	148	0	876	10	886	0	0	0	0	115	1377	0	1492	2526
% Passenger Vehicles	100	0	98.6	98.7	0	97.9	100	97.9	0	0	0	0	96.6	98.4	0	98.2	98.1
Large 2 Axle Vehicles	0	0	1	1	0	8	0	8	0	0	0	0	0	9	0	9	18
% Large 2 Axle Vehicles	0	0	0.7	0.7	0	0.9	0	0.9	0	0	0	0	0	0.6	0	0.6	0.7
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	1	1	0	8	0	8	0	0	0	0	4	12	0	16	25
% 4+ Axle Trucks	0	0	0.7	0.7	0	0.9	0	0.9	0	0	0	0	3.4	0.9	0	1.1	1
Buses	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
% Buses	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0	0.1	0	0.1	0.2

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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 04:45 PM																	
04:45 PM	1	0	13	14	0	114	1	115	0	0	0	0	21	173	0	194	323
05:00 PM	0	0	14	14	0	104	1	105	0	0	0	0	19	191	0	210	329
05:15 PM	0	0	18	18	0	119	1	120	0	0	0	0	14	219	0	233	371
05:30 PM	0	0	24	24	0	118	2	120	0	0	0	0	16	204	0	220	364
Total Volume	1	0	69	70	0	455	5	460	0	0	0	0	70	787	0	857	1387
% App. Total	1.4	0	98.6		0	98.9	1.1		0	0	0		8.2	91.8	0		
PHF	.250	.000	.719	.729	.000	.956	.625	.958	.000	.000	.000	.000	.833	.898	.000	.920	.935

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

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
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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:

	04:00 PM				04:15 PM				04:00 PM				04:45 PM			
+0 mins.	0	0	25	25	0	138	2	140	0	0	0	0	21	173	0	194
+15 mins.	0	0	17	17	0	105	1	106	0	0	0	0	19	191	0	210
+30 mins.	1	0	18	19	0	114	1	115	0	0	0	0	14	219	0	233
+45 mins.	1	0	13	14	0	104	1	105	0	0	0	0	16	204	0	220
Total Volume	2	0	73	75	0	461	5	466	0	0	0	0	70	787	0	857
% App. Total	2.7	0	97.3		0	98.9	1.1		0	0	0		8.2	91.8	0	
PHF	.500	.000	.730	.750	.000	.835	.625	.832	.000	.000	.000	.000	.833	.898	.000	.920

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

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

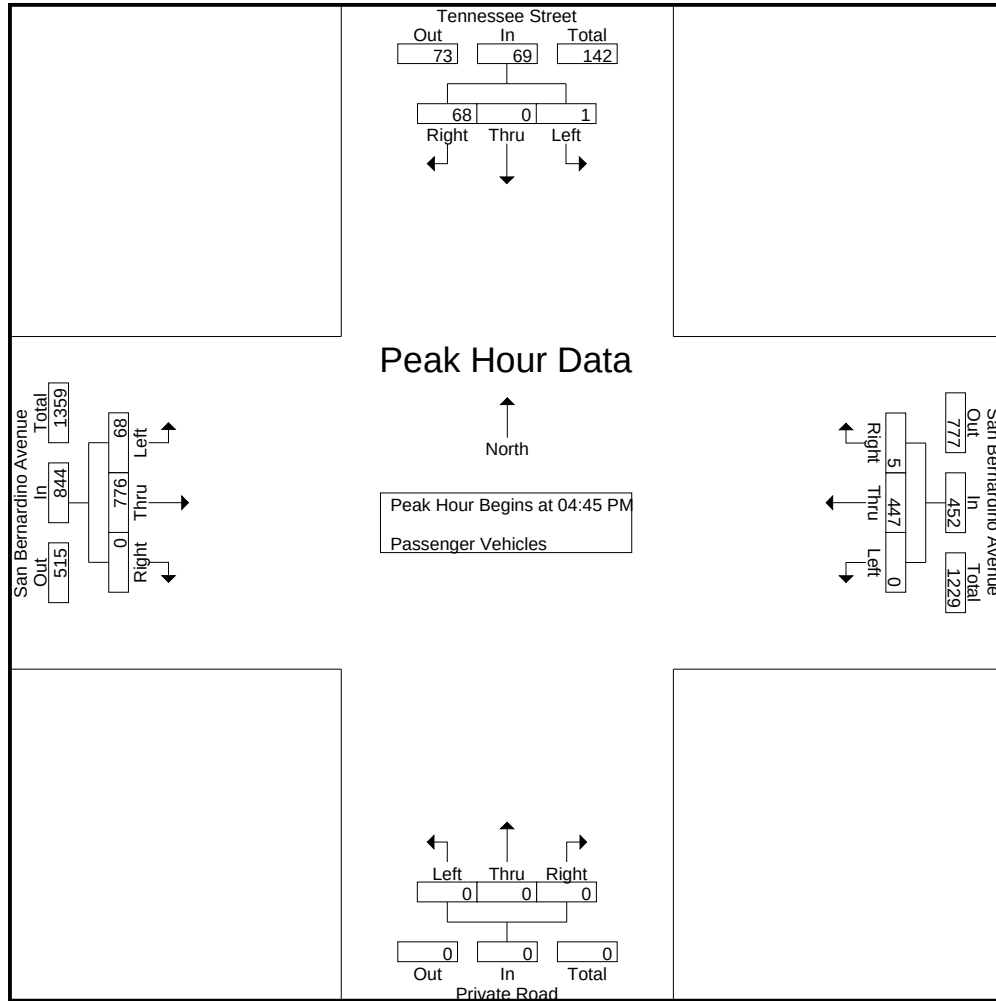
Groups Printed- Passenger Vehicles

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	25	25	0	93	0	93	0	0	0	0	11	127	0	138	256
04:15 PM	0	0	17	17	0	135	2	137	0	0	0	0	14	148	0	162	316
04:30 PM	1	0	17	18	0	101	1	102	0	0	0	0	14	157	0	171	291
04:45 PM	1	0	13	14	0	110	1	111	0	0	0	0	20	170	0	190	315
Total	2	0	72	74	0	439	4	443	0	0	0	0	59	602	0	661	1178
05:00 PM	0	0	14	14	0	103	1	104	0	0	0	0	19	186	0	205	323
05:15 PM	0	0	18	18	0	118	1	119	0	0	0	0	14	218	0	232	369
05:30 PM	0	0	23	23	0	116	2	118	0	0	0	0	15	202	0	217	358
05:45 PM	0	0	19	19	0	100	2	102	0	0	0	0	8	169	0	177	298
Total	0	0	74	74	0	437	6	443	0	0	0	0	56	775	0	831	1348
Grand Total	2	0	146	148	0	876	10	886	0	0	0	0	115	1377	0	1492	2526
Apprch %	1.4	0	98.6		0	98.9	1.1		0	0	0		7.7	92.3	0		
Total %	0.1	0	5.8	5.9	0	34.7	0.4	35.1	0	0	0	0	4.6	54.5	0	59.1	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	0	13	14	0	110	1	111	0	0	0	0	20	170	0	190	315
05:00 PM	0	0	14	14	0	103	1	104	0	0	0	0	19	186	0	205	323
05:15 PM	0	0	18	18	0	118	1	119	0	0	0	0	14	218	0	232	369
05:30 PM	0	0	23	23	0	116	2	118	0	0	0	0	15	202	0	217	358
Total Volume	1	0	68	69	0	447	5	452	0	0	0	0	68	776	0	844	1365
% App. Total	1.4	0	98.6		0	98.9	1.1		0	0	0		8.1	91.9	0		
PHF	.250	.000	.739	.750	.000	.947	.625	.950	.000	.000	.000	.000	.850	.890	.000	.909	.925

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

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	1	0	13	14	0	110	1	111	0	0	0	0	20	170	0	190
+15 mins.	0	0	14	14	0	103	1	104	0	0	0	0	19	186	0	205
+30 mins.	0	0	18	18	0	118	1	119	0	0	0	0	14	218	0	232
+45 mins.	0	0	23	23	0	116	2	118	0	0	0	0	15	202	0	217
Total Volume	1	0	68	69	0	447	5	452	0	0	0	0	68	776	0	844
% App. Total	1.4	0	98.6		0	98.9	1.1		0	0	0		8.1	91.9	0	
PHF	.250	.000	.739	.750	.000	.947	.625	.950	.000	.000	.000	.000	.850	.890	.000	.909

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

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
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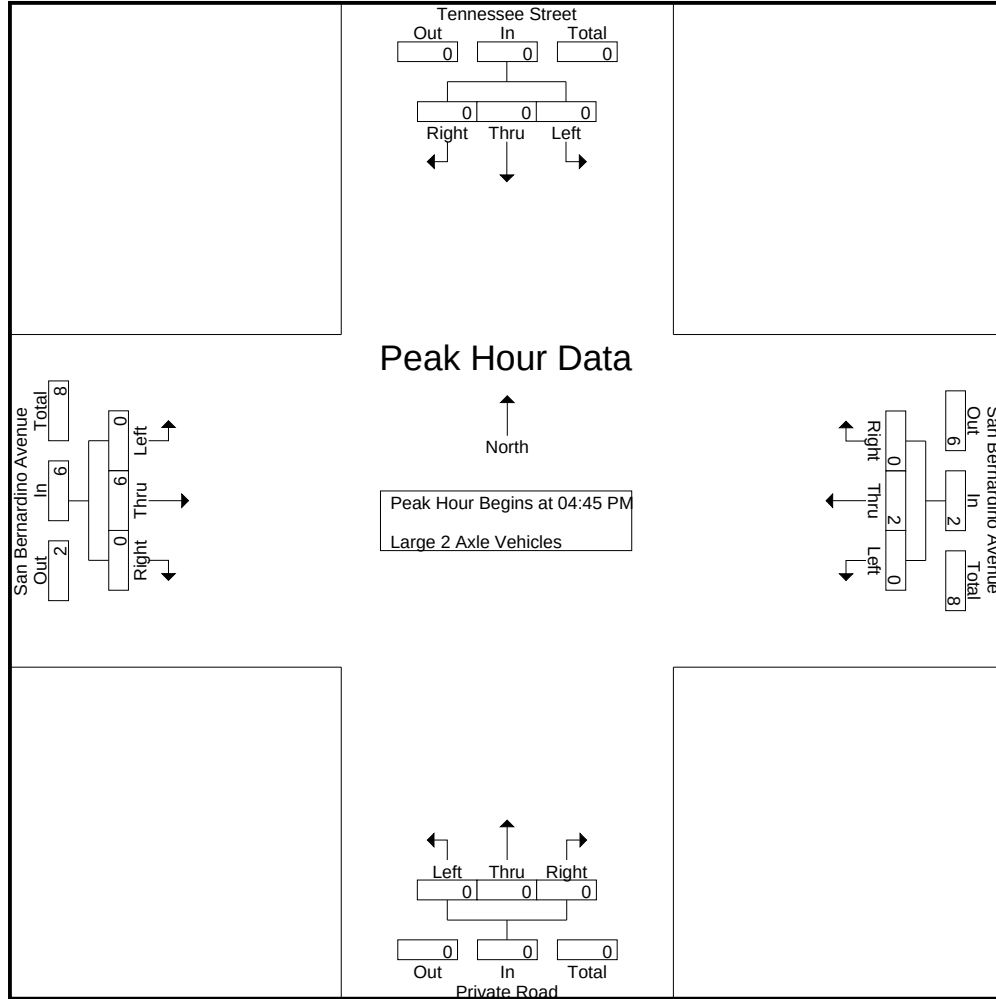
Groups Printed- Large 2 Axle Vehicles

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	0	0	0	0	0	2	0	2	3
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	1	1	0	5	0	5	0	0	0	0	0	4	0	4	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
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	1	0	1	2
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
Grand Total	0	0	1	1	0	8	0	8	0	0	0	0	0	9	0	9	18
Apprch %	0	0	100		0	100	0		0	0	0		0	100	0		
Total %	0	0	5.6	5.6	0	44.4	0	44.4	0	0	0	0	0	50	0	50	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
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	1	0	1	2
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	6	0	6	8
% 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	.500	.000	.500	.667

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

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
+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	1	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	6	0	6
% 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	.500	.000	.500

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

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
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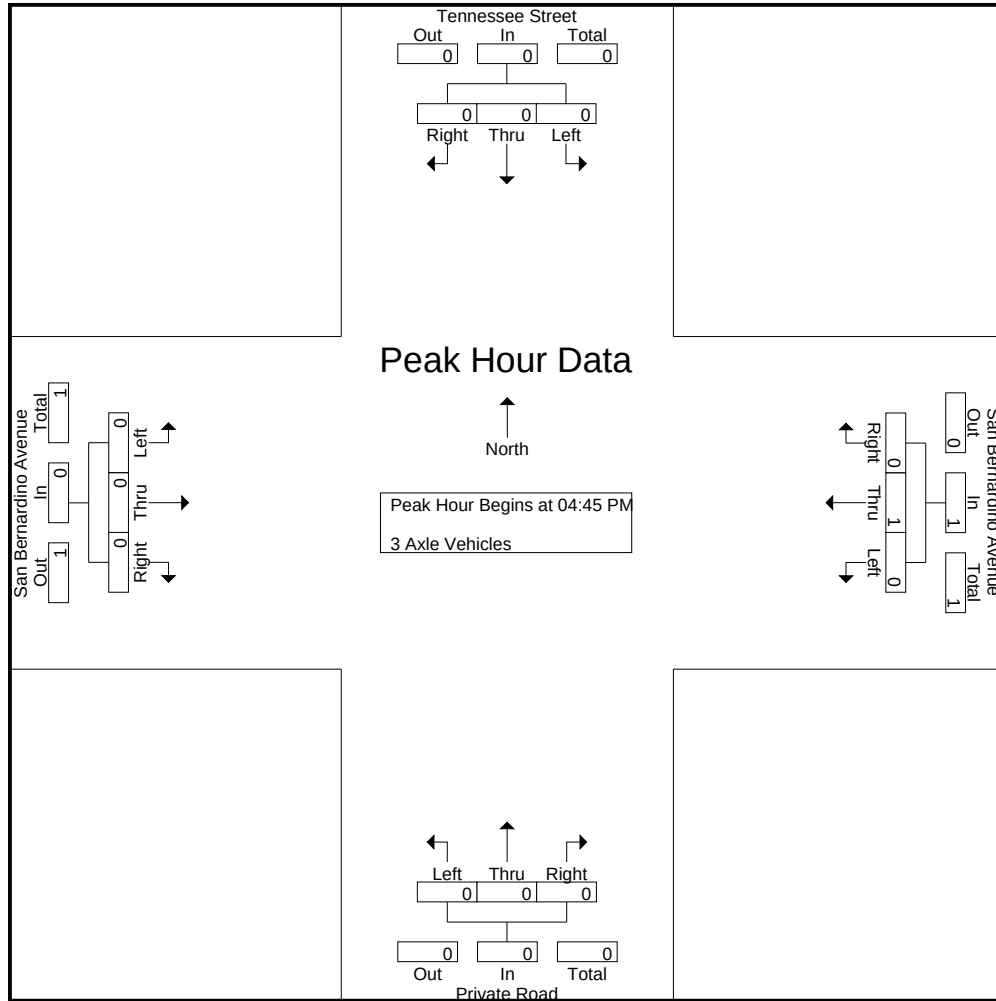
Groups Printed- 3 Axle Vehicles

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	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	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	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	1	0	1	0	0	0	0	0	0	0	0	1
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	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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: Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Ten_San B PM
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 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	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: Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Ten_San B PM
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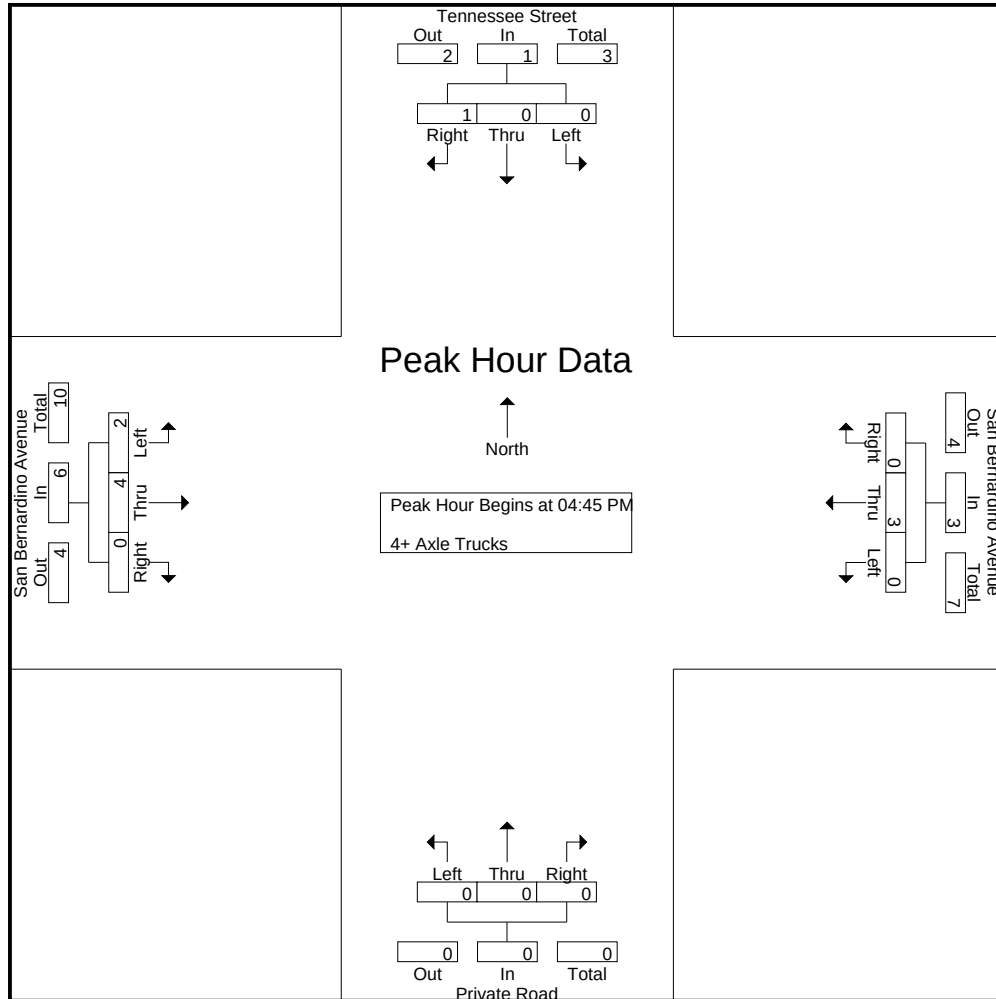
Groups Printed- 4+ Axle Trucks

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	0	0	0	0	0	0	0	1	4	0	5	5
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	1	0	2	5
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
Total	0	0	0	0	0	6	0	6	0	0	0	0	3	8	0	11	17
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	1	1	0	2	0	2	0	0	0	0	1	4	0	5	8
Grand Total	0	0	1	1	0	8	0	8	0	0	0	0	4	12	0	16	25
Apprch %	0	0	100		0	100	0		0	0	0		25	75	0		
Total %	0	0	4	4	0	32	0	32	0	0	0	0	16	48	0	64	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total Volume	0	0	1	1	0	3	0	3	0	0	0	0	2	4	0	6	10
% App. Total	0	0	100		0	100	0		0	0	0		33.3	66.7	0		
PHF	.000	.000	.250	.250	.000	.375	.000	.375	.000	.000	.000	.000	.500	.500	.000	.750	.625

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

File Name : 02_RED_Ten_San B PM
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	0	0	1	1	0	3	0	3	0	0	0	0	2	4	0	6
% App. Total	0	0	100		0	100	0		0	0	0		33.3	66.7	0	
PHF	.000	.000	.250	.250	.000	.375	.000	.375	.000	.000	.000	.000	.500	.500	.000	.750

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

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
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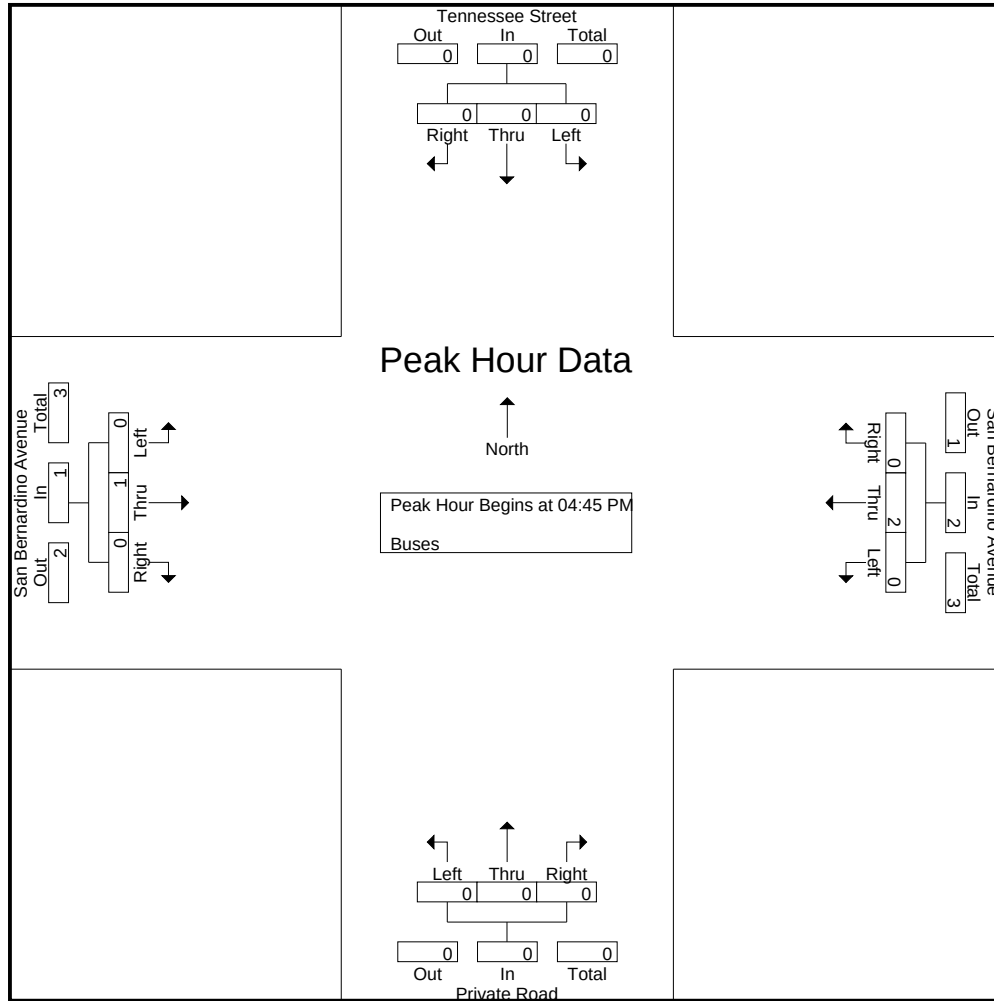
Groups Printed- Buses

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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	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	1	0	1	1
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	1	0	1	0	0	0	0	0	1	0	1	2
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	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
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	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

	Tennessee Street Southbound				San Bernardino Avenue Westbound				Private Road 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	1	0	1	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	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
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: Tennessee Street
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_RED_Ten_San B PM
Site Code : 12223608
Start Date : 6/7/2023
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	1	0	1	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	0	0	0	0	0	0	0	0	1	0	1
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

Location: San Bernardino
 N/S: Tennessee Street
 E/W: San Bernardino Avenue



Date: 6/7/2023
 Day: Wednesday

PEDESTRIANS

		North Leg Tennessee Street	East Leg San Bernardino Avenue	South Leg Private Road	West Leg San Bernardino Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	TOTAL VOLUMES:	0	0	0	0	0

		North Leg Tennessee Street	East Leg San Bernardino Avenue	South Leg Private Road	West Leg San Bernardino Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	1	0	0	0	1
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	1	0	0	0	1
	TOTAL VOLUMES:	2	0	0	0	2

Location: San Bernardino
 N/S: Tennessee Street
 E/W: San Bernardino Avenue



Date: 6/7/2023
 Day: Wednesday

BICYCLES

		Southbound Tennessee Street			Westbound San Bernardino Avenue			Northbound Private Road			Eastbound San Bernardino Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:		0	0	0	0	1	0	0	0	0	0	0	0	1

		Southbound Tennessee Street			Westbound San Bernardino Avenue			Northbound Private Road			Eastbound San Bernardino Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:		0	0	0	0	0	0	0	0	0	0	1	0	1

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

File Name : 04_RED_Ten_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

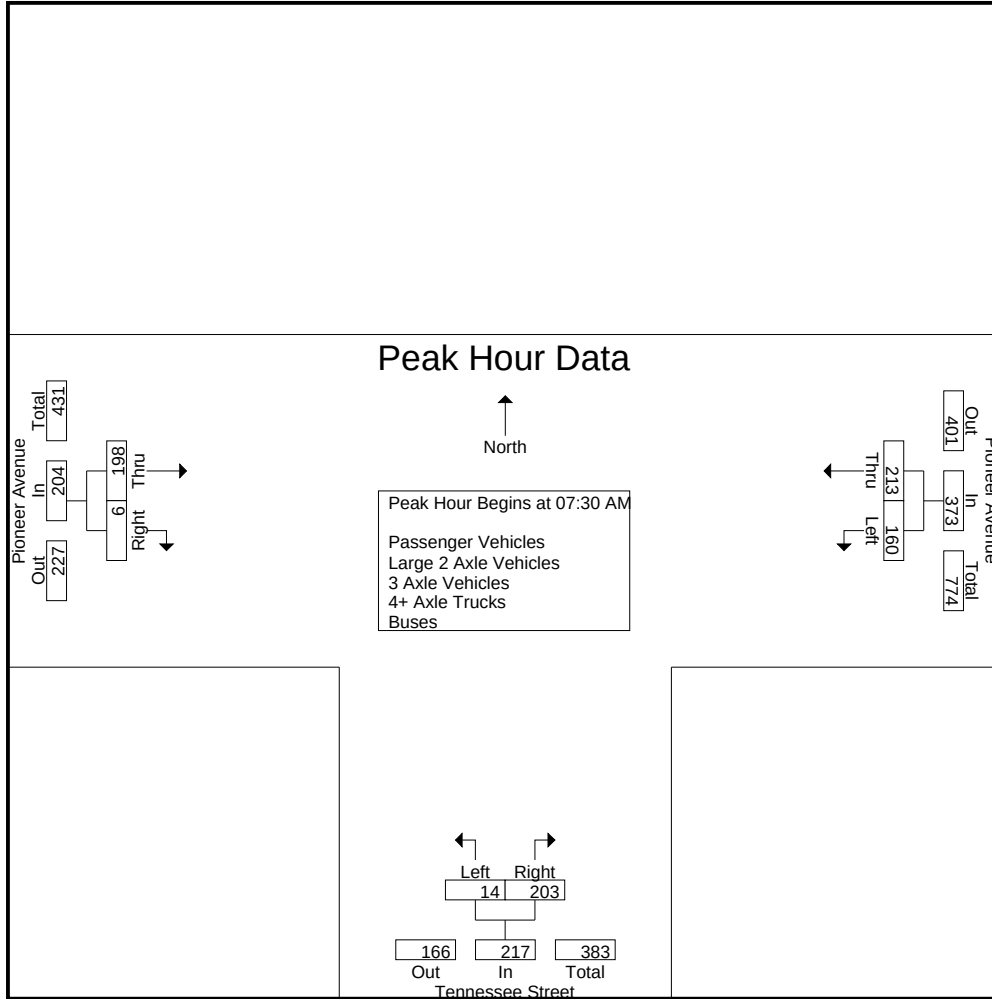
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	12	17	29	3	11	14	15	3	18	61
07:15 AM	17	36	53	4	27	31	16	3	19	103
07:30 AM	25	43	68	3	27	30	25	2	27	125
07:45 AM	28	43	71	4	33	37	18	0	18	126
Total	82	139	221	14	98	112	74	8	82	415
08:00 AM	43	37	80	3	68	71	66	3	69	220
08:15 AM	64	90	154	4	75	79	89	1	90	323
08:30 AM	34	44	78	1	20	21	23	2	25	124
08:45 AM	8	16	24	3	10	13	15	1	16	53
Total	149	187	336	11	173	184	193	7	200	720
Grand Total	231	326	557	25	271	296	267	15	282	1135
Apprch %	41.5	58.5		8.4	91.6		94.7	5.3		
Total %	20.4	28.7	49.1	2.2	23.9	26.1	23.5	1.3	24.8	
Passenger Vehicles	229	323	552	25	268	293	267	12	279	1124
% Passenger Vehicles	99.1	99.1	99.1	100	98.9	99	100	80	98.9	99
Large 2 Axle Vehicles	0	0	0	0	0	0	0	1	1	1
% Large 2 Axle Vehicles	0	0	0	0	0	0	0	6.7	0.4	0.1
3 Axle Vehicles	1	1	2	0	1	1	0	0	0	3
% 3 Axle Vehicles	0.4	0.3	0.4	0	0.4	0.3	0	0	0	0.3
4+ Axle Trucks	1	1	2	0	0	0	0	2	2	4
% 4+ Axle Trucks	0.4	0.3	0.4	0	0	0	0	13.3	0.7	0.4
Buses	0	1	1	0	2	2	0	0	0	3
% Buses	0	0.3	0.2	0	0.7	0.7	0	0	0	0.3

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	25	43	68	3	27	30	25	2	27	125
07:45 AM	28	43	71	4	33	37	18	0	18	126
08:00 AM	43	37	80	3	68	71	66	3	69	220
08:15 AM	64	90	154	4	75	79	89	1	90	323
Total Volume	160	213	373	14	203	217	198	6	204	794
% App. Total	42.9	57.1		6.5	93.5		97.1	2.9		
PHF	.625	.592	.606	.875	.677	.687	.556	.500	.567	.615

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

File Name : 04_RED_Ten_Pio AM
Site Code : 12223608
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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		
+0 mins.	28	43	71	3	27	30	25	2	27
+15 mins.	43	37	80	4	33	37	18	0	18
+30 mins.	64	90	154	3	68	71	66	3	69
+45 mins.	34	44	78	4	75	79	89	1	90
Total Volume	169	214	383	14	203	217	198	6	204
% App. Total	44.1	55.9		6.5	93.5		97.1	2.9	
PHF	.660	.594	.622	.875	.677	.687	.556	.500	.567

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

File Name : 04_RED_Ten_Pio AM
Site Code : 12223608
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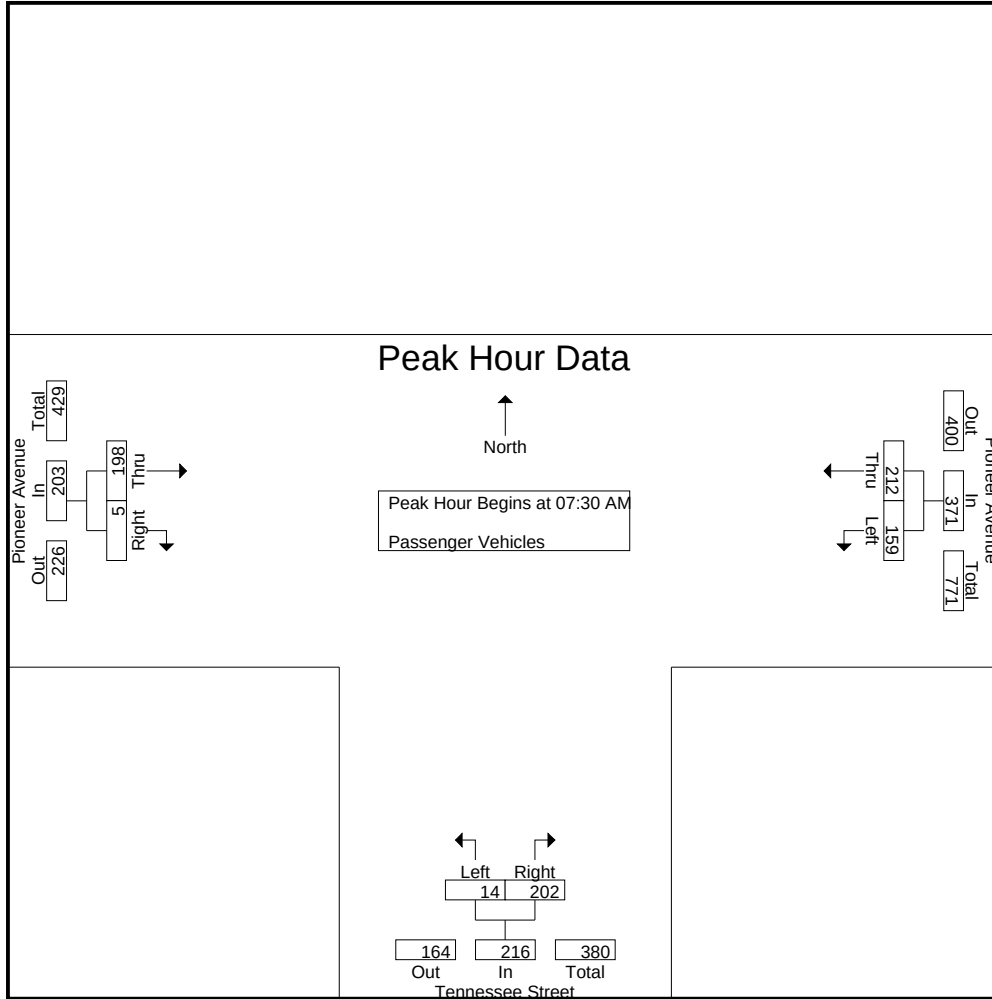
Groups Printed- Passenger Vehicles

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	11	17	28	3	10	13	15	2	17	58
07:15 AM	17	36	53	4	27	31	16	3	19	103
07:30 AM	25	43	68	3	27	30	25	2	27	125
07:45 AM	27	43	70	4	32	36	18	0	18	124
Total	80	139	219	14	96	110	74	7	81	410
08:00 AM	43	37	80	3	68	71	66	2	68	219
08:15 AM	64	89	153	4	75	79	89	1	90	322
08:30 AM	34	42	76	1	20	21	23	2	25	122
08:45 AM	8	16	24	3	9	12	15	0	15	51
Total	149	184	333	11	172	183	193	5	198	714
Grand Total	229	323	552	25	268	293	267	12	279	1124
Apprch %	41.5	58.5		8.5	91.5		95.7	4.3		
Total %	20.4	28.7	49.1	2.2	23.8	26.1	23.8	1.1	24.8	

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	25	43	68	3	27	30	25	2	27	125
07:45 AM	27	43	70	4	32	36	18	0	18	124
08:00 AM	43	37	80	3	68	71	66	2	68	219
08:15 AM	64	89	153	4	75	79	89	1	90	322
Total Volume	159	212	371	14	202	216	198	5	203	790
% App. Total	42.9	57.1		6.5	93.5		97.5	2.5		
PHF	.621	.596	.606	.875	.673	.684	.556	.625	.564	.613

City of Redlands
N/S: Tennessee 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		
+0 mins.	25	43	68	3	27	30	25	2	27
+15 mins.	27	43	70	4	32	36	18	0	18
+30 mins.	43	37	80	3	68	71	66	2	68
+45 mins.	64	89	153	4	75	79	89	1	90
Total Volume	159	212	371	14	202	216	198	5	203
% App. Total	42.9	57.1		6.5	93.5		97.5	2.5	
PHF	.621	.596	.606	.875	.673	.684	.556	.625	.564

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

File Name : 04_RED_Ten_Pio AM
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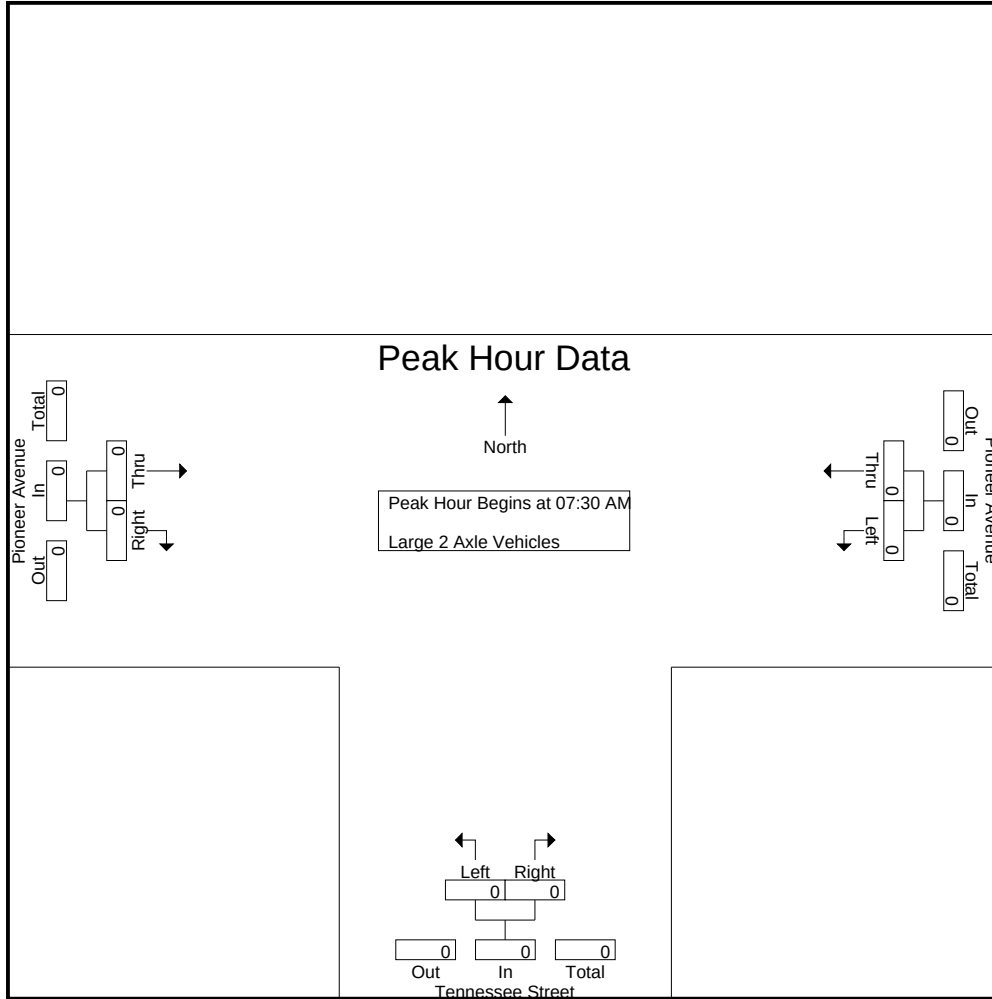
Groups Printed- Large 2 Axle Vehicles

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

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
 N/S: Tennessee 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		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

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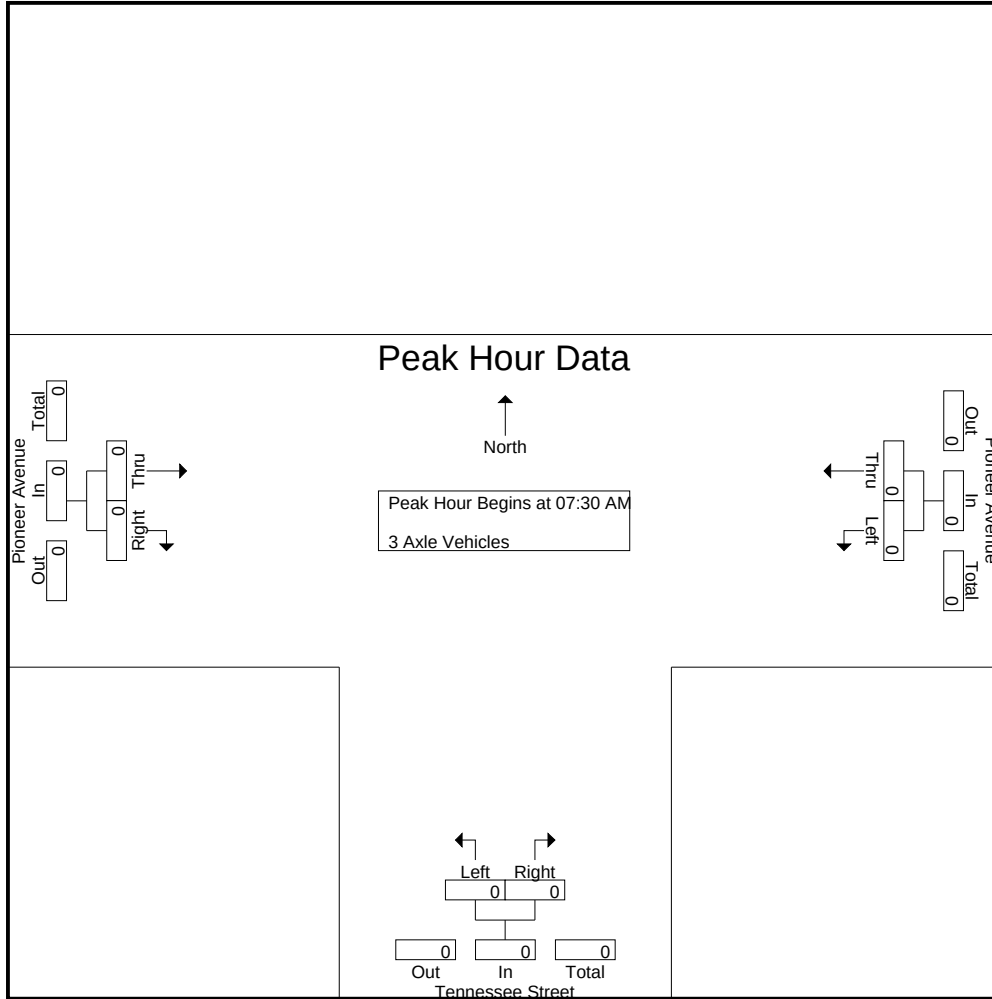
Groups Printed- 3 Axle Vehicles

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	1	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	1	1	0	0	0	1
Total	0	1	1	0	1	1	0	0	0	2
Grand Total	1	1	2	0	1	1	0	0	0	3
Apprch %	50	50		0	100		0	0		
Total %	33.3	33.3	66.7	0	33.3	33.3	0	0	0	

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Redlands
 N/S: Tennessee 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		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

File Name : 04_RED_Ten_Pio AM
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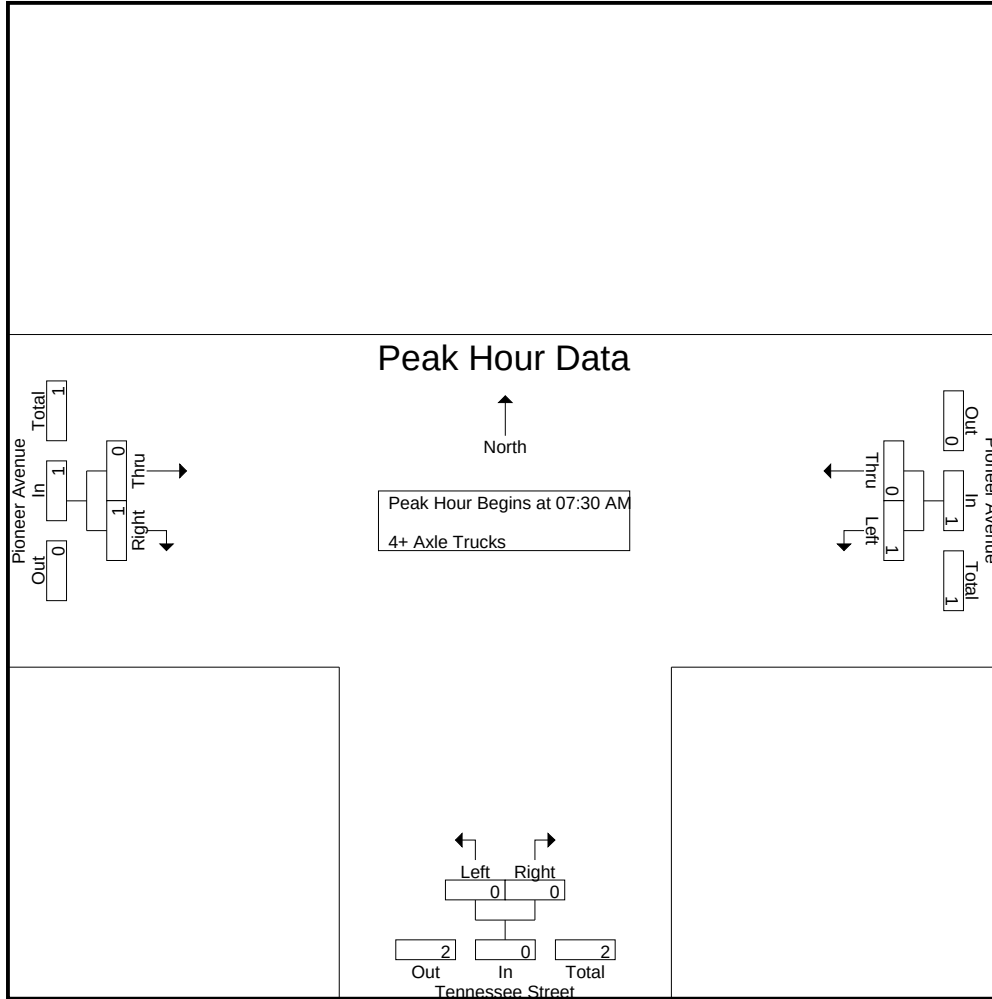
Groups Printed- 4+ Axle Trucks

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	1	0	0	0	0	0	0	1
Total	1	0	1	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	1	1	1
Total	0	1	1	0	0	0	0	2	2	3
Grand Total	1	1	2	0	0	0	0	2	2	4
Apprch %	50	50		0	0		0	100		
Total %	25	25	50	0	0	0	0	50	50	

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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
07:45 AM	1	0	1	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	1	1	2
% App. Total	100	0		0	0		0	100		
PHF	.250	.000	.250	.000	.000	.000	.000	.250	.250	.500

City of Redlands
 N/S: Tennessee 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		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	1	1
% App. Total	100	0		0	0		0	100	
PHF	.250	.000	.250	.000	.000	.000	.000	.250	.250

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

File Name : 04_RED_Ten_Pio AM
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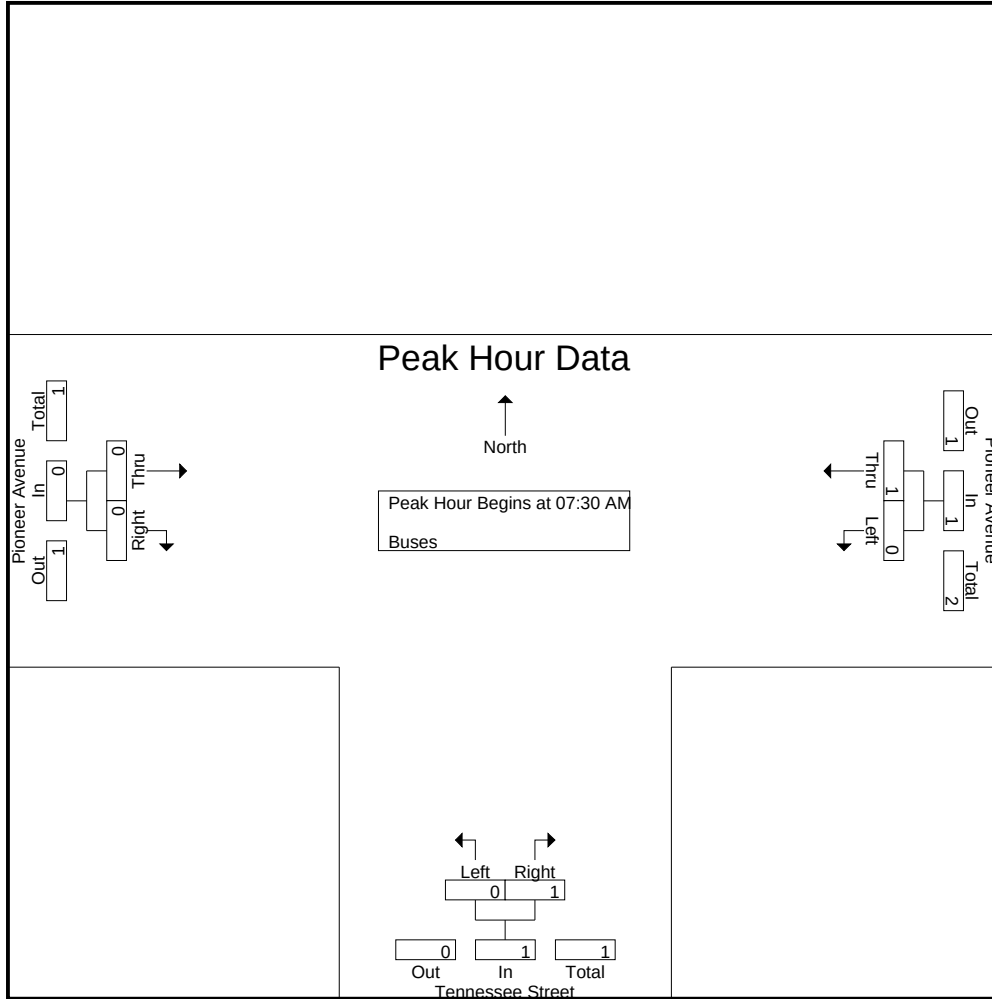
Groups Printed- Buses

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	1	0	0	0	1
Total	0	0	0	0	2	2	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
Grand Total	0	1	1	0	2	2	0	0	0	3
Apprch %	0	100		0	100		0	0		
Total %	0	33.3	33.3	0	66.7	66.7	0	0	0	

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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
07:45 AM	0	0	0	0	1	1	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	1	1	0	1	1	0	0	0	2
% App. Total	0	100		0	100		0	0		
PHF	.000	.250	.250	.000	.250	.250	.000	.000	.000	.500

City of Redlands
 N/S: Tennessee 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		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	1	1	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	1	1	0	1	1	0	0	0
% App. Total	0	100		0	100		0	0	
PHF	.000	.250	.250	.000	.250	.250	.000	.000	.000

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

File Name : 04_RED_Ten_Pio PM
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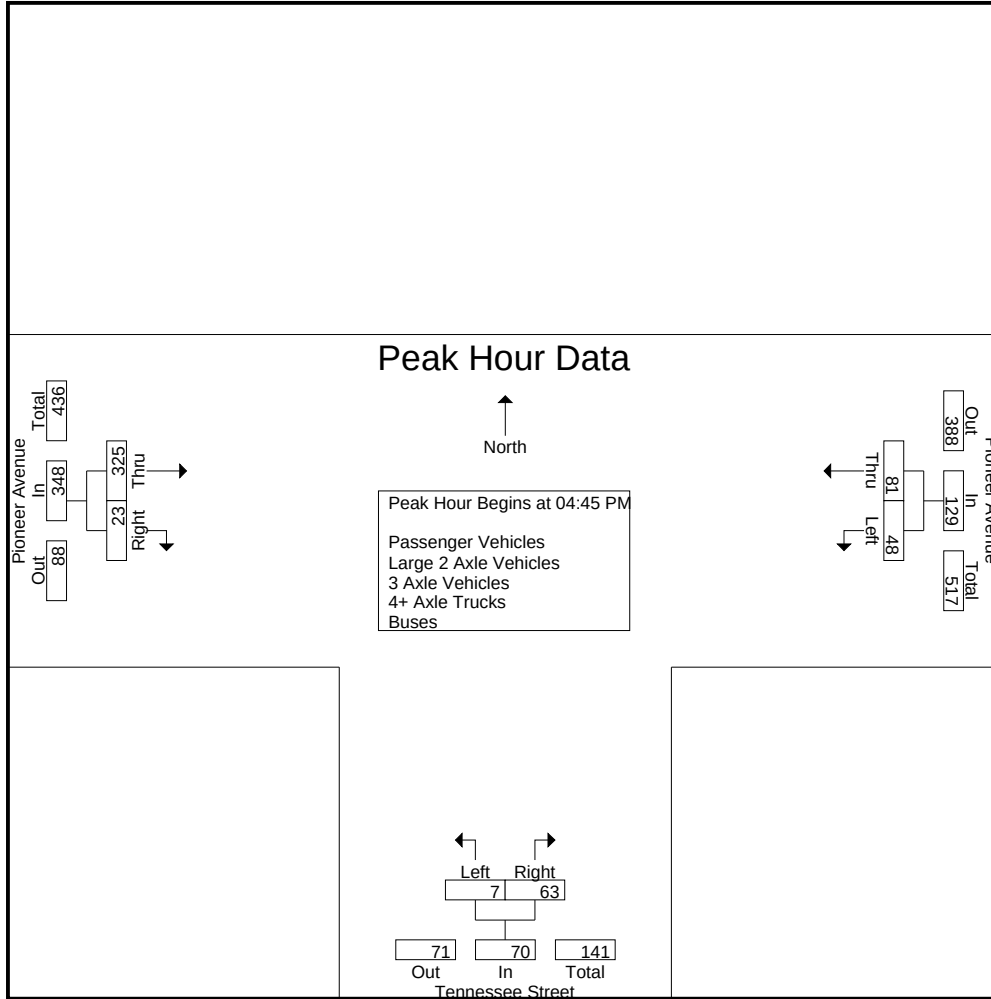
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	18	26	44	3	10	13	41	8	49	106
04:15 PM	13	19	32	3	12	15	82	5	87	134
04:30 PM	10	24	34	3	13	16	63	7	70	120
04:45 PM	9	23	32	0	18	18	74	4	78	128
Total	50	92	142	9	53	62	260	24	284	488
05:00 PM	10	21	31	2	19	21	69	5	74	126
05:15 PM	9	16	25	1	13	14	111	8	119	158
05:30 PM	20	21	41	4	13	17	71	6	77	135
05:45 PM	11	25	36	3	7	10	61	8	69	115
Total	50	83	133	10	52	62	312	27	339	534
Grand Total	100	175	275	19	105	124	572	51	623	1022
Apprch %	36.4	63.6		15.3	84.7		91.8	8.2		
Total %	9.8	17.1	26.9	1.9	10.3	12.1	56	5	61	
Passenger Vehicles	100	170	270	16	105	121	565	49	614	1005
% Passenger Vehicles	100	97.1	98.2	84.2	100	97.6	98.8	96.1	98.6	98.3
Large 2 Axle Vehicles	0	3	3	0	0	0	2	1	3	6
% Large 2 Axle Vehicles	0	1.7	1.1	0	0	0	0.3	2	0.5	0.6
3 Axle Vehicles	0	1	1	0	0	0	3	0	3	4
% 3 Axle Vehicles	0	0.6	0.4	0	0	0	0.5	0	0.5	0.4
4+ Axle Trucks	0	1	1	3	0	3	1	1	2	6
% 4+ Axle Trucks	0	0.6	0.4	15.8	0	2.4	0.2	2	0.3	0.6
Buses	0	0	0	0	0	0	1	0	1	1
% Buses	0	0	0	0	0	0	0.2	0	0.2	0.1

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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 04:45 PM										
04:45 PM	9	23	32	0	18	18	74	4	78	128
05:00 PM	10	21	31	2	19	21	69	5	74	126
05:15 PM	9	16	25	1	13	14	111	8	119	158
05:30 PM	20	21	41	4	13	17	71	6	77	135
Total Volume	48	81	129	7	63	70	325	23	348	547
% App. Total	37.2	62.8		10	90		93.4	6.6		
PHF	.600	.880	.787	.438	.829	.833	.732	.719	.731	.866

City of Redlands
N/S: Tennessee 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:

	04:00 PM			04:15 PM			04:45 PM		
+0 mins.	18	26	44	3	12	15	74	4	78
+15 mins.	13	19	32	3	13	16	69	5	74
+30 mins.	10	24	34	0	18	18	111	8	119
+45 mins.	9	23	32	2	19	21	71	6	77
Total Volume	50	92	142	8	62	70	325	23	348
% App. Total	35.2	64.8		11.4	88.6		93.4	6.6	
PHF	.694	.885	.807	.667	.816	.833	.732	.719	.731

City of Redlands
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Weather: Clear

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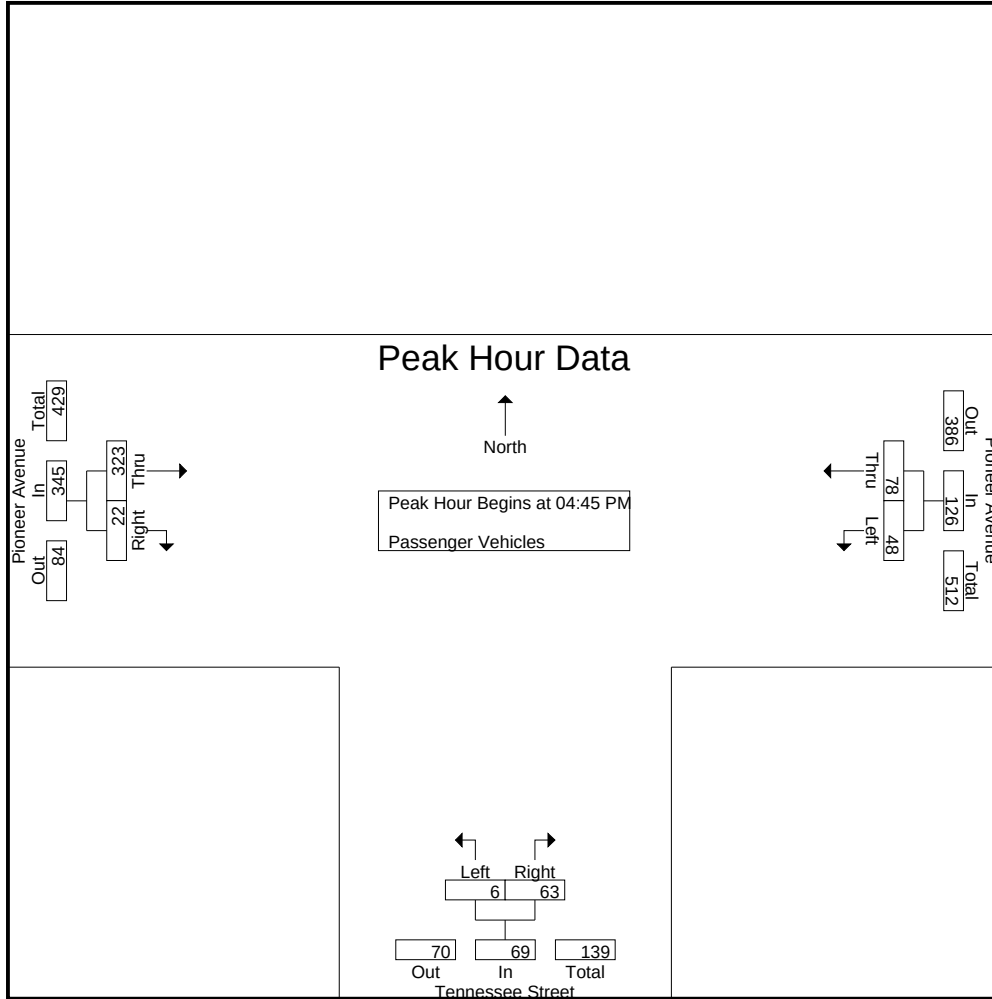
Groups Printed- Passenger Vehicles

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	18	26	44	2	10	12	40	8	48	104
04:15 PM	13	19	32	3	12	15	78	5	83	130
04:30 PM	10	23	33	2	13	15	63	6	69	117
04:45 PM	9	23	32	0	18	18	74	4	78	128
Total	50	91	141	7	53	60	255	23	278	479
05:00 PM	10	20	30	2	19	21	68	5	73	124
05:15 PM	9	14	23	1	13	14	111	8	119	156
05:30 PM	20	21	41	3	13	16	70	5	75	132
05:45 PM	11	24	35	3	7	10	61	8	69	114
Total	50	79	129	9	52	61	310	26	336	526
Grand Total	100	170	270	16	105	121	565	49	614	1005
Apprch %	37	63		13.2	86.8		92	8		
Total %	10	16.9	26.9	1.6	10.4	12	56.2	4.9	61.1	

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	9	23	32	0	18	18	74	4	78	128
05:00 PM	10	20	30	2	19	21	68	5	73	124
05:15 PM	9	14	23	1	13	14	111	8	119	156
05:30 PM	20	21	41	3	13	16	70	5	75	132
Total Volume	48	78	126	6	63	69	323	22	345	540
% App. Total	38.1	61.9		8.7	91.3		93.6	6.4		
PHF	.600	.848	.768	.500	.829	.821	.727	.688	.725	.865

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

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	9	23	32	0	18	18	74	4	78
+15 mins.	10	20	30	2	19	21	68	5	73
+30 mins.	9	14	23	1	13	14	111	8	119
+45 mins.	20	21	41	3	13	16	70	5	75
Total Volume	48	78	126	6	63	69	323	22	345
% App. Total	38.1	61.9		8.7	91.3		93.6	6.4	
PHF	.600	.848	.768	.500	.829	.821	.727	.688	.725

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

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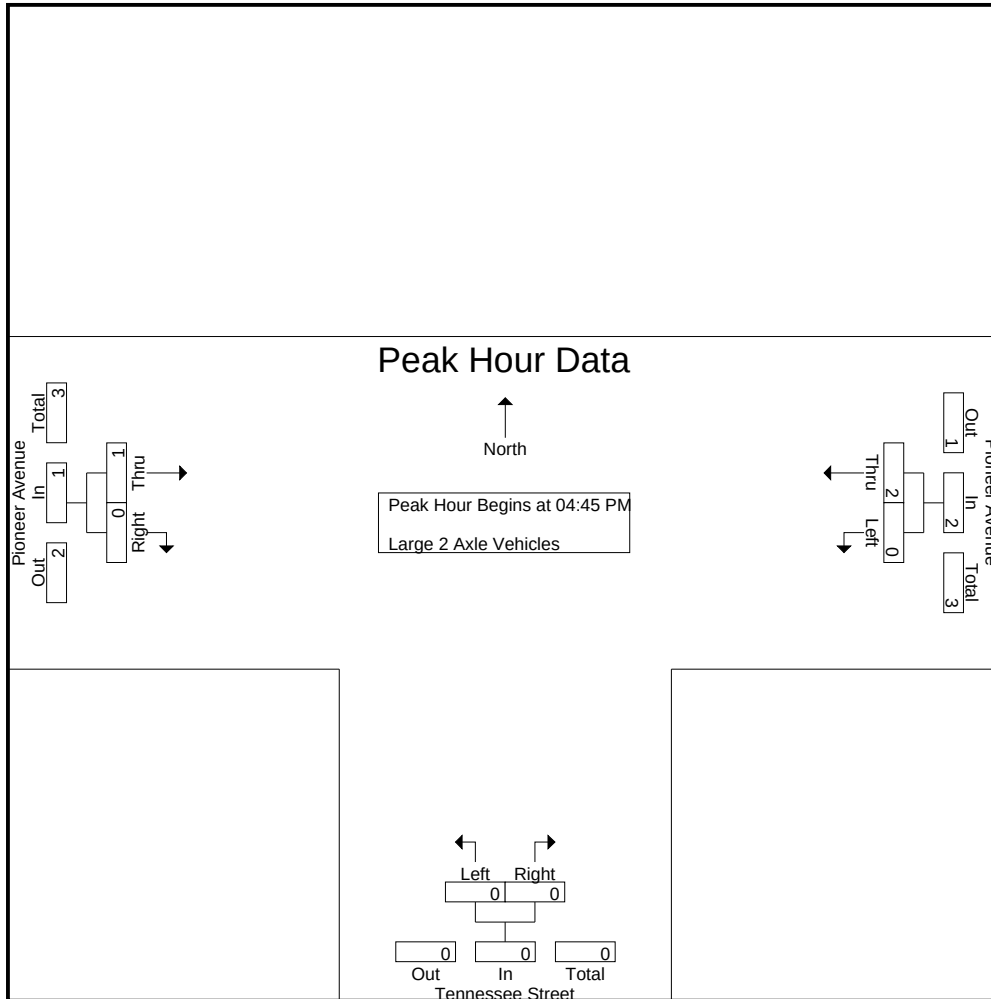
Groups Printed- Large 2 Axle Vehicles

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	2	2
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	2	2	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	0	0	0	1	0	1	4
Grand Total	0	3	3	0	0	0	2	1	3	6
Apprch %	0	100		0	0		66.7	33.3		
Total %	0	50	50	0	0	0	33.3	16.7	50	

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	2	2	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	1	0	1	3
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.375

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

File Name : 04_RED_Ten_Pio PM
Site Code : 12223608
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

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

File Name : 04_RED_Ten_Pio PM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

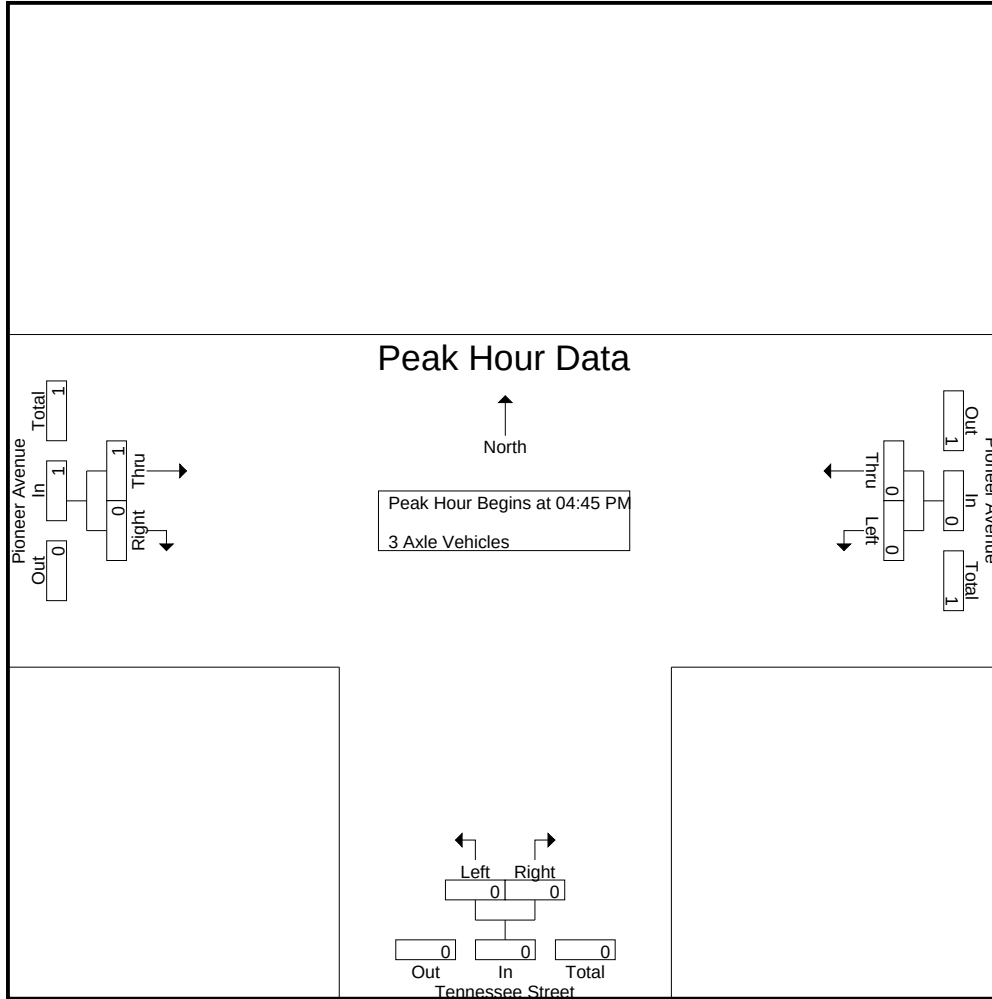
Groups Printed- 3 Axle Vehicles

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	2	0	2	2
04:30 PM	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	2	0	2	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
Grand Total	0	1	1	0	0	0	3	0	3	4
Apprch %	0	100		0	0		100	0		
Total %	0	25	25	0	0	0	75	0	75	

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

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

File Name : 04_RED_Ten_Pio PM
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

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

File Name : 04_RED_Ten_Pio PM
Site Code : 12223608
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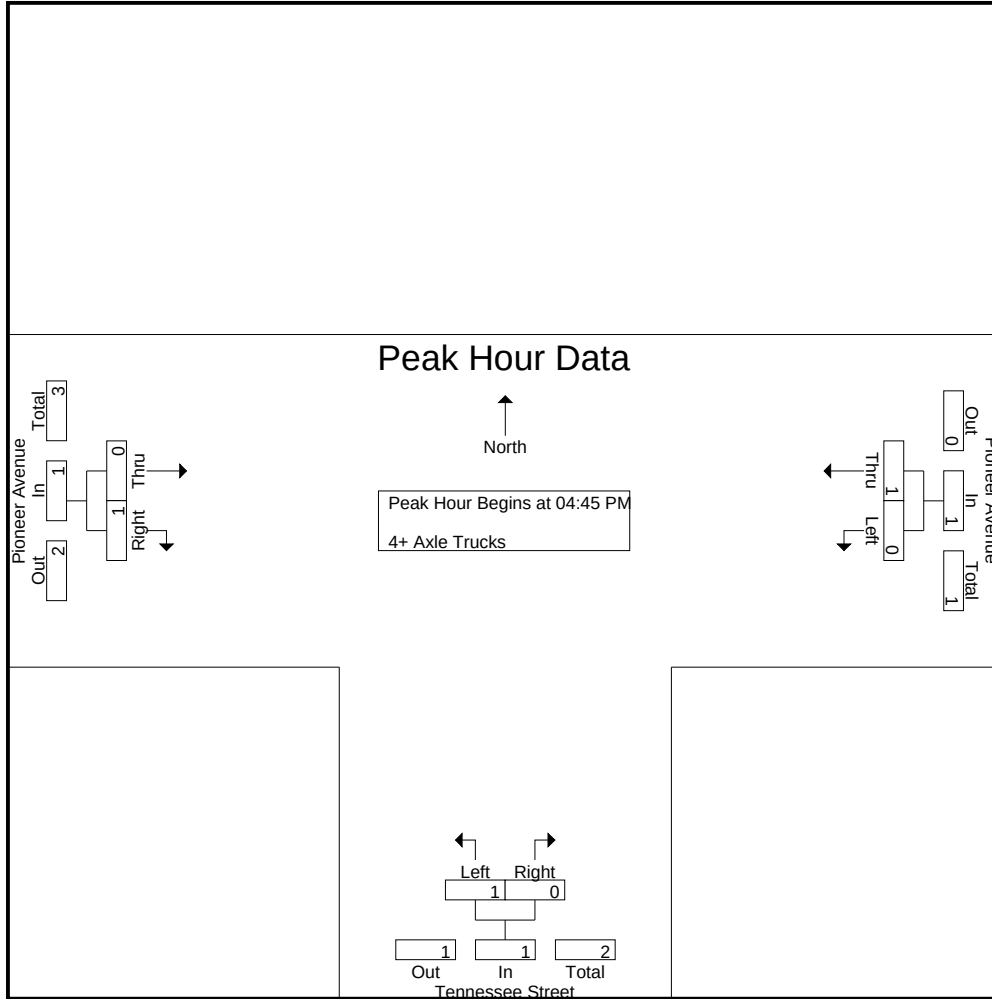
Groups Printed- 4+ Axle Trucks

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	1	0	1	0	0	0	1
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	1	0	1	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	2	1	0	1	3
05:00 PM	0	1	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	1	0	1	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	1	0	1	0	1	1	3
Grand Total	0	1	1	3	0	3	1	1	2	6
Apprch %	0	100		100	0		50	50		
Total %	0	16.7	16.7	50	0	50	16.7	16.7	33.3	

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	1	0	1	0	1	1	2
Total Volume	0	1	1	1	0	1	0	1	1	3
% App. Total	0	100		100	0		0	100		
PHF	.000	.250	.250	.250	.000	.250	.000	.250	.250	.375

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

File Name : 04_RED_Ten_Pio PM
 Site Code : 12223608
 Start Date : 6/7/2023
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	1	0	1	0	1	1
Total Volume	0	1	1	1	0	1	0	1	1
% App. Total	0	100		100	0		0	100	
PHF	.000	.250	.250	.250	.000	.250	.000	.250	.250

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

File Name : 04_RED_Ten_Pio PM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

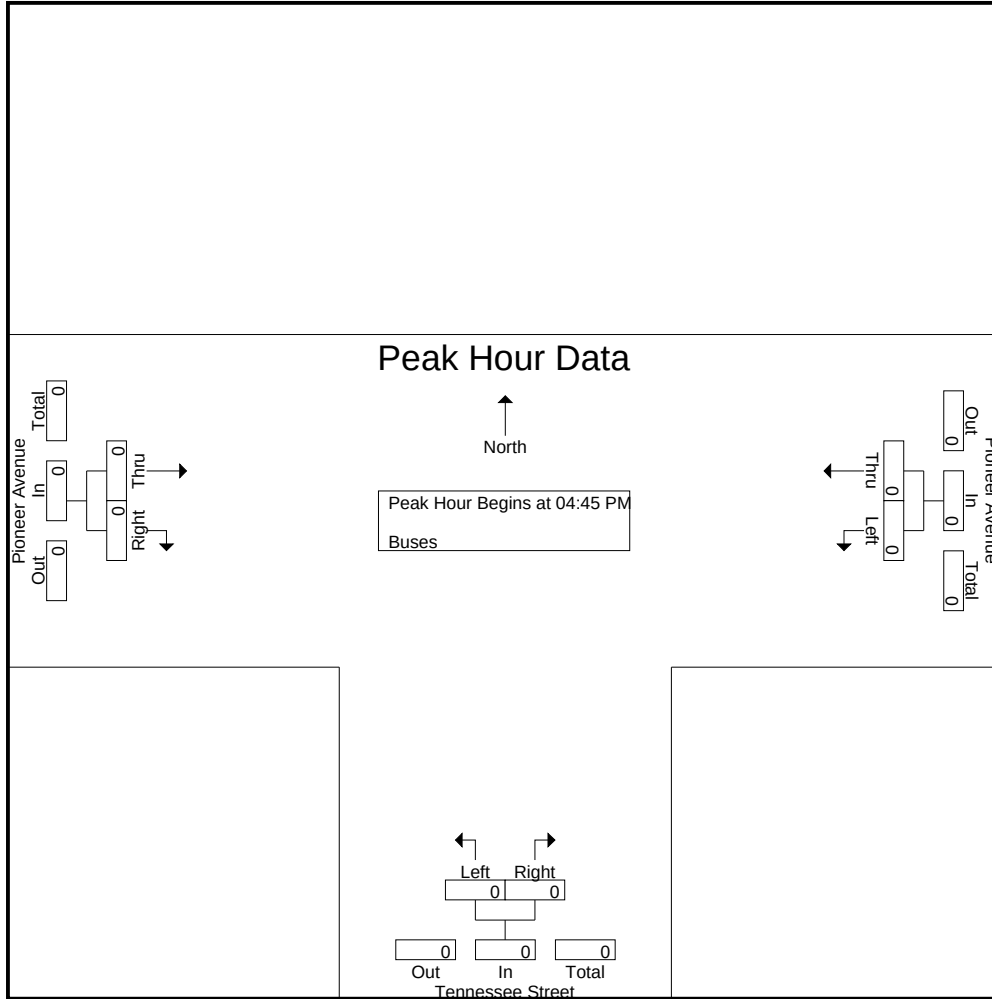
Groups Printed- Buses

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

	Pioneer Avenue Westbound			Tennessee Street Northbound			Pioneer Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

File Name : 04_RED_Ten_Pio PM
 Site Code : 12223608
 Start Date : 6/7/2023
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: San Bernardino
 N/S: Tennessee Street
 E/W: Pioneer Avenue



Date: 6/7/2023
 Day: Wednesday

PEDESTRIANS

	North Leg Dead End	East Leg Pioneer Avenue	South Leg Tennessee Street	West Leg Pioneer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Dead End	East Leg Pioneer Avenue	South Leg Tennessee Street	West Leg Pioneer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Location: San Bernardino
 N/S: Tennessee Street
 E/W: Pioneer Avenue



Date: 6/7/2023
 Day: Wednesday

BICYCLES

	Southbound Dead End			Westbound Pioneer Avenue			Northbound Tennessee Street			Eastbound Pioneer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	0	0	3

	Southbound Dead End			Westbound Pioneer Avenue			Northbound Tennessee Street			Eastbound Pioneer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	5	0	5

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

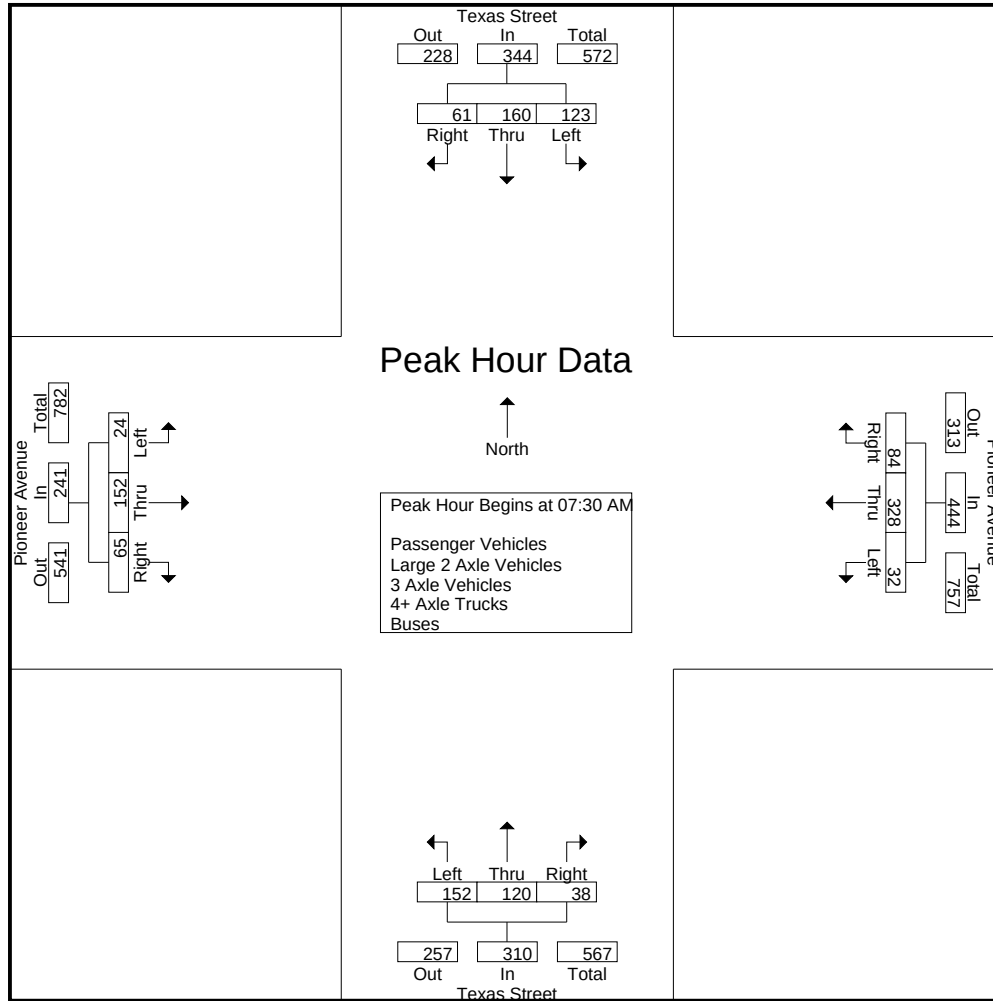
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	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	2	5	5	12	15	24	2	41	6	4	6	16	2	10	2	14	83
07:15 AM	1	10	10	21	13	47	4	64	18	6	5	29	6	15	14	35	149
07:30 AM	12	29	13	54	16	61	8	85	21	14	10	45	5	29	10	44	228
07:45 AM	22	15	10	47	10	83	25	118	28	19	12	59	5	30	14	49	273
Total	37	59	38	134	54	215	39	308	73	43	33	149	18	84	40	142	733
08:00 AM	39	40	17	96	4	86	34	124	41	40	8	89	9	43	16	68	377
08:15 AM	50	76	21	147	2	98	17	117	62	47	8	117	5	50	25	80	461
08:30 AM	10	28	12	50	15	36	3	54	29	8	11	48	5	33	19	57	209
08:45 AM	0	4	1	5	6	18	2	26	9	5	6	20	4	18	4	26	77
Total	99	148	51	298	27	238	56	321	141	100	33	274	23	144	64	231	1124
Grand Total	136	207	89	432	81	453	95	629	214	143	66	423	41	228	104	373	1857
Apprch %	31.5	47.9	20.6		12.9	72	15.1		50.6	33.8	15.6		11	61.1	27.9		
Total %	7.3	11.1	4.8	23.3	4.4	24.4	5.1	33.9	11.5	7.7	3.6	22.8	2.2	12.3	5.6	20.1	
Passenger Vehicles	136	198	88	422	80	453	94	627	209	135	66	410	41	227	103	371	1830
% Passenger Vehicles	100	95.7	98.9	97.7	98.8	100	98.9	99.7	97.7	94.4	100	96.9	100	99.6	99	99.5	98.5
Large 2 Axle Vehicles	0	2	0	2	1	0	0	1	0	2	0	2	0	0	1	1	6
% Large 2 Axle Vehicles	0	1	0	0.5	1.2	0	0	0.2	0	1.4	0	0.5	0	0	1	0.3	0.3
3 Axle Vehicles	0	1	1	2	0	0	1	1	1	0	0	1	0	1	0	1	5
% 3 Axle Vehicles	0	0.5	1.1	0.5	0	0	1.1	0.2	0.5	0	0	0.2	0	0.4	0	0.3	0.3
4+ Axle Trucks	0	3	0	3	0	0	0	0	2	3	0	5	0	0	0	0	8
% 4+ Axle Trucks	0	1.4	0	0.7	0	0	0	0	0.9	2.1	0	1.2	0	0	0	0	0.4
Buses	0	3	0	3	0	0	0	0	2	3	0	5	0	0	0	0	8
% Buses	0	1.4	0	0.7	0	0	0	0	0.9	2.1	0	1.2	0	0	0	0	0.4

	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	12	29	13	54	16	61	8	85	21	14	10	45	5	29	10	44	228
07:45 AM	22	15	10	47	10	83	25	118	28	19	12	59	5	30	14	49	273
08:00 AM	39	40	17	96	4	86	34	124	41	40	8	89	9	43	16	68	377
08:15 AM	50	76	21	147	2	98	17	117	62	47	8	117	5	50	25	80	461
Total Volume	123	160	61	344	32	328	84	444	152	120	38	310	24	152	65	241	1339
% App. Total	35.8	46.5	17.7		7.2	73.9	18.9		49	38.7	12.3		10	63.1	27		
PHF	.615	.526	.726	.585	.500	.837	.618	.895	.613	.638	.792	.662	.667	.760	.650	.753	.726

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
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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:

	07:30 AM				07:30 AM				07:45 AM				07:45 AM			
+0 mins.	12	29	13	54	16	61	8	85	28	19	12	59	5	30	14	49
+15 mins.	22	15	10	47	10	83	25	118	41	40	8	89	9	43	16	68
+30 mins.	39	40	17	96	4	86	34	124	62	47	8	117	5	50	25	80
+45 mins.	50	76	21	147	2	98	17	117	29	8	11	48	5	33	19	57
Total Volume	123	160	61	344	32	328	84	444	160	114	39	313	24	156	74	254
% App. Total	35.8	46.5	17.7		7.2	73.9	18.9		51.1	36.4	12.5		9.4	61.4	29.1	
PHF	.615	.526	.726	.585	.500	.837	.618	.895	.645	.606	.813	.669	.667	.780	.740	.794

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

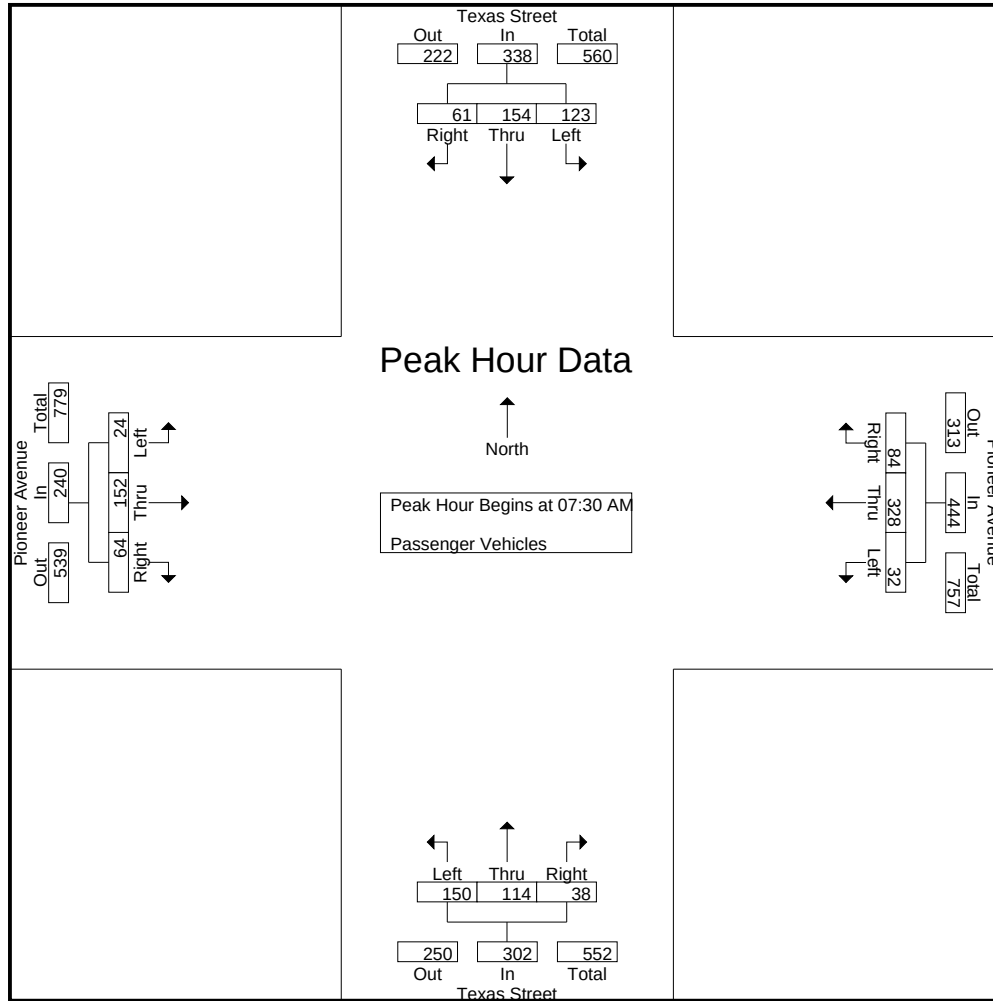
Groups Printed- Passenger Vehicles

	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	2	4	4	10	15	24	2	41	6	2	6	14	2	10	2	14	79
07:15 AM	1	10	10	21	12	47	3	62	18	6	5	29	6	15	14	35	147
07:30 AM	12	28	13	53	16	61	8	85	21	14	10	45	5	29	9	43	226
07:45 AM	22	15	10	47	10	83	25	118	26	17	12	55	5	30	14	49	269
Total	37	57	37	131	53	215	38	306	71	39	33	143	18	84	39	141	721
08:00 AM	39	37	17	93	4	86	34	124	41	36	8	85	9	43	16	68	370
08:15 AM	50	74	21	145	2	98	17	117	62	47	8	117	5	50	25	80	459
08:30 AM	10	26	12	48	15	36	3	54	26	8	11	45	5	33	19	57	204
08:45 AM	0	4	1	5	6	18	2	26	9	5	6	20	4	17	4	25	76
Total	99	141	51	291	27	238	56	321	138	96	33	267	23	143	64	230	1109
Grand Total	136	198	88	422	80	453	94	627	209	135	66	410	41	227	103	371	1830
Apprch %	32.2	46.9	20.9		12.8	72.2	15		51	32.9	16.1		11.1	61.2	27.8		
Total %	7.4	10.8	4.8	23.1	4.4	24.8	5.1	34.3	11.4	7.4	3.6	22.4	2.2	12.4	5.6	20.3	

	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	12	28	13	53	16	61	8	85	21	14	10	45	5	29	9	43	226
07:45 AM	22	15	10	47	10	83	25	118	26	17	12	55	5	30	14	49	269
08:00 AM	39	37	17	93	4	86	34	124	41	36	8	85	9	43	16	68	370
08:15 AM	50	74	21	145	2	98	17	117	62	47	8	117	5	50	25	80	459
Total Volume	123	154	61	338	32	328	84	444	150	114	38	302	24	152	64	240	1324
% App. Total	36.4	45.6	18		7.2	73.9	18.9		49.7	37.7	12.6		10	63.3	26.7		
PHF	.615	.520	.726	.583	.500	.837	.618	.895	.605	.606	.792	.645	.667	.760	.640	.750	.721

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
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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.	12	28	13	53	16	61	8	85	21	14	10	45	5	29	9	43
+15 mins.	22	15	10	47	10	83	25	118	26	17	12	55	5	30	14	49
+30 mins.	39	37	17	93	4	86	34	124	41	36	8	85	9	43	16	68
+45 mins.	50	74	21	145	2	98	17	117	62	47	8	117	5	50	25	80
Total Volume	123	154	61	338	32	328	84	444	150	114	38	302	24	152	64	240
% App. Total	36.4	45.6	18		7.2	73.9	18.9		49.7	37.7	12.6		10	63.3	26.7	
PHF	.615	.520	.726	.583	.500	.837	.618	.895	.605	.606	.792	.645	.667	.760	.640	.750

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

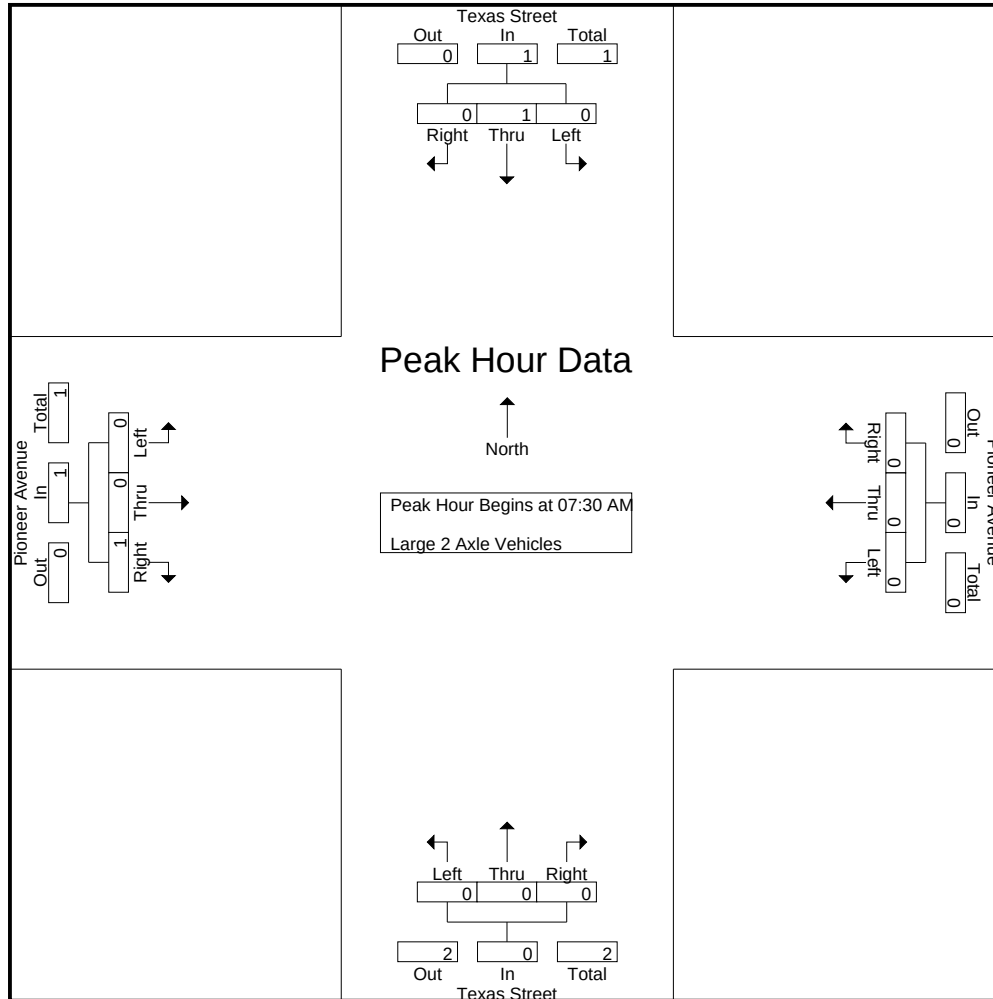
Groups Printed- Large 2 Axle Vehicles

	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	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	0	0	0	0	1	0	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	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	0	0	1	0	2	0	2	0	0	1	1	5
08:00 AM	0	1	0	1	0	0	0	0	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	2	1	0	0	1	0	2	0	2	0	0	1	1	6
Apprch %	0	100	0		100	0	0		0	100	0		0	0	100		
Total %	0	33.3	0	33.3	16.7	0	0	16.7	0	33.3	0	33.3	0	0	16.7	16.7	

	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	0	1	0	0	0	0	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	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
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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	1	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	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	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	100	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
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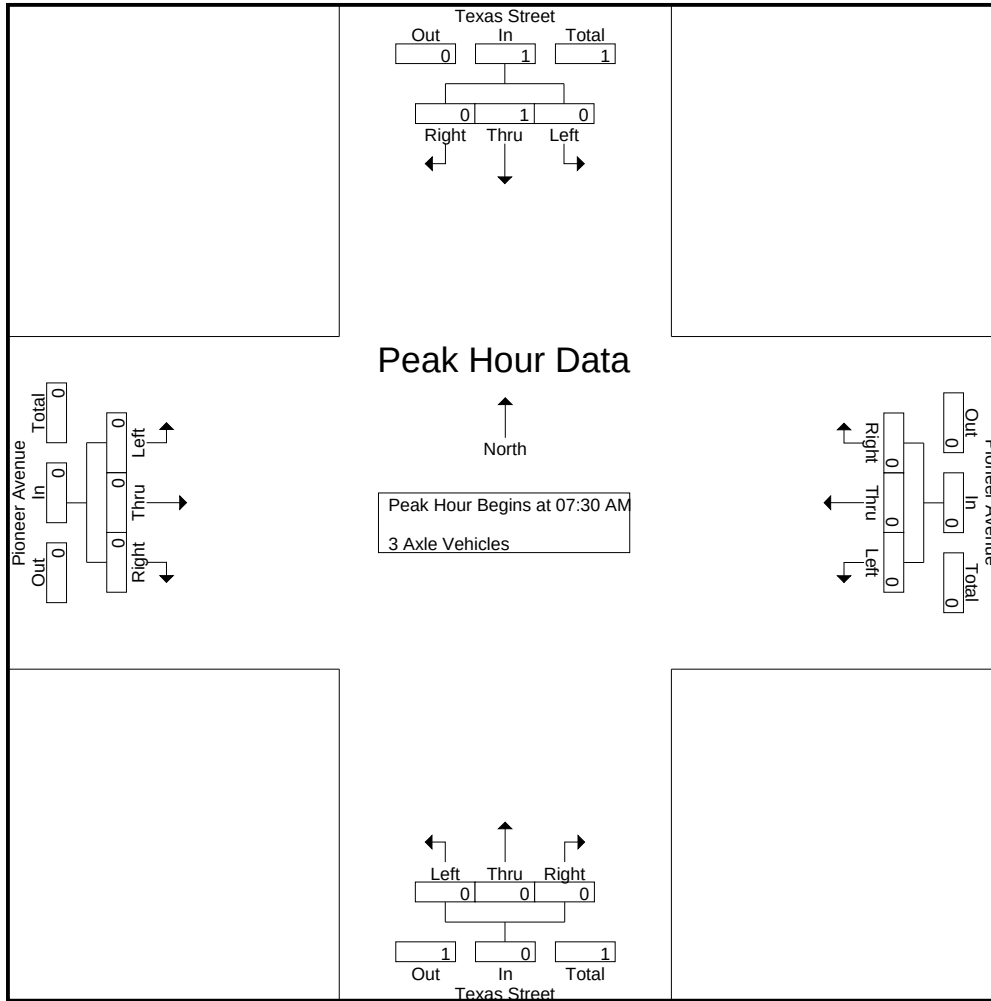
Groups Printed- 3 Axle Vehicles

	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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	0	1	1	0	0	0	0	0	0	0	0	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	1	0	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
Grand Total	0	1	1	2	0	0	1	1	1	0	0	1	0	1	0	1	5
Apprch %	0	50	50		0	0	100		100	0	0		0	100	0		
Total %	0	20	20	40	0	0	20	20	20	0	0	20	0	20	0	20	

	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
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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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	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	.250	.000	.250	.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 : 05_RED_Tex_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

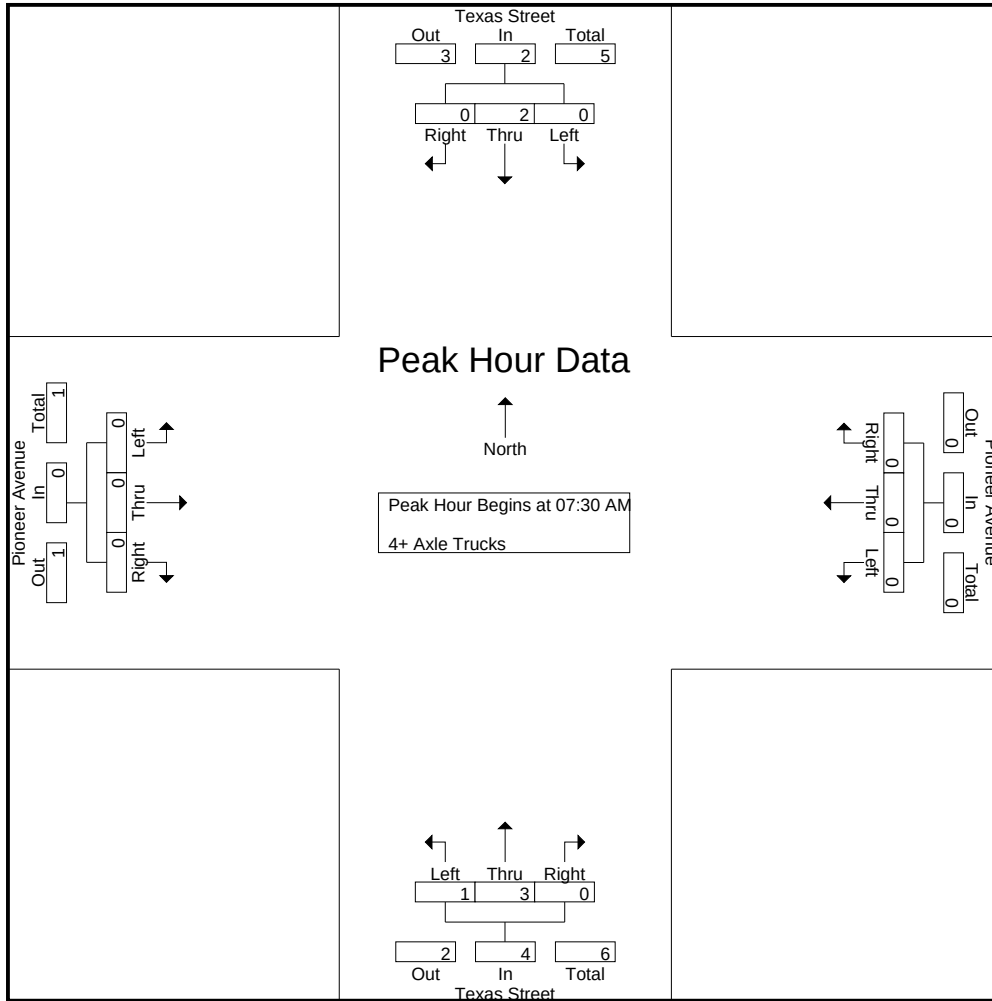
Groups Printed- 4+ Axle Trucks

	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	0	0	0
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	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	1	0	0	1	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	0	3	0	3	0	0	0	0	1	2	0	3	0	0	0	0	6
Grand Total	0	3	0	3	0	0	0	0	2	3	0	5	0	0	0	0	8
Apprch %	0	100	0		0	0	0		40	60	0		0	0	0		
Total %	0	37.5	0	37.5	0	0	0	0	25	37.5	0	62.5	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 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	1	1	0	2	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	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	1	3	0	4	0	0	0	0	6
% App. Total	0	100	0		0	0	0		25	75	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.000	.000	.500

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
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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	1	1	0	2	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	2	0	2	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	1	3	0	4	0	0	0	0
% App. Total	0	100	0		0	0	0		25	75	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.000	.000

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
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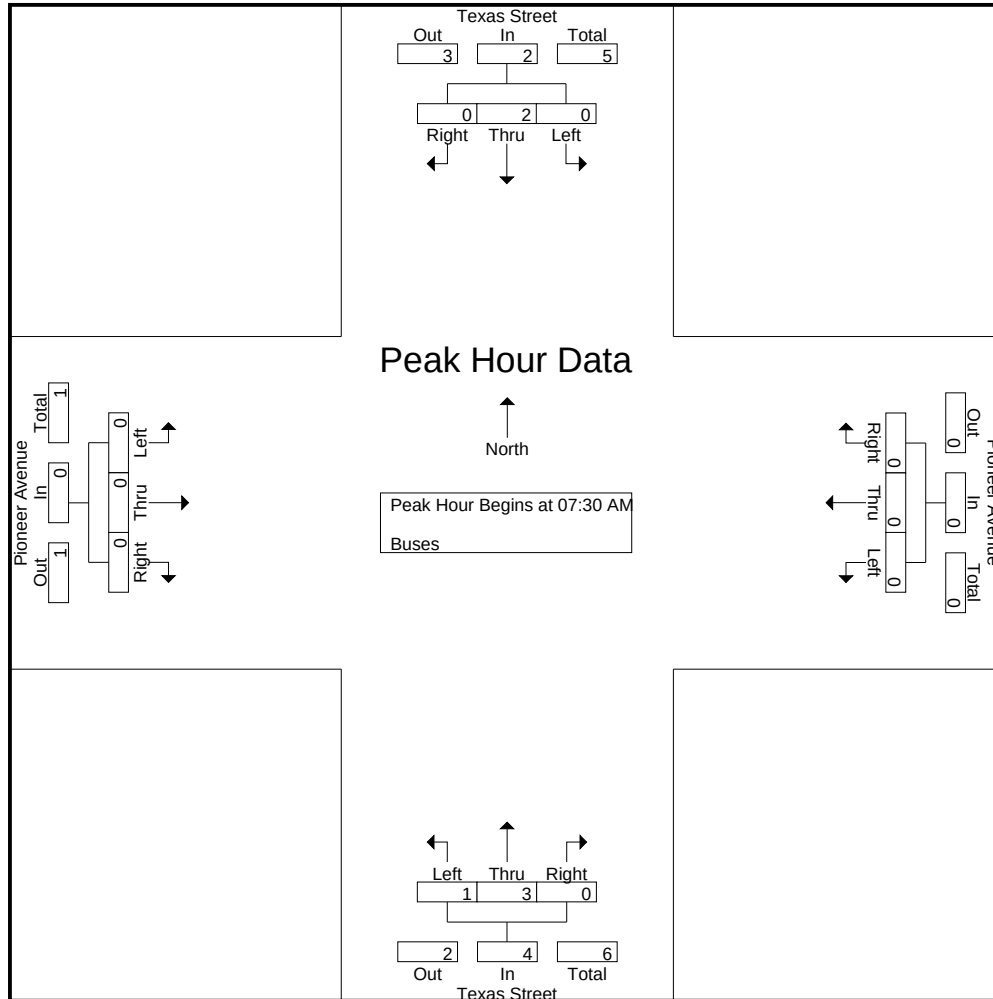
Groups Printed- Buses

	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	0	0	0
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	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	1	0	0	1	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	0	3	0	3	0	0	0	0	1	2	0	3	0	0	0	0	6
Grand Total	0	3	0	3	0	0	0	0	2	3	0	5	0	0	0	0	8
Apprch %	0	100	0		0	0	0		40	60	0		0	0	0		
Total %	0	37.5	0	37.5	0	0	0	0	25	37.5	0	62.5	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 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	1	1	0	2	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	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	1	3	0	4	0	0	0	0	6
% App. Total	0	100	0		0	0	0		25	75	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.000	.000	.500

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

File Name : 05_RED_Tex_Pio AM
Site Code : 12223608
Start Date : 6/7/2023
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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	1	1	0	2	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	2	0	2	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	1	3	0	4	0	0	0	0
% App. Total	0	100	0		0	0	0		25	75	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.000	.000

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

File Name : 05_RED_Tex_Pio PM
Site Code : 12223608
Start Date : 6/7/2023
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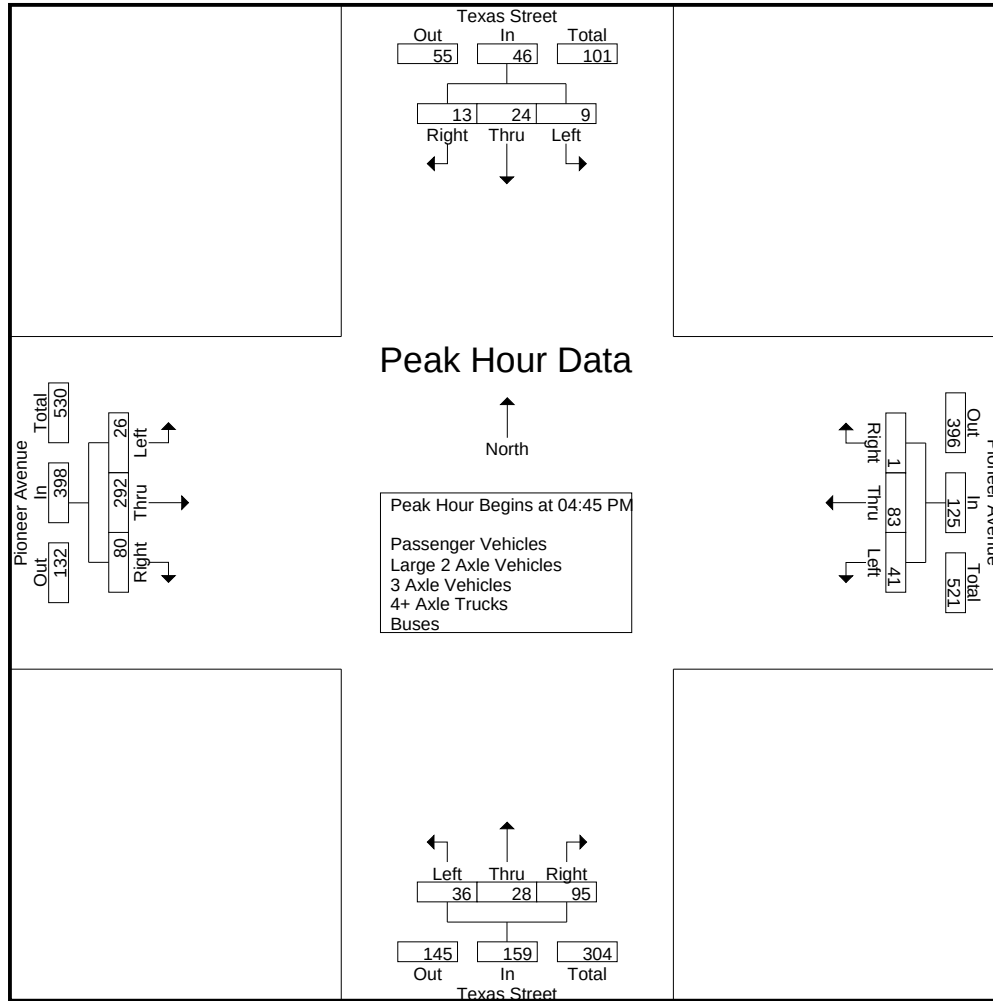
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	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	5	8	4	17	9	25	0	34	8	9	15	32	8	39	26	73	156
04:15 PM	3	9	8	20	12	21	1	34	2	6	16	24	7	72	14	93	171
04:30 PM	0	4	4	8	13	22	2	37	5	5	25	35	6	55	12	73	153
04:45 PM	4	10	2	16	10	20	0	30	11	9	20	40	9	71	20	100	186
Total	12	31	18	61	44	88	3	135	26	29	76	131	30	237	72	339	666
05:00 PM	2	4	3	9	10	21	1	32	6	7	25	38	7	67	17	91	170
05:15 PM	0	5	5	10	6	19	0	25	8	7	20	35	6	100	25	131	201
05:30 PM	3	5	3	11	15	23	0	38	11	5	30	46	4	54	18	76	171
05:45 PM	0	7	4	11	9	21	0	30	8	6	29	43	5	48	19	72	156
Total	5	21	15	41	40	84	1	125	33	25	104	162	22	269	79	370	698
Grand Total	17	52	33	102	84	172	4	260	59	54	180	293	52	506	151	709	1364
Apprch %	16.7	51	32.4		32.3	66.2	1.5		20.1	18.4	61.4		7.3	71.4	21.3		
Total %	1.2	3.8	2.4	7.5	6.2	12.6	0.3	19.1	4.3	4	13.2	21.5	3.8	37.1	11.1	52	
Passenger Vehicles	16	52	32	100	83	168	4	255	59	54	179	292	52	500	150	702	1349
% Passenger Vehicles	94.1	100	97	98	98.8	97.7	100	98.1	100	100	99.4	99.7	100	98.8	99.3	99	98.9
Large 2 Axle Vehicles	0	0	0	0	1	3	0	4	0	0	1	1	0	2	0	2	7
% Large 2 Axle Vehicles	0	0	0	0	1.2	1.7	0	1.5	0	0	0.6	0.3	0	0.4	0	0.3	0.5
3 Axle Vehicles	0	0	1	1	0	0	0	0	0	0	0	0	0	2	1	3	4
% 3 Axle Vehicles	0	0	3	1	0	0	0	0	0	0	0	0	0	0.4	0.7	0.4	0.3
4+ Axle Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% 4+ Axle Trucks	0	0	0	0	0	0.6	0	0.4	0	0	0	0	0	0.2	0	0.1	0.1
Buses	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
% Buses	5.9	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0	0.1	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 04:45 PM																	
04:45 PM	4	10	2	16	10	20	0	30	11	9	20	40	9	71	20	100	186
05:00 PM	2	4	3	9	10	21	1	32	6	7	25	38	7	67	17	91	170
05:15 PM	0	5	5	10	6	19	0	25	8	7	20	35	6	100	25	131	201
05:30 PM	3	5	3	11	15	23	0	38	11	5	30	46	4	54	18	76	171
Total Volume	9	24	13	46	41	83	1	125	36	28	95	159	26	292	80	398	728
% App. Total	19.6	52.2	28.3		32.8	66.4	0.8		22.6	17.6	59.7		6.5	73.4	20.1		
PHF	.563	.600	.650	.719	.683	.902	.250	.822	.818	.778	.792	.864	.722	.730	.800	.760	.905

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:

	04:00 PM				04:00 PM				05:00 PM				04:45 PM			
+0 mins.	5	8	4	17	9	25	0	34	6	7	25	38	9	71	20	100
+15 mins.	3	9	8	20	12	21	1	34	8	7	20	35	7	67	17	91
+30 mins.	0	4	4	8	13	22	2	37	11	5	30	46	6	100	25	131
+45 mins.	4	10	2	16	10	20	0	30	8	6	29	43	4	54	18	76
Total Volume	12	31	18	61	44	88	3	135	33	25	104	162	26	292	80	398
% App. Total	19.7	50.8	29.5		32.6	65.2	2.2		20.4	15.4	64.2		6.5	73.4	20.1	
PHF	.600	.775	.563	.763	.846	.880	.375	.912	.750	.893	.867	.880	.722	.730	.800	.760

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

File Name : 05_RED_Tex_Pio PM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

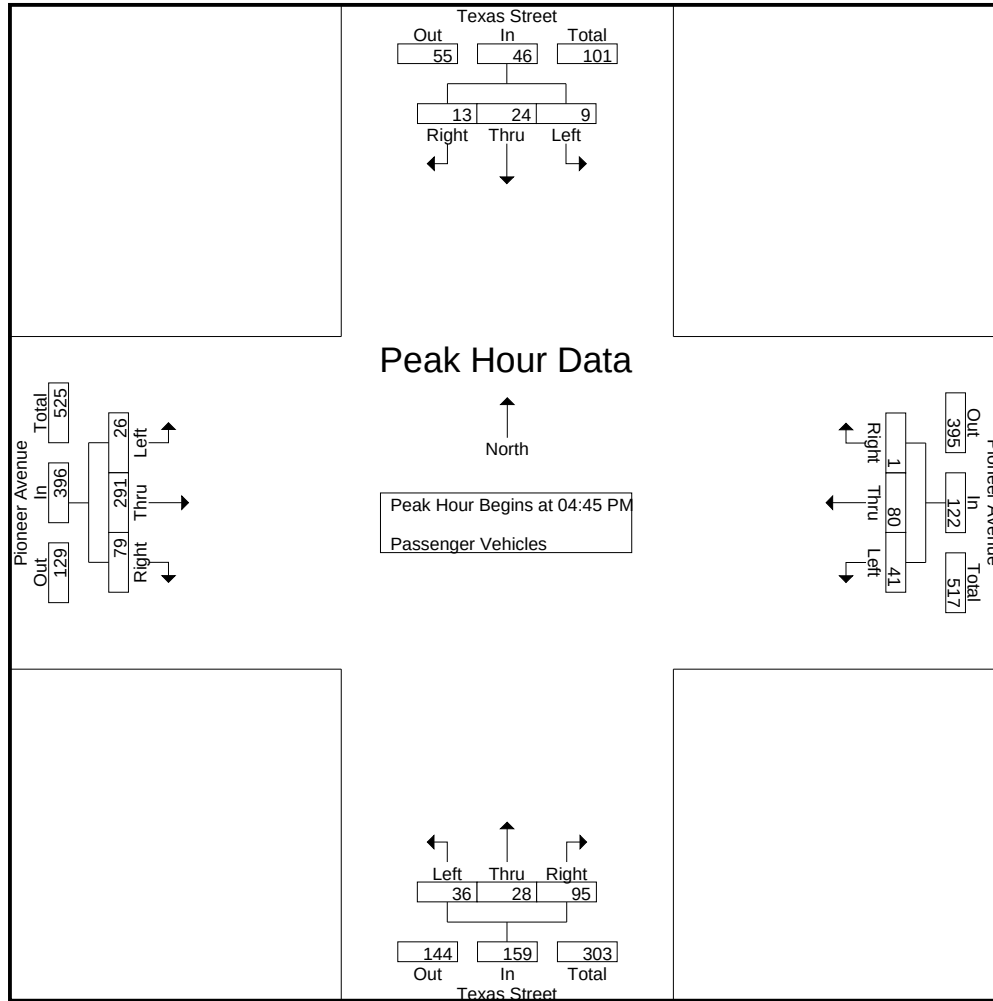
Groups Printed- Passenger Vehicles

	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	5	8	4	17	9	25	0	34	8	9	14	31	8	38	26	72	154
04:15 PM	2	9	7	18	11	21	1	33	2	6	16	24	7	68	14	89	164
04:30 PM	0	4	4	8	13	22	2	37	5	5	25	35	6	55	12	73	153
04:45 PM	4	10	2	16	10	20	0	30	11	9	20	40	9	71	20	100	186
Total	11	31	17	59	43	88	3	134	26	29	75	130	30	232	72	334	657
05:00 PM	2	4	3	9	10	20	1	31	6	7	25	38	7	66	17	90	168
05:15 PM	0	5	5	10	6	17	0	23	8	7	20	35	6	100	25	131	199
05:30 PM	3	5	3	11	15	23	0	38	11	5	30	46	4	54	17	75	170
05:45 PM	0	7	4	11	9	20	0	29	8	6	29	43	5	48	19	72	155
Total	5	21	15	41	40	80	1	121	33	25	104	162	22	268	78	368	692
Grand Total	16	52	32	100	83	168	4	255	59	54	179	292	52	500	150	702	1349
Apprch %	16	52	32		32.5	65.9	1.6		20.2	18.5	61.3		7.4	71.2	21.4		
Total %	1.2	3.9	2.4	7.4	6.2	12.5	0.3	18.9	4.4	4	13.3	21.6	3.9	37.1	11.1	52	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	10	2	16	10	20	0	30	11	9	20	40	9	71	20	100	186
05:00 PM	2	4	3	9	10	20	1	31	6	7	25	38	7	66	17	90	168
05:15 PM	0	5	5	10	6	17	0	23	8	7	20	35	6	100	25	131	199
05:30 PM	3	5	3	11	15	23	0	38	11	5	30	46	4	54	17	75	170
Total Volume	9	24	13	46	41	80	1	122	36	28	95	159	26	291	79	396	723
% App. Total	19.6	52.2	28.3		33.6	65.6	0.8		22.6	17.6	59.7		6.6	73.5	19.9		
PHF	.563	.600	.650	.719	.683	.870	.250	.803	.818	.778	.792	.864	.722	.728	.790	.756	.908

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

File Name : 05_RED_Tex_Pio PM
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	4	10	2	16	10	20	0	30	11	9	20	40	9	71	20	100
+15 mins.	2	4	3	9	10	20	1	31	6	7	25	38	7	66	17	90
+30 mins.	0	5	5	10	6	17	0	23	8	7	20	35	6	100	25	131
+45 mins.	3	5	3	11	15	23	0	38	11	5	30	46	4	54	17	75
Total Volume	9	24	13	46	41	80	1	122	36	28	95	159	26	291	79	396
% App. Total	19.6	52.2	28.3		33.6	65.6	0.8		22.6	17.6	59.7		6.6	73.5	19.9	
PHF	.563	.600	.650	.719	.683	.870	.250	.803	.818	.778	.792	.864	.722	.728	.790	.756

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

File Name : 05_RED_Tex_Pio PM
Site Code : 12223608
Start Date : 6/7/2023
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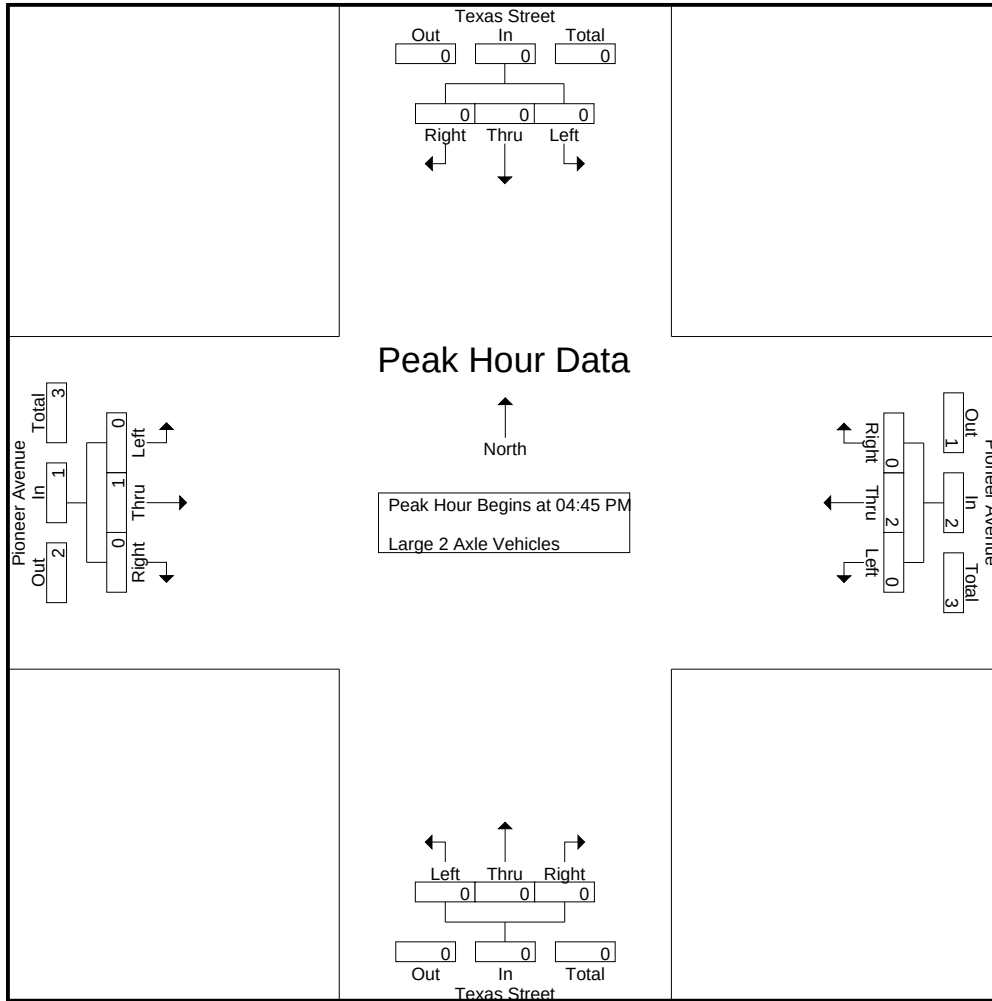
Groups Printed- Large 2 Axle Vehicles

	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	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	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	0	0	0	0	1	0	0	1	0	0	1	1	0	1	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	2	0	2	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	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	1	0	1	4
Grand Total	0	0	0	0	1	3	0	4	0	0	1	1	0	2	0	2	7
Apprch %	0	0	0		25	75	0		0	0	100		0	100	0		
Total %	0	0	0	0	14.3	42.9	0	57.1	0	0	14.3	14.3	0	28.6	0	28.6	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	2	0	2	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
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	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.375

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

File Name : 05_RED_Tex_Pio PM
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 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	1	0	1
+30 mins.	0	0	0	0	0	2	0	2	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	.250	.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 : 05_RED_Tex_Pio PM
Site Code : 12223608
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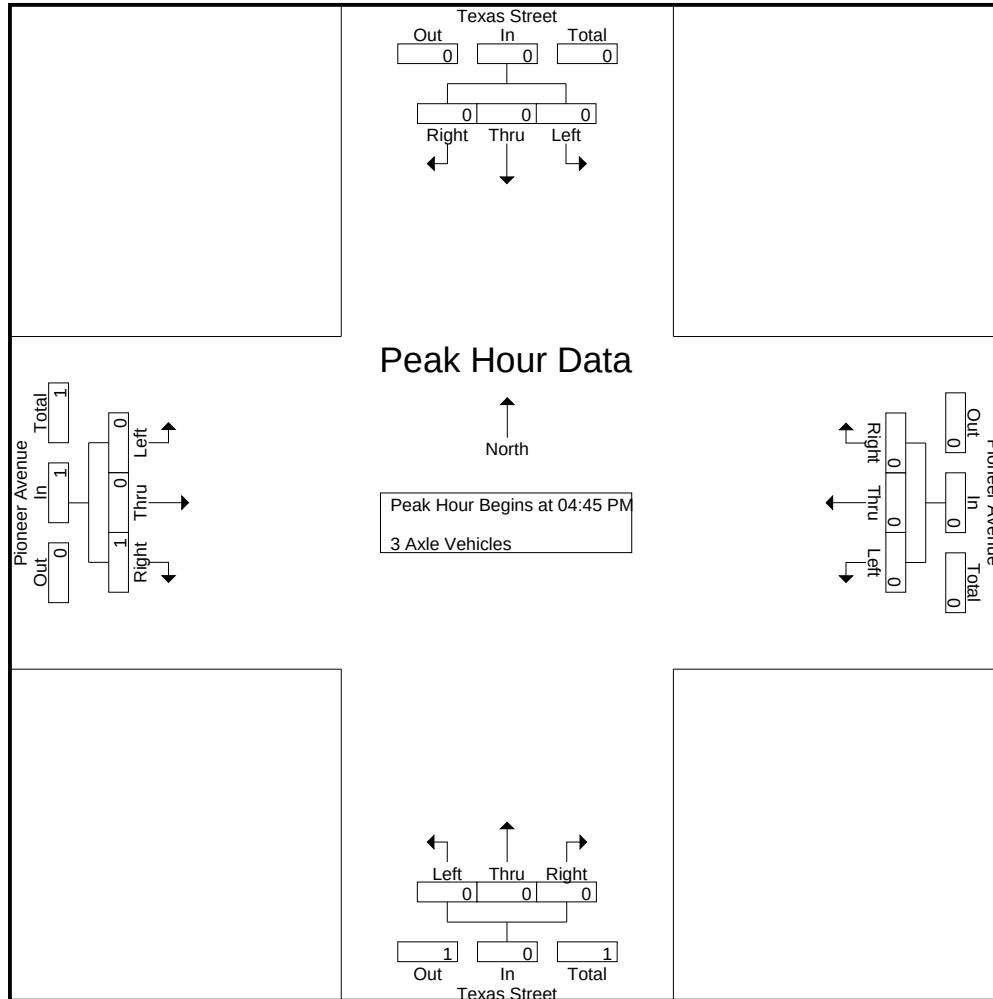
Groups Printed- 3 Axle Vehicles

	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	1	1	0	0	0	0	0	0	0	0	0	2	0	2	3
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	1	1	0	0	0	0	0	0	0	0	0	2	0	2	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	0	0	0	0	0	0	0	0	0	1	1	1
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	1	1	1
Grand Total	0	0	1	1	0	0	0	0	0	0	0	0	0	2	1	3	4
Apprch %	0	0	100		0	0	0		0	0	0		0	66.7	33.3		
Total %	0	0	25	25	0	0	0	0	0	0	0	0	0	50	25	75	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250

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

File Name : 05_RED_Tex_Pio PM
Site Code : 12223608
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 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	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250

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

File Name : 05_RED_Tex_Pio PM
Site Code : 12223608
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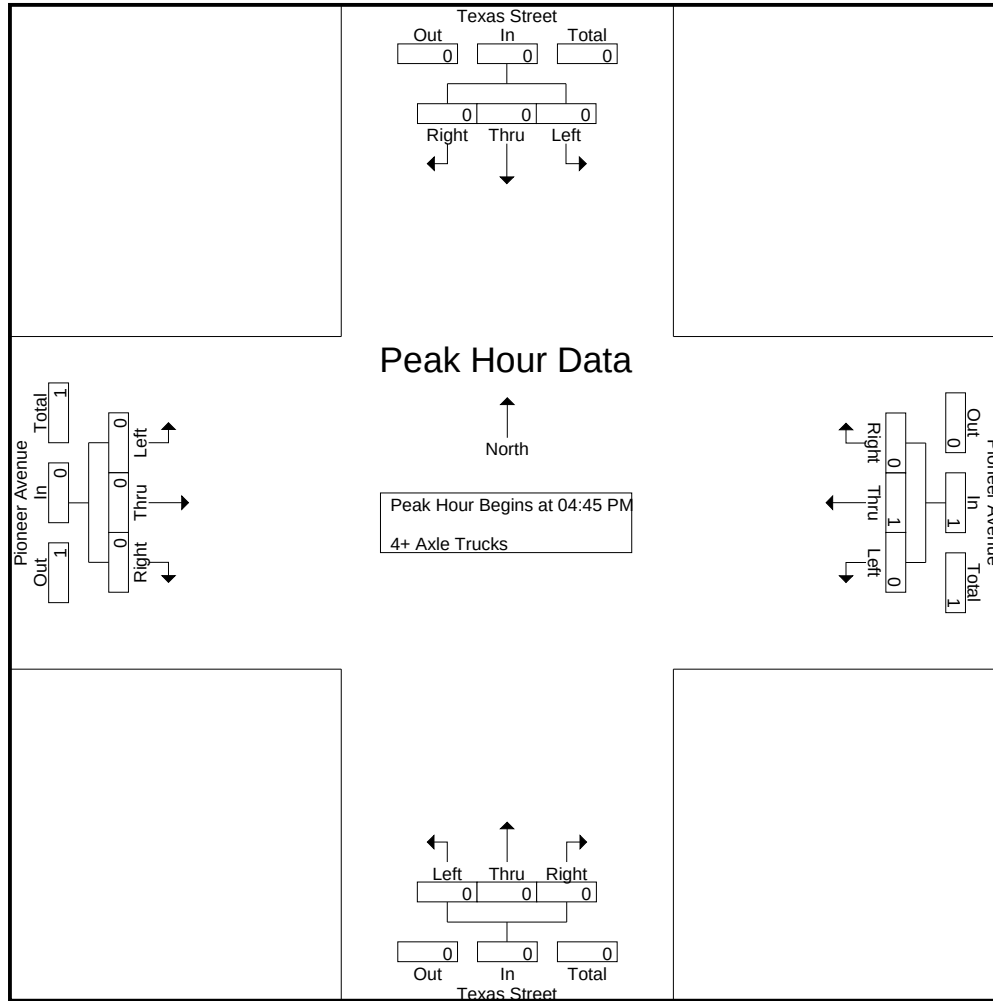
Groups Printed- 4+ Axle Trucks

	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	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	1	0	1	1
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	1	0	1	1
05:00 PM	0	0	0	0	0	1	0	1	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	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	1	0	1	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	1	0	1	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
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: Pioneer Avenue
Weather: Clear

File Name : 05_RED_Tex_Pio PM
Site Code : 12223608
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 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	1	0	1	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	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
E/W: Pioneer Avenue
Weather: Clear

File Name : 05_RED_Tex_Pio PM
Site Code : 12223608
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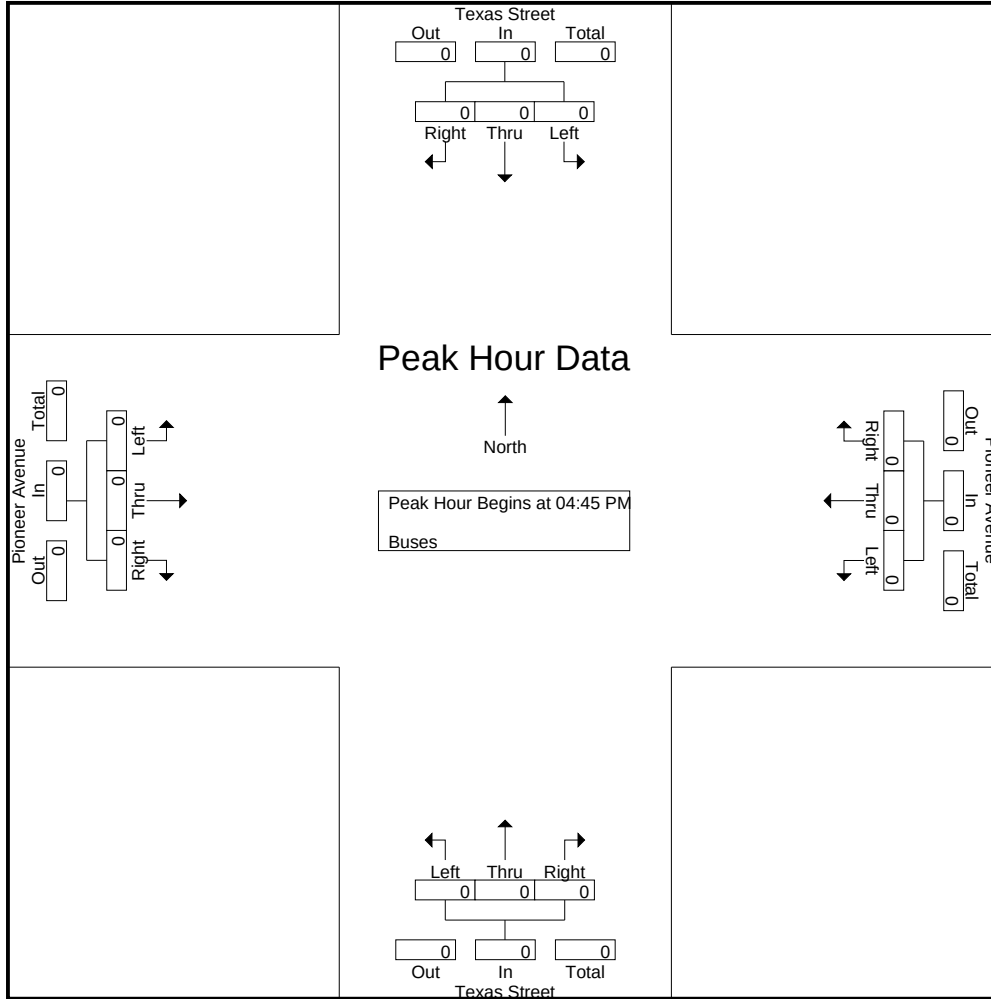
Groups Printed- Buses

	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	1	0	1	1
04:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
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	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Apprch %	100	0	0		0	0	0		0	0	0		0	100	0		
Total %	50	0	0	50	0	0	0	0	0	0	0	0	0	50	0	50	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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 : 05_RED_Tex_Pio PM
Site Code : 12223608
Start Date : 6/7/2023
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 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

Location: San Bernardino
 N/S: Texas Street
 E/W: Pioneer Avenue



Date: 6/7/2023
 Day: Wednesday

PEDESTRIANS

	North Leg Texas Street	East Leg Pioneer Avenue	South Leg Texas Street	West Leg Pioneer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	0	2	1	4
7:15 AM	1	1	3	4	9
7:30 AM	0	0	2	2	4
7:45 AM	3	3	2	3	11
8:00 AM	11	7	7	12	37
8:15 AM	15	9	6	16	46
8:30 AM	4	3	2	3	12
8:45 AM	2	1	2	2	7
TOTAL VOLUMES:	37	24	26	43	130

	North Leg Texas Street	East Leg Pioneer Avenue	South Leg Texas Street	West Leg Pioneer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	2	2	0	0	4
TOTAL VOLUMES:	2	2	0	1	5

Location: San Bernardino
 N/S: Texas Street
 E/W: Pioneer Avenue



Date: 6/7/2023
 Day: Wednesday

BICYCLES

		Southbound Texas Street			Westbound Pioneer Avenue			Northbound Texas Street			Eastbound Pioneer Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
TOTAL VOLUMES:		0	0	0	0	3	0	0	0	0	0	0	0	3

		Southbound Texas Street			Westbound Pioneer Avenue			Northbound Texas Street			Eastbound Pioneer Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
	5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	2	0	0	0	0	0	0	0	0	0	1	3
TOTAL VOLUMES:		0	2	0	0	0	0	0	0	0	0	4	1	7

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

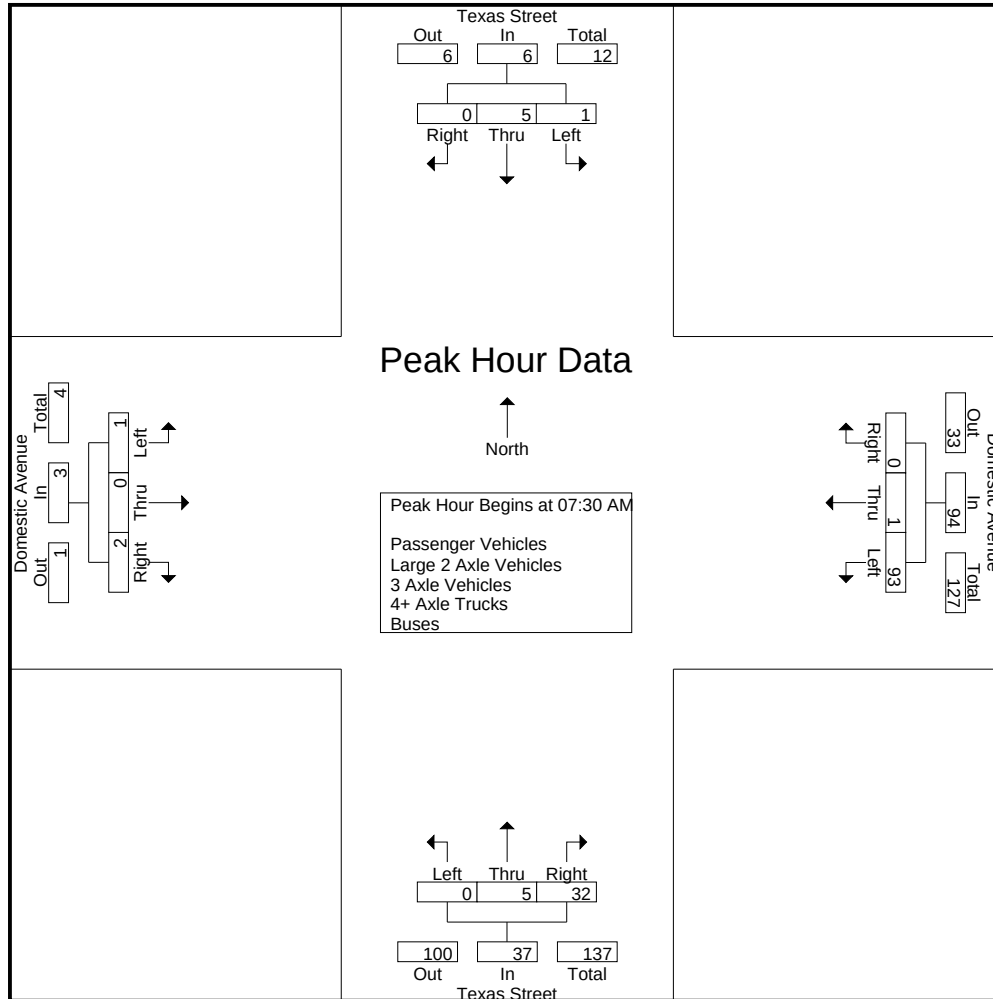
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	2	0	2	4	0	0	4	0	1	4	5	0	0	0	0	11
07:15 AM	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	9
07:30 AM	0	2	0	2	14	1	0	15	0	1	2	3	1	0	2	3	23
07:45 AM	0	0	0	0	11	0	0	11	0	1	5	6	0	0	0	0	17
Total	0	4	0	4	38	1	0	39	0	3	11	14	1	0	2	3	60
08:00 AM	0	1	0	1	25	0	0	25	0	2	12	14	0	0	0	0	40
08:15 AM	1	2	0	3	43	0	0	43	0	1	13	14	0	0	0	0	60
08:30 AM	0	0	0	0	8	0	0	8	1	0	4	5	0	0	1	1	14
08:45 AM	0	1	0	1	4	0	0	4	0	1	5	6	0	0	0	0	11
Total	1	4	0	5	80	0	0	80	1	4	34	39	0	0	1	1	125
Grand Total	1	8	0	9	118	1	0	119	1	7	45	53	1	0	3	4	185
Apprch %	11.1	88.9	0		99.2	0.8	0		1.9	13.2	84.9		25	0	75		
Total %	0.5	4.3	0	4.9	63.8	0.5	0	64.3	0.5	3.8	24.3	28.6	0.5	0	1.6	2.2	
Passenger Vehicles	1	3	0	4	114	1	0	115	1	3	45	49	1	0	3	4	172
% Passenger Vehicles	100	37.5	0	44.4	96.6	100	0	96.6	100	42.9	100	92.5	100	0	100	100	93
Large 2 Axle Vehicles	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
% Large 2 Axle Vehicles	0	0	0	0	1.7	0	0	1.7	0	0	0	0	0	0	0	0	1.1
3 Axle Vehicles	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
% 3 Axle Vehicles	0	25	0	22.2	0	0	0	0	0	14.3	0	1.9	0	0	0	0	1.6
4+ Axle Trucks	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
% 4+ Axle Trucks	0	37.5	0	33.3	0	0	0	0	0	42.9	0	5.7	0	0	0	0	3.2
Buses	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
% Buses	0	0	0	0	1.7	0	0	1.7	0	0	0	0	0	0	0	0	1.1

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	0	2	0	2	14	1	0	15	0	1	2	3	1	0	2	3	23
07:45 AM	0	0	0	0	11	0	0	11	0	1	5	6	0	0	0	0	17
08:00 AM	0	1	0	1	25	0	0	25	0	2	12	14	0	0	0	0	40
08:15 AM	1	2	0	3	43	0	0	43	0	1	13	14	0	0	0	0	60
Total Volume	1	5	0	6	93	1	0	94	0	5	32	37	1	0	2	3	140
% App. Total	16.7	83.3	0		98.9	1.1	0		0	13.5	86.5		33.3	0	66.7		
PHF	.250	.625	.000	.500	.541	.250	.000	.547	.000	.625	.615	.661	.250	.000	.250	.250	.583

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
Start Date : 6/7/2023
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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:

	07:30 AM				07:30 AM				07:45 AM				07:00 AM			
+0 mins.	0	2	0	2	14	1	0	15	0	1	5	6	0	0	0	0
+15 mins.	0	0	0	0	11	0	0	11	0	2	12	14	0	0	0	0
+30 mins.	0	1	0	1	25	0	0	25	0	1	13	14	1	0	2	3
+45 mins.	1	2	0	3	43	0	0	43	1	0	4	5	0	0	0	0
Total Volume	1	5	0	6	93	1	0	94	1	4	34	39	1	0	2	3
% App. Total	16.7	83.3	0		98.9	1.1	0		2.6	10.3	87.2		33.3	0	66.7	
PHF	.250	.625	.000	.500	.541	.250	.000	.547	.250	.500	.654	.696	.250	.000	.250	.250

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

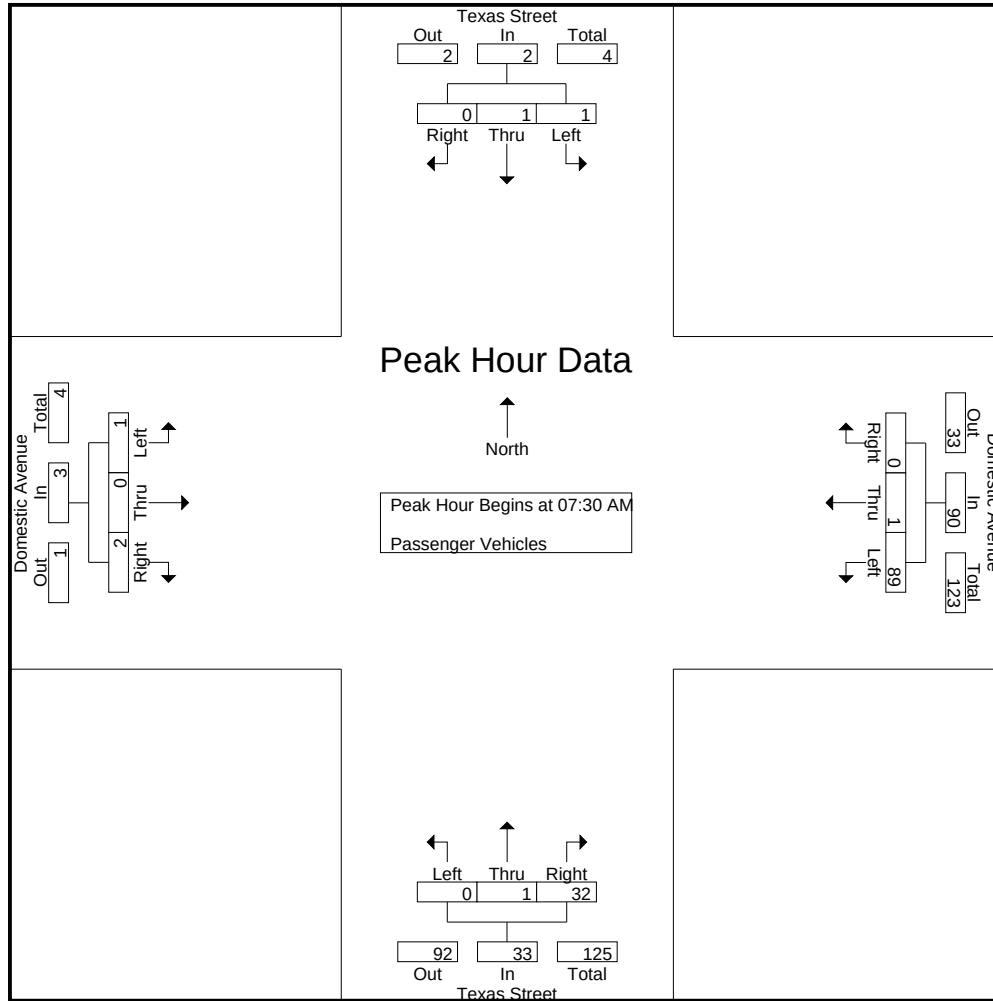
Groups Printed- Passenger Vehicles

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	4	0	0	4	0	1	4	5	0	0	0	0	10
07:15 AM	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	9
07:30 AM	0	1	0	1	14	1	0	15	0	0	2	2	1	0	2	3	21
07:45 AM	0	0	0	0	11	0	0	11	0	0	5	5	0	0	0	0	16
Total	0	2	0	2	38	1	0	39	0	1	11	12	1	0	2	3	56
08:00 AM	0	0	0	0	23	0	0	23	0	0	12	12	0	0	0	0	35
08:15 AM	1	0	0	1	41	0	0	41	0	1	13	14	0	0	0	0	56
08:30 AM	0	0	0	0	8	0	0	8	1	0	4	5	0	0	1	1	14
08:45 AM	0	1	0	1	4	0	0	4	0	1	5	6	0	0	0	0	11
Total	1	1	0	2	76	0	0	76	1	2	34	37	0	0	1	1	116
Grand Total	1	3	0	4	114	1	0	115	1	3	45	49	1	0	3	4	172
Apprch %	25	75	0		99.1	0.9	0		2	6.1	91.8		25	0	75		
Total %	0.6	1.7	0	2.3	66.3	0.6	0	66.9	0.6	1.7	26.2	28.5	0.6	0	1.7	2.3	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	1	0	1	14	1	0	15	0	0	2	2	1	0	2	3	21
07:45 AM	0	0	0	0	11	0	0	11	0	0	5	5	0	0	0	0	16
08:00 AM	0	0	0	0	23	0	0	23	0	0	12	12	0	0	0	0	35
08:15 AM	1	0	0	1	41	0	0	41	0	1	13	14	0	0	0	0	56
Total Volume	1	1	0	2	89	1	0	90	0	1	32	33	1	0	2	3	128
% App. Total	50	50	0		98.9	1.1	0		0	3	97		33.3	0	66.7		
PHF	.250	.250	.000	.500	.543	.250	.000	.549	.000	.250	.615	.589	.250	.000	.250	.250	.571

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
Start Date : 6/7/2023
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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	1	0	1	14	1	0	15	0	0	2	2	1	0	2	3
+15 mins.	0	0	0	0	11	0	0	11	0	0	5	5	0	0	0	0
+30 mins.	0	0	0	0	23	0	0	23	0	0	12	12	0	0	0	0
+45 mins.	1	0	0	1	41	0	0	41	0	1	13	14	0	0	0	0
Total Volume	1	1	0	2	89	1	0	90	0	1	32	33	1	0	2	3
% App. Total	50	50	0		98.9	1.1	0		0	3	97		33.3	0	66.7	
PHF	.250	.250	.000	.500	.543	.250	.000	.549	.000	.250	.615	.589	.250	.000	.250	.250

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
Start Date : 6/7/2023
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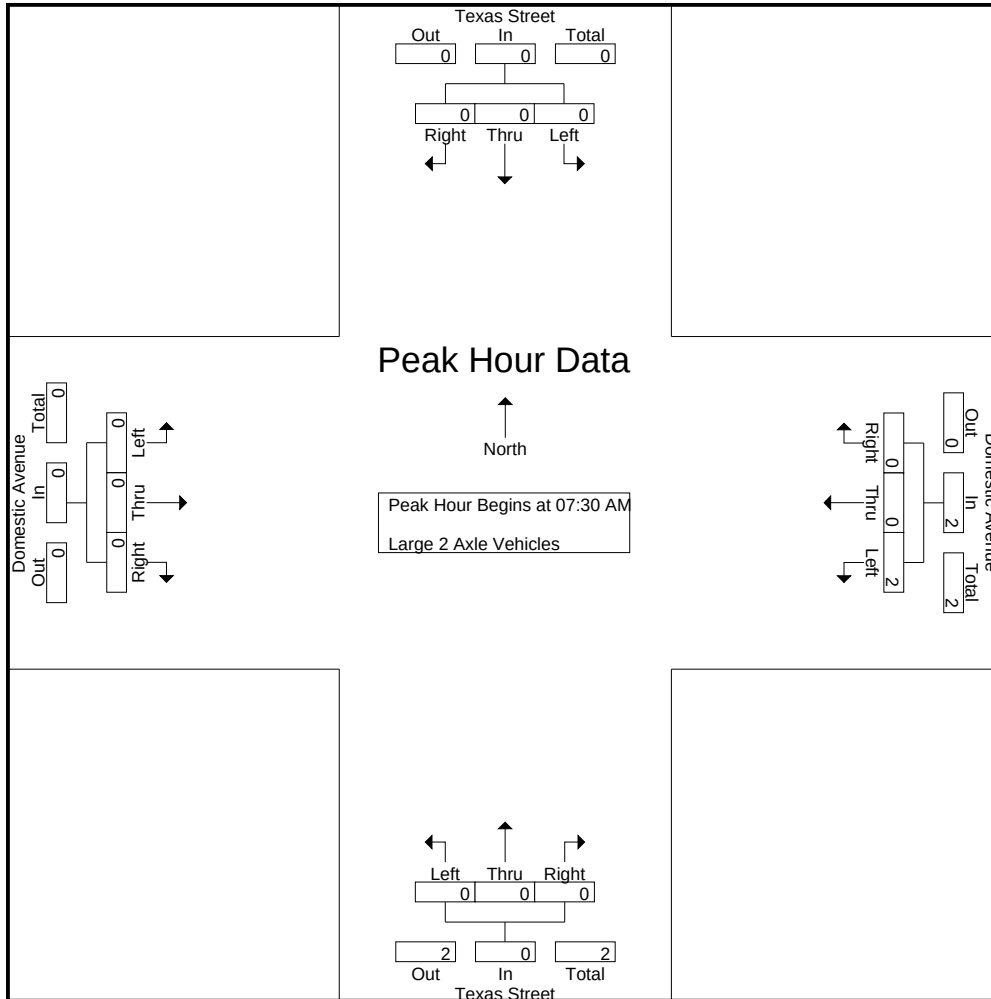
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	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	2	0	0	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0		100	0	0		0	0	0		0	0	0		
Total %	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	1	0	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		100	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 2



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	1	0	0	1	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	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
Start Date : 6/7/2023
Page No : 1

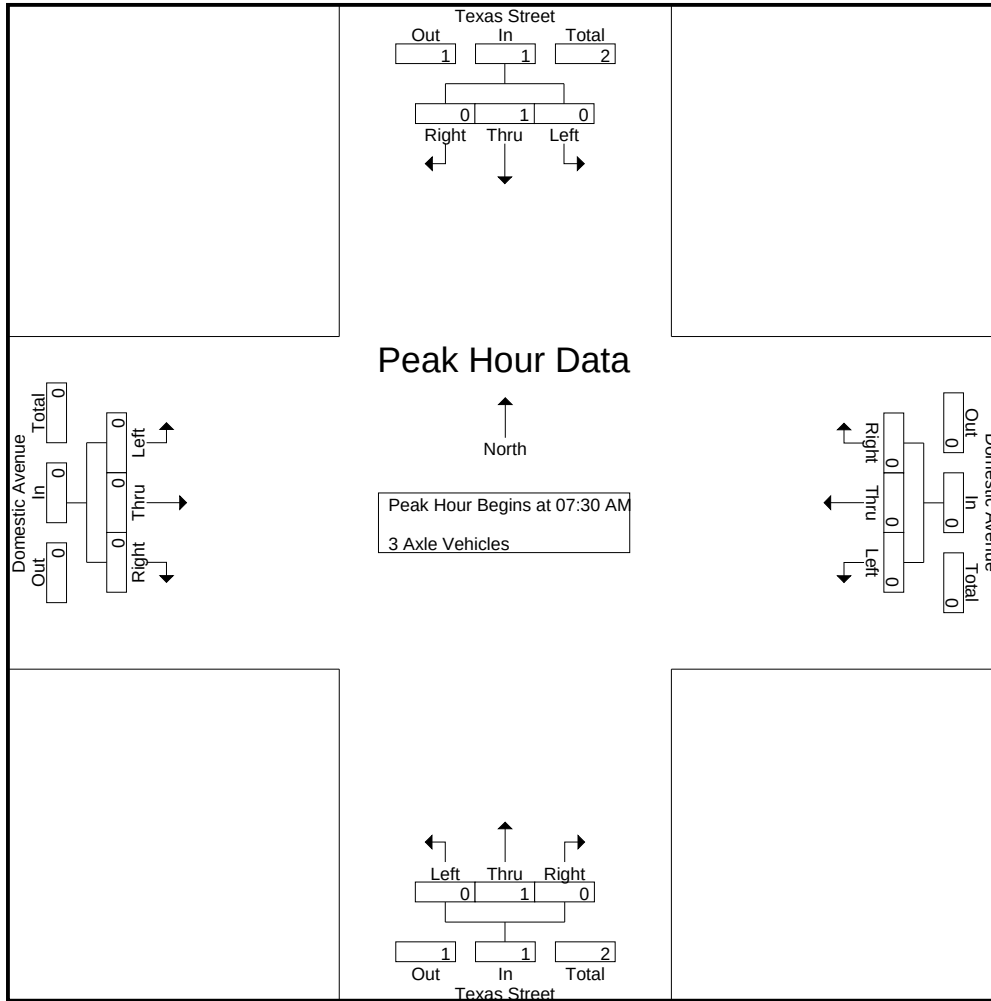
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	0	0	0	0	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	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	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	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	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	66.7	0	66.7	0	0	0	0	0	33.3	0	33.3	0	0	0	0	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
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	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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

File Name : 06_RED_Tex_Dom 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	1	0	1	0	0	0	0	0	1	0	1	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	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
Start Date : 6/7/2023
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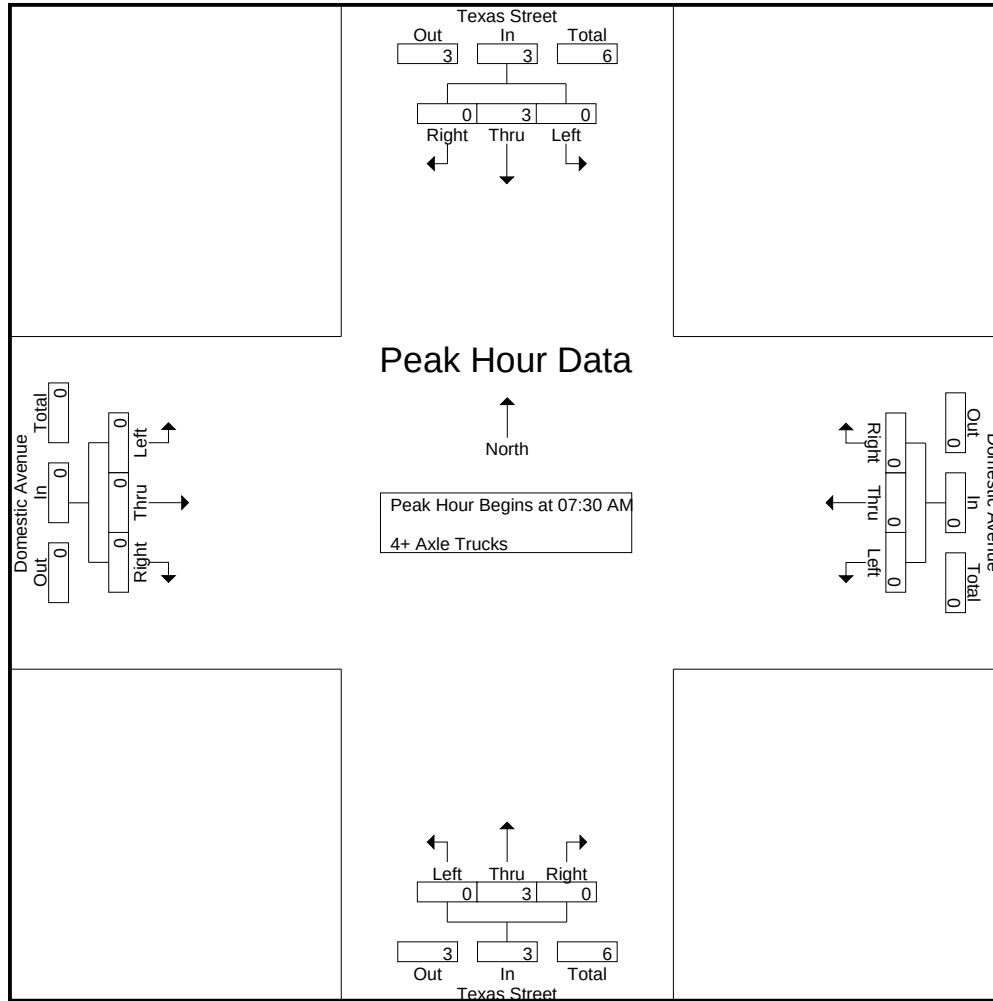
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	0	0	0
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	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
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	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Grand Total	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	50	0	50	0	0	0	0	0	50	0	50	0	0	0	0	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	1	0	1	0	0	0	0	1
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.500

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
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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	1	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
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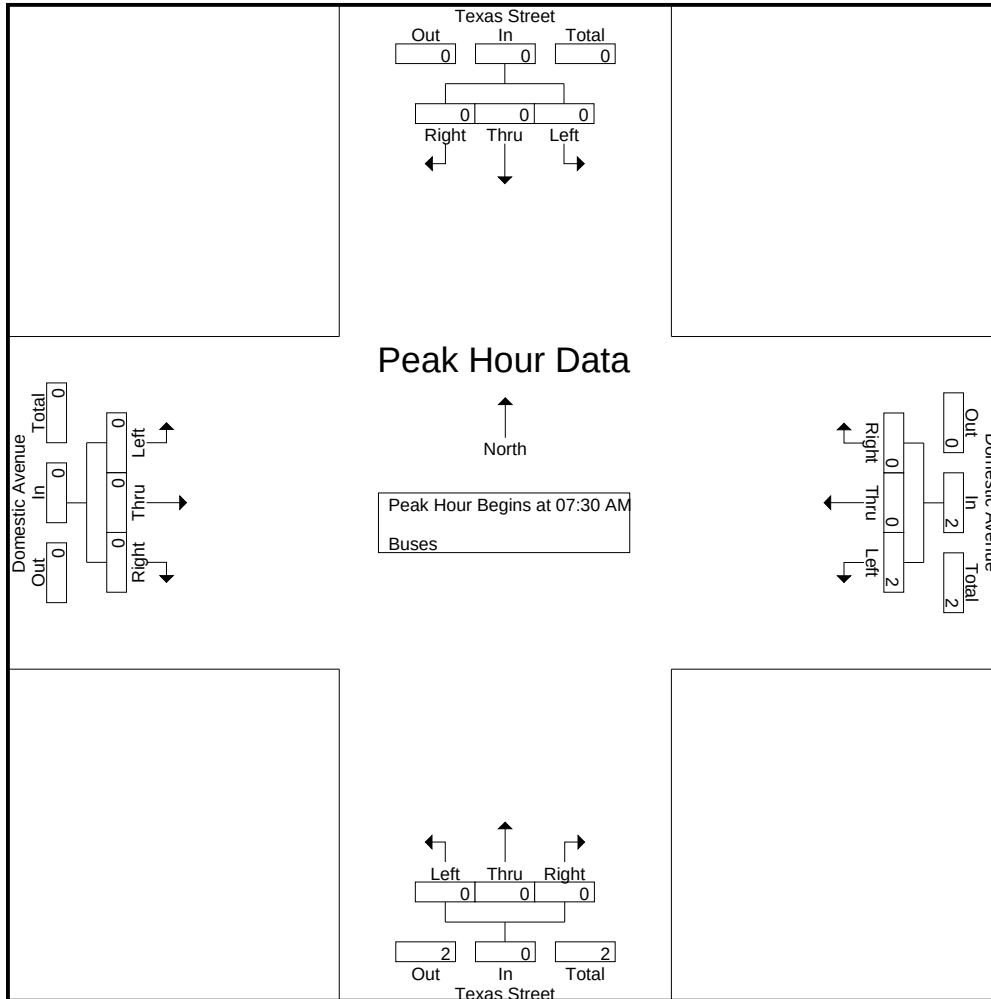
Groups Printed- Buses

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	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	2	0	0	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0		100	0	0		0	0	0		0	0	0		
Total %	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	1	0	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		100	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

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

File Name : 06_RED_Tex_Dom AM
Site Code : 12223608
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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	1	0	0	1	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	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000

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

File Name : 06_RED_Tex_Dom PM
Site Code : 12223608
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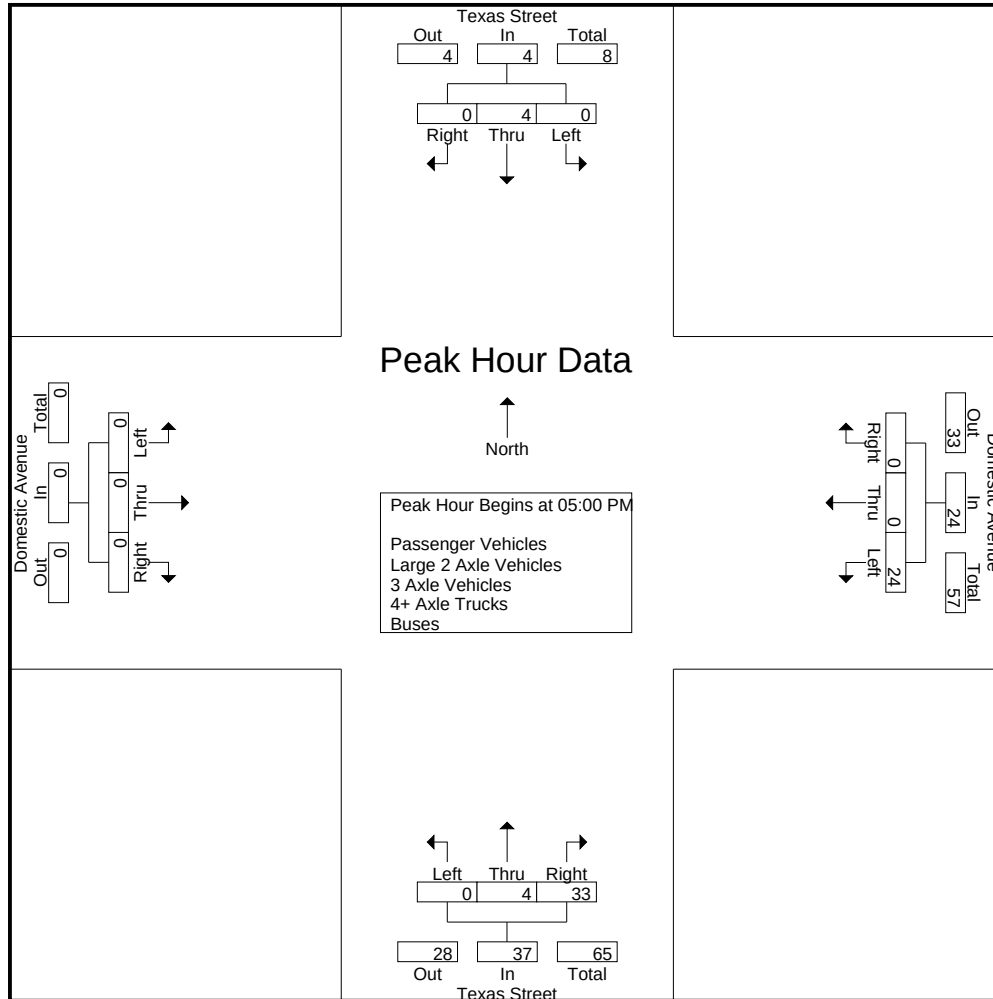
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks - Buses

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	5	0	0	5	0	0	7	7	0	0	0	0	12
04:15 PM	0	0	0	0	6	0	0	6	0	0	9	9	0	0	0	0	15
04:30 PM	1	0	0	1	5	0	0	5	0	1	7	8	0	0	0	0	14
04:45 PM	0	0	0	0	3	0	0	3	0	0	9	9	0	0	0	0	12
Total	1	0	0	1	19	0	0	19	0	1	32	33	0	0	0	0	53
05:00 PM	0	3	0	3	2	0	0	2	0	3	7	10	0	0	0	0	15
05:15 PM	0	0	0	0	8	0	0	8	0	0	10	10	0	0	0	0	18
05:30 PM	0	0	0	0	6	0	0	6	0	0	7	7	0	0	0	0	13
05:45 PM	0	1	0	1	8	0	0	8	0	1	9	10	0	0	0	0	19
Total	0	4	0	4	24	0	0	24	0	4	33	37	0	0	0	0	65
Grand Total	1	4	0	5	43	0	0	43	0	5	65	70	0	0	0	0	118
Apprch %	20	80	0		100	0	0		0	7.1	92.9		0	0	0		
Total %	0.8	3.4	0	4.2	36.4	0	0	36.4	0	4.2	55.1	59.3	0	0	0	0	
Passenger Vehicles	1	4	0	5	43	0	0	43	0	5	65	70	0	0	0	0	118
% Passenger Vehicles	100	100	0	100	100	0	0	100	0	100	100	100	0	0	0	0	100
Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	0	3	0	3	2	0	0	2	0	3	7	10	0	0	0	0	15
05:15 PM	0	0	0	0	8	0	0	8	0	0	10	10	0	0	0	0	18
05:30 PM	0	0	0	0	6	0	0	6	0	0	7	7	0	0	0	0	13
05:45 PM	0	1	0	1	8	0	0	8	0	1	9	10	0	0	0	0	19
Total Volume	0	4	0	4	24	0	0	24	0	4	33	37	0	0	0	0	65
% App. Total	0	100	0		100	0	0		0	10.8	89.2		0	0	0		
PHF	.000	.333	.000	.333	.750	.000	.000	.750	.000	.333	.825	.925	.000	.000	.000	.000	.855

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

File Name : 06_RED_Tex_Dom 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:

	04:15 PM				05:00 PM				04:30 PM				04:00 PM			
+0 mins.	0	0	0	0	2	0	0	2	0	1	7	8	0	0	0	0
+15 mins.	1	0	0	1	8	0	0	8	0	0	9	9	0	0	0	0
+30 mins.	0	0	0	0	6	0	0	6	0	3	7	10	0	0	0	0
+45 mins.	0	3	0	3	8	0	0	8	0	0	10	10	0	0	0	0
Total Volume	1	3	0	4	24	0	0	24	0	4	33	37	0	0	0	0
% App. Total	25	75	0		100	0	0		0	10.8	89.2		0	0	0	
PHF	.250	.250	.000	.333	.750	.000	.000	.750	.000	.333	.825	.925	.000	.000	.000	.000

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

File Name : 06_RED_Tex_Dom PM
Site Code : 12223608
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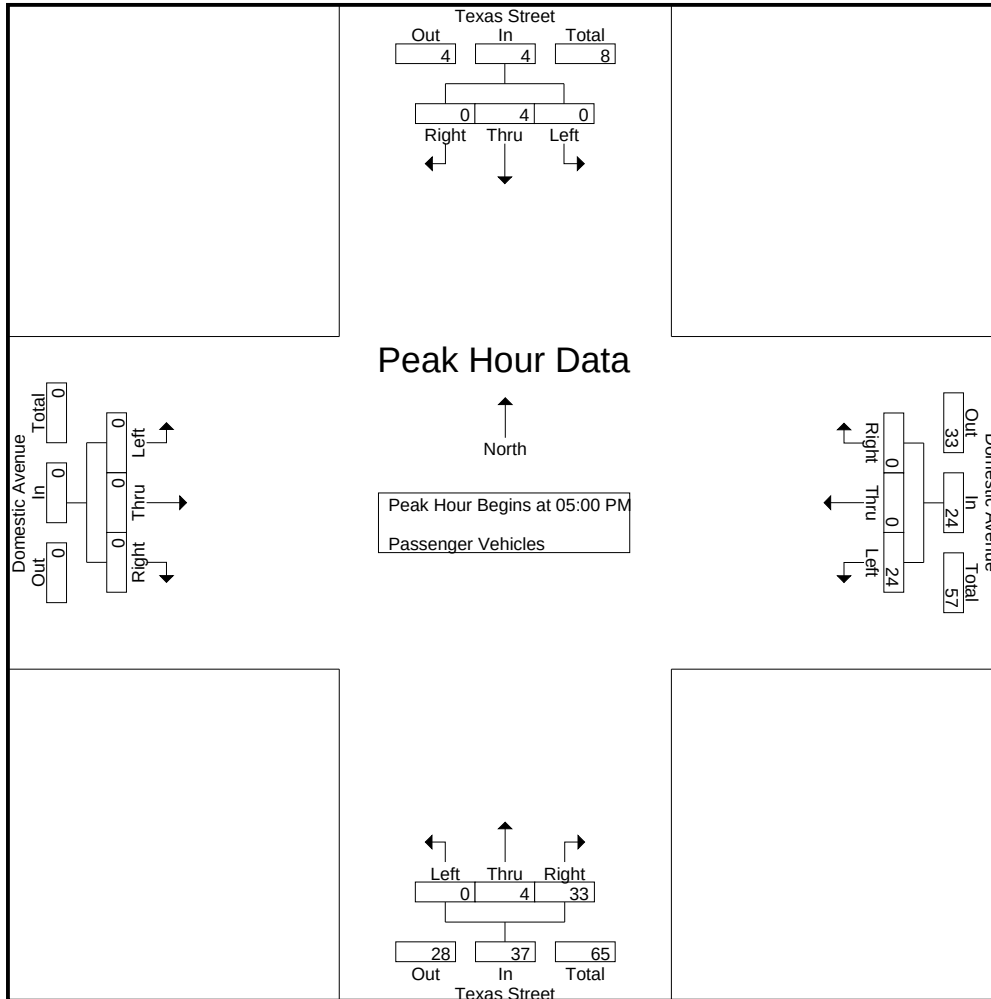
Groups Printed- Passenger Vehicles

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	5	0	0	5	0	0	7	7	0	0	0	0	12
04:15 PM	0	0	0	0	6	0	0	6	0	0	9	9	0	0	0	0	15
04:30 PM	1	0	0	1	5	0	0	5	0	1	7	8	0	0	0	0	14
04:45 PM	0	0	0	0	3	0	0	3	0	0	9	9	0	0	0	0	12
Total	1	0	0	1	19	0	0	19	0	1	32	33	0	0	0	0	53
05:00 PM	0	3	0	3	2	0	0	2	0	3	7	10	0	0	0	0	15
05:15 PM	0	0	0	0	8	0	0	8	0	0	10	10	0	0	0	0	18
05:30 PM	0	0	0	0	6	0	0	6	0	0	7	7	0	0	0	0	13
05:45 PM	0	1	0	1	8	0	0	8	0	1	9	10	0	0	0	0	19
Total	0	4	0	4	24	0	0	24	0	4	33	37	0	0	0	0	65
Grand Total	1	4	0	5	43	0	0	43	0	5	65	70	0	0	0	0	118
Apprch %	20	80	0		100	0	0		0	7.1	92.9		0	0	0		
Total %	0.8	3.4	0	4.2	36.4	0	0	36.4	0	4.2	55.1	59.3	0	0	0	0	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	3	0	3	2	0	0	2	0	3	7	10	0	0	0	0	15
05:15 PM	0	0	0	0	8	0	0	8	0	0	10	10	0	0	0	0	18
05:30 PM	0	0	0	0	6	0	0	6	0	0	7	7	0	0	0	0	13
05:45 PM	0	1	0	1	8	0	0	8	0	1	9	10	0	0	0	0	19
Total Volume	0	4	0	4	24	0	0	24	0	4	33	37	0	0	0	0	65
% App. Total	0	100	0		100	0	0		0	10.8	89.2		0	0	0		
PHF	.000	.333	.000	.333	.750	.000	.000	.750	.000	.333	.825	.925	.000	.000	.000	.000	.855

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

File Name : 06_RED_Tex_Dom PM
Site Code : 12223608
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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	3	0	3	2	0	0	2	0	3	7	10	0	0	0	0
+15 mins.	0	0	0	0	8	0	0	8	0	0	10	10	0	0	0	0
+30 mins.	0	0	0	0	6	0	0	6	0	0	7	7	0	0	0	0
+45 mins.	0	1	0	1	8	0	0	8	0	1	9	10	0	0	0	0
Total Volume	0	4	0	4	24	0	0	24	0	4	33	37	0	0	0	0
% App. Total	0	100	0		100	0	0		0	10.8	89.2		0	0	0	
PHF	.000	.333	.000	.333	.750	.000	.000	.750	.000	.333	.825	.925	.000	.000	.000	.000

City of Redlands
N/S: Texas Street
E/W: Domestic Avenue
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File Name : 06_RED_Tex_Dom PM
Site Code : 12223608
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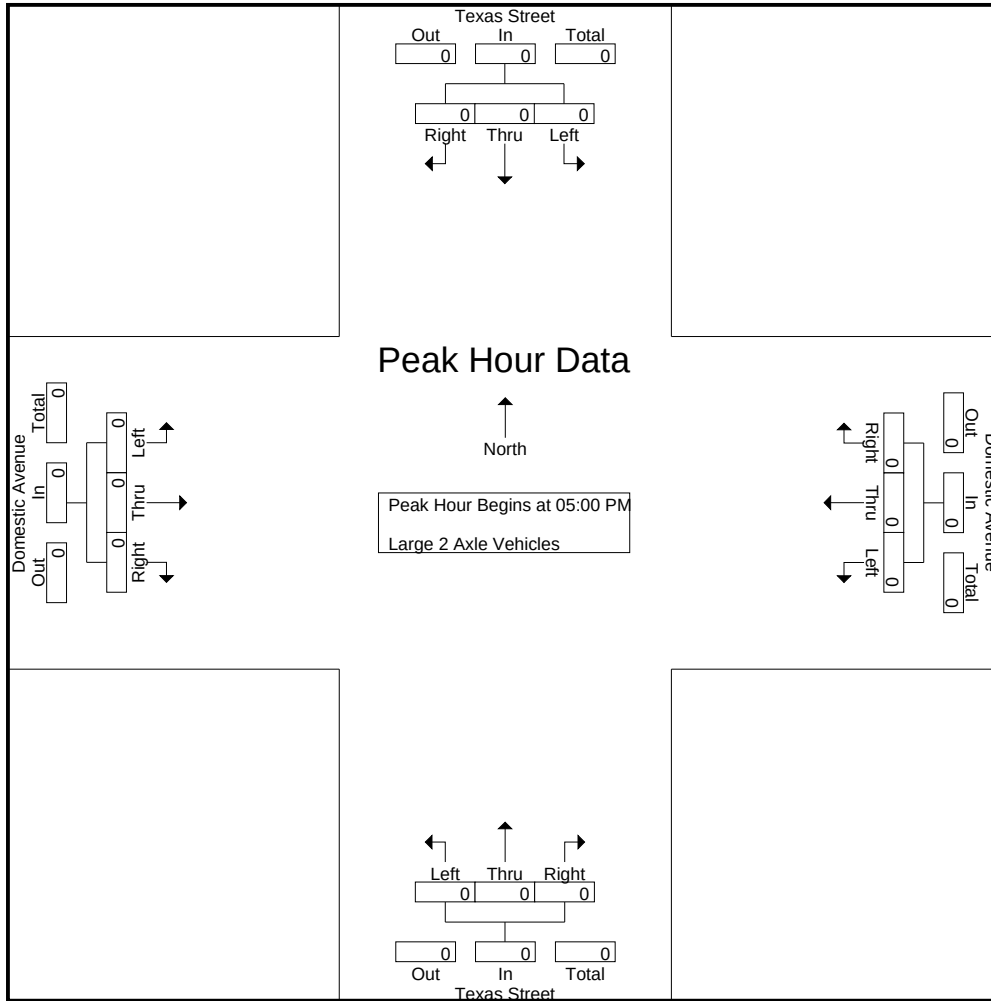
Groups Printed- Large 2 Axle Vehicles

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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: Domestic Avenue
Weather: Clear

File Name : 06_RED_Tex_Dom 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.	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: Domestic Avenue
Weather: Clear

File Name : 06_RED_Tex_Dom PM
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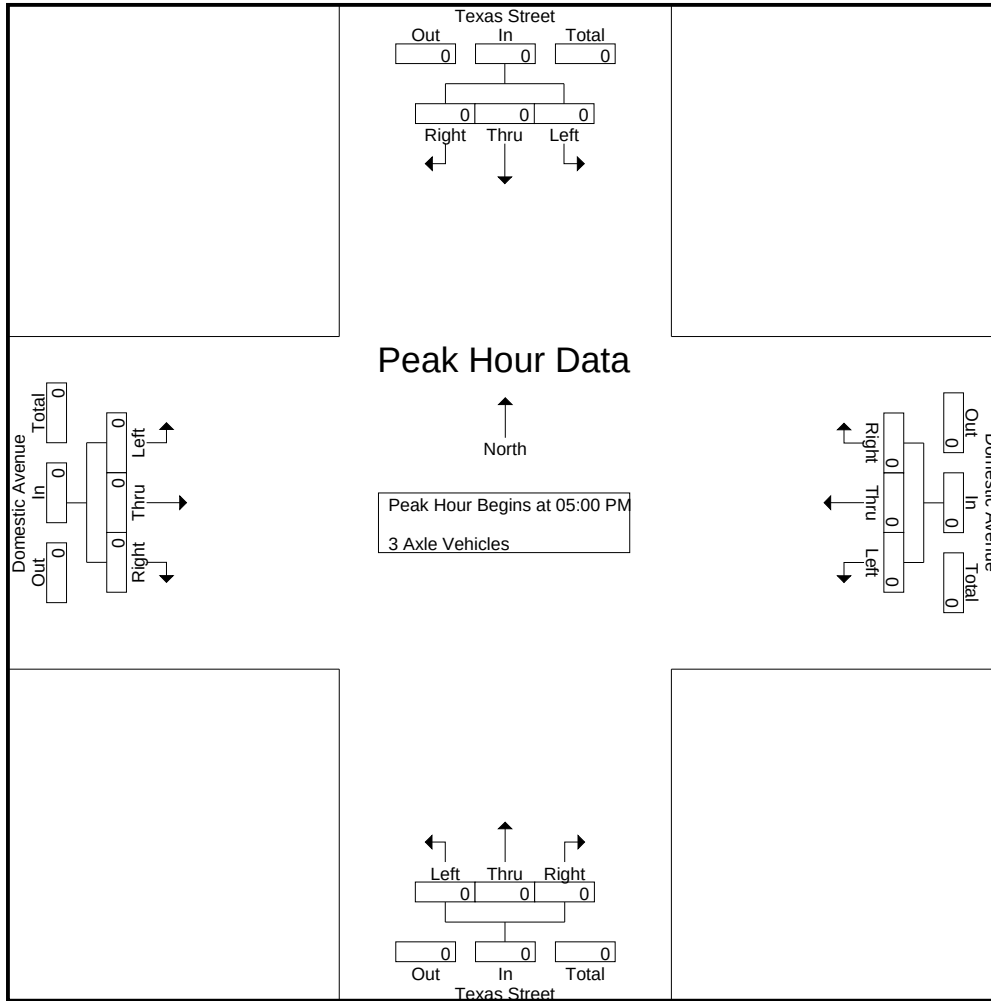
Groups Printed- 3 Axle Vehicles

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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: Domestic Avenue
Weather: Clear

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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: Domestic Avenue
Weather: Clear

File Name : 06_RED_Tex_Dom PM
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Start Date : 6/7/2023
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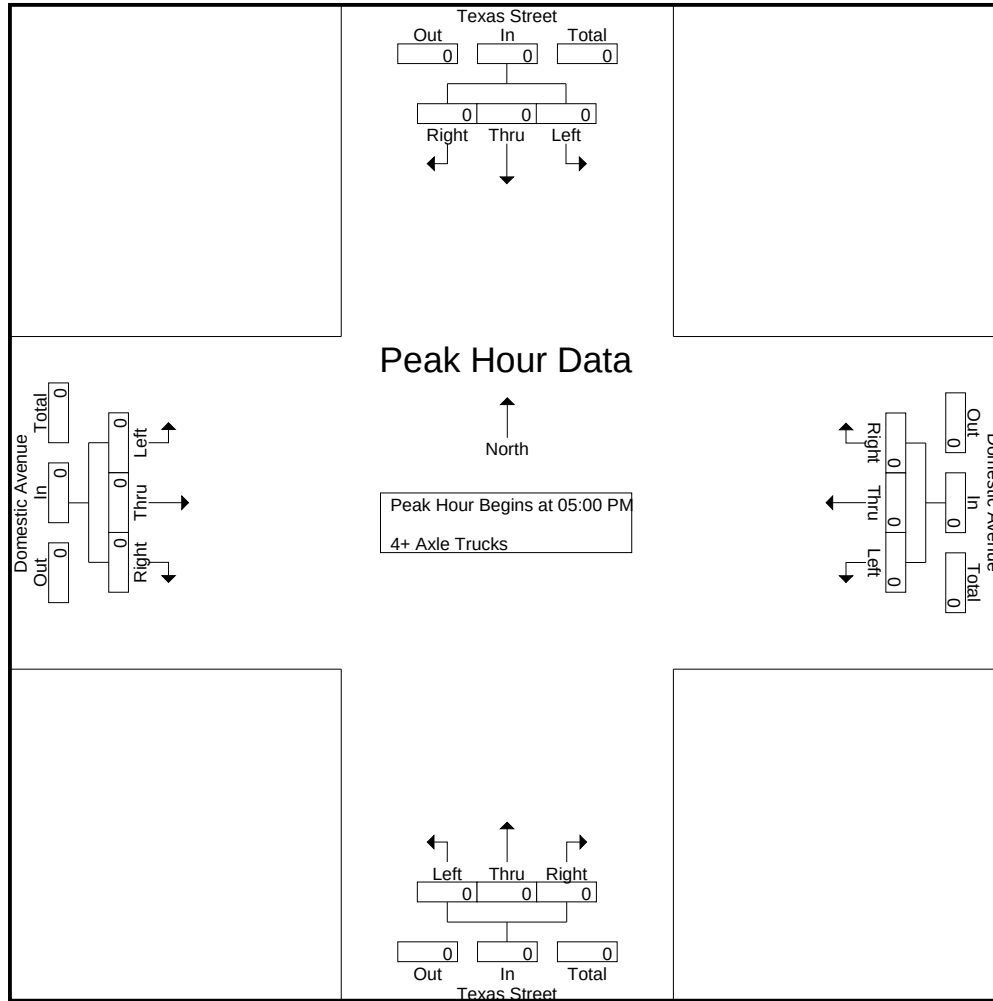
Groups Printed- 4+ Axle Trucks

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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: Domestic Avenue
Weather: Clear

File Name : 06_RED_Tex_Dom PM
Site Code : 12223608
Start Date : 6/7/2023
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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: Domestic Avenue
Weather: Clear

File Name : 06_RED_Tex_Dom PM
Site Code : 12223608
Start Date : 6/7/2023
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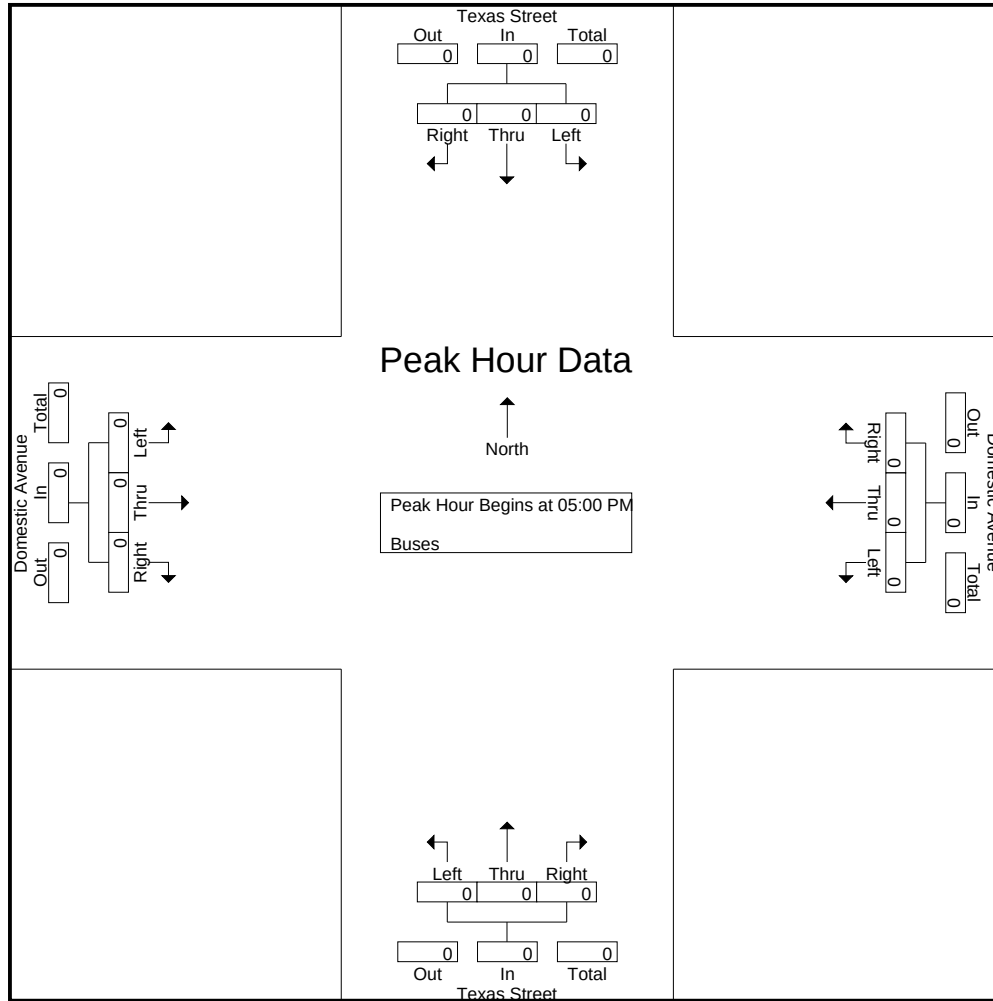
Groups Printed- Buses

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Texas Street Southbound				Domestic Avenue Westbound				Texas Street Northbound				Domestic 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: Domestic Avenue
Weather: Clear

File Name : 06_RED_Tex_Dom PM
Site Code : 12223608
Start Date : 6/7/2023
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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

Location: San Bernardino
 N/S: Texas Street
 E/W: Domestic Avenue



Date: 6/7/2023
 Day: Wednesday

PEDESTRIANS

	North Leg Texas Street	East Leg Domestic Avenue	South Leg Texas Street	West Leg Domestic Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	1	0	0	1
7:30 AM	0	2	0	0	2
7:45 AM	0	0	0	0	0
8:00 AM	2	0	0	2	4
8:15 AM	2	1	0	2	5
8:30 AM	0	0	0	0	0
8:45 AM	0	3	0	0	3
TOTAL VOLUMES:	4	8	0	4	16

	North Leg Texas Street	East Leg Domestic Avenue	South Leg Texas Street	West Leg Domestic Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	1	1	0	1	3
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	3	0	1	5

Location: San Bernardino
 N/S: Texas Street
 E/W: Domestic Avenue



Date: 6/7/2023
 Day: Wednesday

BICYCLES

		Southbound Texas Street			Westbound Domestic Avenue			Northbound Texas Street			Eastbound Domestic Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:		0	0	0	0	0	0	0	0	0	0	0	0	0

		Southbound Texas Street			Westbound Domestic Avenue			Northbound Texas Street			Eastbound Domestic Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	2
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:		0	0	0	2	0	0	0	0	0	0	0	0	2

Appendix C:

Volume Development Worksheets

1 Study Intersection: I-210 NB Ramps / W San Bernardino Ave
 North/South: I-210 NB Ramps
 East/West: W San Bernardino Ave

OY Year: _____
 Ambient Growth: _____
 Years till opening: _____

Vehicle		Existing		Balance		Existing		Project Only				Existing With Project	
		AM	PM	AM	PM	AM	PM	Dist. %		AM	PM	AM	PM
								IN	OUT				
	NBL	31	54			31	54			0	0	31	54
	NBT	196	391			196	391			0	0	196	391
	NBR	39	51		3	39	54			0	0	39	54
	SBL	145	227	-1	2	144	229	40%		8	30	152	259
	SBT	12	17			12	17			0	0	12	17
	SBR	86	91			86	91			0	0	86	91
	EBL	103	423			103	423			0	0	103	423
	EBT	312	566	-1	2	311	568	10%		2	7	313	575
	EBR	101	193			101	193			0	0	101	193
	WBL	41	27		3	41	30			0	0	41	30
	WBT	498	323		2	498	325		40%	27	17	525	342
	WBR	256	165		1	256	166		10%	6	4	262	170

2 Study Intersection: Tennessee St / W San Bernardino Ave
 North/South: Tennessee St
 East/West: W San Bernardino Ave

OY Year: _____
 Ambient Growth: _____
 Years till opening: _____

Vehicle		Existing		Balance		Existing		Project Only				Existing With Proj.	
		AM	PM	AM	PM	AM	PM	Dist. %		AM	PM	AM	PM
								IN	OUT				
	NBL	0	0			0	0			0	0	0	0
	NBT	0	0			0	0			0	0	0	0
	NBR	0	0			0	0			0	0	0	0
	SBL	2	1	2	1	4	2			0	0	4	2
	SBT	0	0			0	0			0	0	0	0
	SBR	159	69	1	-1	160	68		50%	33	21	193	89
	EBL	194	70	1	-3	195	67	50%		10	37	205	104
	EBT	297	787	2	-3	299	784			0	0	299	784
	EBR	0	0			0	0			0	0	0	0
	WBL	0	0			0	0			0	0	0	0
	WBT	634	455	1	-2	635	453			0	0	635	453
	WBR	23	5		-1	23	4			0	0	23	4

3 Study Intersection: Project Drwy / W Pioneer Ave
 North/South: Project Drwy
 East/West: W Pioneer Ave

OY Year: _____
 Ambient Growth: _____
 Years till opening: _____

Vehicle		Existing		Balance		Existing		Project Only				Existing With Proj.	
		AM	PM	AM	PM	AM	PM	Dist. %		AM	PM	AM	PM
								IN	OUT				
	NBL					0	0			0	0	0	0
	NBT					0	0			0	0	0	0
	NBR					0	0			0	0	0	0
	SBL					0	0		68%	44	28	44	28
	SBT					0	0			0	0	0	0
	SBR					0	0		25%	16	11	16	11
	EBL					0	0	25%		5	18	5	18
	EBT					203	348			0	0	203	348
	EBR					0	0			0	0	0	0
	WBL					0	0			0	0	0	0
	WBT					227	86			0	0	227	86
	WBR					0	0	68%		14	50	14	50

4 Study Intersection: Tennessee St / W Pioneer Ave
 North/South: Tennessee St
 East/West: W Pioneer Ave

OY Year: _____
 Ambient Growth: _____
 Years till opening: _____

Vehicle		Existing		Balance		Existing		Project Only				Existing With Proj.	
		AM	PM	AM	PM	AM	PM	Dist. %		AM	PM	AM	PM
								IN	OUT				
	NBL	14	7			14	7	50%		10	37	24	44
	NBT	0	0			0	0			0	0	0	0
	NBR	203	63	1	1	204	64			0	0	204	64
	SBL	0	0			0	0			0	0	0	0
	SBT	0	0			0	0			0	0	0	0
	SBR	0	0			0	0			0	0	0	0
	EBL	0	0			0	0			0	0	0	0
	EBT	198	325			198	325		18%	11	7	209	332
	EBR	6	23	-1		5	23		50%	33	21	38	44
	WBL	160	48	-1	-1	159	47			0	0	159	47
	WBT	213	81		-2	213	79	18%		4	13	217	92
	WBR	0	0			0	0			0	0	0	0

5 Study Intersection: Texas St / W Pioneer Ave
 North/South: Texas St
 East/West: W Pioneer Ave

OY Year: 2019
 Ambient Growth: _____
 Years till opening: _____

Vehicle		Existing		Balance		Existing		Project Only				Existing With Proj.	
		AM	PM	AM	PM	AM	PM	Dist. %		AM	PM	AM	PM
								IN	OUT				
	NBL	152	36			152	36	16%		4	12	156	48
	NBT	120	28			120	28	4%		1	3	121	31
	NBR	38	95			38	95			0	0	38	95
	SBL	123	9			123	9			0	0	123	9
	SBT	160	24			160	24		4%	3	2	163	26
	SBR	61	13			61	13			0	0	61	13
	EBL	24	26			24	26			0	0	24	26
	EBT	152	292			152	292		2%	1	0	153	292
	EBR	65	80			65	80		16%	10	7	75	87
	WBL	32	41			32	41			0	0	32	41
	WBT	328	83			328	83	2%		0	1	328	84
	WBR	84	1			84	1			0	0	84	1

6 Study Intersection: Texas St / W Domestic Ave
 North/South: Texas St
 East/West: W Domestic Ave

OY Year: 2019
 Ambient Growth: _____
 Years till opening: _____

Vehicle		Existing		Balance		Existing		Project Only				Existing With Proj.	
		AM	PM	AM	PM	AM	PM	Dist. %		AM	PM	AM	PM
								IN	OUT				
	NBL	0	0			0	0	4%		1	3	1	3
	NBT	5	4			5	4			0	0	5	4
	NBR	32	33			32	33			0	0	32	33
	SBL	1	0			1	0			0	0	1	0
	SBT	5	4			5	4			0	0	5	4
	SBR	0	0			0	0			0	0	0	0
	EBL	1	0			1	0			0	0	1	0
	EBT	0	0			0	0		3%	2	1	2	1
	EBR	2	0			2	0		4%	3	2	5	2
	WBL	93	24			93	24			0	0	93	24
	WBT	1	0			1	0	3%		1	2	2	2
	WBR	0	0			0	0			0	0	0	0

Appendix D:

Existing Year 2022 AM Peak Hour Analysis Worksheets

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	311	101	41	498	256	31	196	39	144	12	86
Future Volume (vph)	103	311	101	41	498	256	31	196	39	144	12	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	245		0	160		0	0		0	110		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.975			0.868	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3273	1810	1583	1752	1845	1583	1752	3395	0	1719	1542	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3273	1810	1583	1752	1845	1583	1752	3395	0	1719	1542	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			155			269		18			97	
Link Speed (mph)		30			45			35			30	
Link Distance (ft)		1240			275			514			370	
Travel Time (s)		28.2			4.2			10.0			8.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	5%	2%	3%	3%	2%	3%	4%	2%	5%	14%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	116	349	113	46	560	288	35	220	44	162	13	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	116	349	113	46	560	288	35	264	0	162	110	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	5.0	5.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	14.7	36.0	36.0	14.7	36.0	36.0	14.7	35.0		14.7	35.0	
Total Split (s)	14.7	50.3	50.3	14.7	50.3	50.3	14.7	35.0		20.0	40.3	
Total Split (%)	12.3%	41.9%	41.9%	12.3%	41.9%	41.9%	12.3%	29.2%		16.7%	33.6%	
Maximum Green (s)	10.0	44.3	44.3	10.0	44.3	44.3	10.0	29.0		15.3	34.3	
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	5.0	3.7	5.0		3.7	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.0	6.0	4.7	6.0	6.0	4.7	6.0		4.7	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		22.0			22.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	10.2	41.1	41.1	10.2	34.2	34.2	10.2	12.8		13.6	23.2	
Actuated g/C Ratio	0.11	0.44	0.44	0.11	0.37	0.37	0.11	0.14		0.15	0.25	
v/c Ratio	0.32	0.43	0.14	0.24	0.82	0.38	0.18	0.55		0.64	0.24	
Control Delay	44.4	22.1	1.7	45.9	37.7	4.8	45.0	40.8		52.2	11.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	44.4	22.1	1.7	45.9	37.7	4.8	45.0	40.8		52.2	11.3	
LOS	D	C	A	D	D	A	D	D		D	B	
Approach Delay		22.6			27.6			41.3			35.7	
Approach LOS		C			C			D			D	
90th %ile Green (s)	10.0	44.3	44.3	10.0	44.3	44.3	10.0	16.6		15.3	21.9	
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Gap		Max	Hold	
70th %ile Green (s)	10.0	42.3	42.3	10.0	42.3	42.3	10.0	14.3		15.3	19.6	
70th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Max	Gap		Max	Hold	
50th %ile Green (s)	10.0	35.5	35.5	10.0	35.5	35.5	10.0	12.7		15.3	18.0	
50th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Max	Gap		Max	Hold	
30th %ile Green (s)	10.0	43.9	43.9	0.0	29.2	29.2	0.0	10.7		12.4	27.8	
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Skip	Gap		Gap	Hold	
10th %ile Green (s)	10.0	36.9	36.9	0.0	22.2	22.2	0.0	10.0		10.0	24.7	
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Skip	Min		Min	Hold	
Stops (vph)	91	209	4	37	427	28	30	193		127	22	
Fuel Used(gal)	2	6	1	1	11	2	1	4		3	1	
CO Emissions (g/hr)	170	389	72	70	769	109	44	299		185	44	
NOx Emissions (g/hr)	33	76	14	14	150	21	8	58		36	9	
VOC Emissions (g/hr)	39	90	17	16	178	25	10	69		43	10	
Dilemma Vehicles (#)	0	0	0	0	23	0	0	9		0	0	
Queue Length 50th (ft)	34	160	0	26	298	7	20	73		91	6	
Queue Length 95th (ft)	67	252	14	67	448	57	54	123		#187	53	
Internal Link Dist (ft)		1160			195			434			290	
Turn Bay Length (ft)	245			160						110		
Base Capacity (vph)	360	882	851	192	899	909	192	1096		289	642	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.32	0.40	0.13	0.24	0.62	0.32	0.18	0.24		0.56	0.17	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 92.6

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 29.3

Intersection LOS: C

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

90th %ile Actuated Cycle: 107.6

70th %ile Actuated Cycle: 103.3

50th %ile Actuated Cycle: 94.9

30th %ile Actuated Cycle: 83.7

10th %ile Actuated Cycle: 73.6

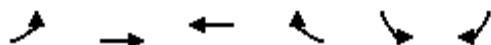
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Tennessee St/I-215 NB Ramps & San Bernardino Ave

Ø1	Ø2	Ø3	Ø4
14.7 s	50.3 s	14.7 s	40.3 s
Ø5	Ø6	Ø7	Ø8
14.7 s	50.3 s	20 s	35 s

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	311	101	41	498	256	31	196	39	144	12	86
Future Volume (veh/h)	103	311	101	41	498	256	31	196	39	144	12	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1826	1870	1856	1856	1870	1856	1841	1870	1826	1693	1811
Adj Flow Rate, veh/h	116	349	113	46	560	288	35	220	44	162	13	97
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	5	2	3	3	2	3	4	2	5	14	6
Cap, veh/h	390	720	625	143	664	567	120	372	73	216	32	236
Arrive On Green	0.12	0.39	0.39	0.08	0.36	0.36	0.07	0.13	0.13	0.12	0.18	0.18
Sat Flow, veh/h	3319	1826	1585	1767	1856	1585	1767	2914	572	1739	173	1288
Grp Volume(v), veh/h	116	349	113	46	560	288	35	130	134	162	0	110
Grp Sat Flow(s),veh/h/ln	1659	1826	1585	1767	1856	1585	1767	1749	1738	1739	0	1461
Q Serve(g_s), s	2.5	11.2	3.6	1.9	21.7	11.2	1.5	5.5	5.7	7.0	0.0	5.2
Cycle Q Clear(g_c), s	2.5	11.2	3.6	1.9	21.7	11.2	1.5	5.5	5.7	7.0	0.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.88
Lane Grp Cap(c), veh/h	390	720	625	143	664	567	120	223	222	216	0	268
V/C Ratio(X)	0.30	0.48	0.18	0.32	0.84	0.51	0.29	0.58	0.60	0.75	0.00	0.41
Avail Cap(c_a), veh/h	424	1033	897	226	1050	897	226	648	644	340	0	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.6	17.8	15.5	34.0	23.1	19.7	34.7	32.2	32.3	33.1	0.0	28.2
Incr Delay (d2), s/veh	0.4	0.5	0.1	1.3	3.7	0.7	1.3	2.4	2.6	5.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.5	1.2	0.8	9.0	3.9	0.7	2.4	2.5	3.2	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	18.3	15.6	35.3	26.9	20.5	36.0	34.6	34.9	38.4	0.0	29.2
LnGrp LOS	C	B	B	D	C	C	D	C	C	D	A	C
Approach Vol, veh/h		578			894			299			272	
Approach Delay, s/veh		20.5			25.2			34.9			34.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	36.9	10.0	20.4	13.9	34.0	14.4	16.0				
Change Period (Y+Rc), s	* 4.7	6.0	* 4.7	6.0	* 4.7	6.0	* 4.7	6.0				
Max Green Setting (Gmax), s	* 10	44.3	* 10	34.3	* 10	44.3	* 15	29.0				
Max Q Clear Time (g_c+I1), s	3.9	13.2	3.5	7.2	4.5	23.7	9.0	7.7				
Green Ext Time (p_c), s	0.0	2.7	0.0	0.6	0.1	4.3	0.2	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			26.6									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	195	299	635	23	4	160
Future Volume (vph)	195	299	635	23	4	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	25
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.995			0.850
Flt Protected		0.981			0.950	
Satd. Flow (prot)	0	1827	1853	0	1770	1583
Flt Permitted		0.981			0.950	
Satd. Flow (perm)	0	1827	1853	0	1770	1583
Link Speed (mph)		45	45		35	
Link Distance (ft)		300	1369		1324	
Travel Time (s)		4.5	20.7		25.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	219	336	713	26	4	180
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	555	739	0	4	180
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 74.7%						
ICU Level of Service D						
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	195	299	635	23	4	160
Future Vol, veh/h	195	299	635	23	4	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	219	336	713	26	4	180
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	739	0	-	0	1500	726
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	774	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	867	-	-	-	134	425
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	455	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	867	-	-	-	92	425
Mov Cap-2 Maneuver	-	-	-	-	92	-
Stage 1	-	-	-	-	330	-
Stage 2	-	-	-	-	455	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.2	0		20.1		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	867	-	-	-	92	425
HCM Lane V/C Ratio	0.253	-	-	-	0.049	0.423
HCM Control Delay (s)	10.6	0	-	-	46.1	19.5
HCM Lane LOS	B	A	-	-	E	C
HCM 95th %tile Q(veh)	1	-	-	-	0.2	2.1

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↲	↲	↲	↲
Traffic Volume (vph)	198	5	159	213	14	204
Future Volume (vph)	198	5	159	213	14	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	170		0	25
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.997					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1857	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1857	0	1770	1863	1770	1583
Link Speed (mph)	25			25	35	
Link Distance (ft)	1771			1935	1324	
Travel Time (s)	48.3			52.8	25.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	319	8	256	344	23	329
Shared Lane Traffic (%)						
Lane Group Flow (vph)	327	0	256	344	23	329
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	32.9%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	5.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	198	5	159	213	14	204
Future Vol, veh/h	198	5	159	213	14	204
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	319	8	256	344	23	329
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	327	0	1179	323
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	856	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1233	-	211	718
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	416	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1233	-	167	718
Mov Cap-2 Maneuver	-	-	-	-	167	-
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	329	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	3.7		15.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	167	718	-	-	1233	-
HCM Lane V/C Ratio	0.135	0.458	-	-	0.208	-
HCM Control Delay (s)	29.9	14.2	-	-	8.7	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	2.4	-	-	0.8	-

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing AM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	152	65	32	328	84	152	120	38	123	160	61
Future Volume (vph)	24	152	65	32	328	84	152	120	38	123	160	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	125		0	160		100
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99			0.99				0.91
Frt		0.955			0.974			0.964				0.850
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	1770	1762	0	0	1784	0	1770	1773	0	1770	1863	1583
Flt Permitted	0.328				0.956		0.950			0.950		
Satd. Flow (perm)	611	1762	0	0	1712	0	1770	1773	0	1770	1863	1447
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			16			18				84
Link Speed (mph)		25			25			25				25
Link Distance (ft)		1935			830			633			1328	
Travel Time (s)		52.8			22.6			17.3			36.2	
Confl. Peds. (#/hr)			17			29			19			33
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	33	208	89	44	449	115	208	164	52	168	219	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	297	0	0	608	0	208	216	0	168	219	84
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								4
Detector Phase	2	2		6	6		3	8		7	4	4
Switch Phase												

Synchro 11 Report

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing AM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	28.6	28.6		32.6	32.6		9.5	31.6		9.5	27.6	27.6
Total Split (s)	43.4	43.4		43.4	43.4		18.2	31.6		15.0	28.4	28.4
Total Split (%)	48.2%	48.2%		48.2%	48.2%		20.2%	35.1%		16.7%	31.6%	31.6%
Maximum Green (s)	37.8	37.8		37.8	37.8		14.0	26.0		10.8	22.8	22.8
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.6		3.2	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6			5.6		4.2	5.6		4.2	5.6	5.6
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	16.0	16.0		20.0	20.0			19.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	30.5	30.5			30.5		12.2	16.5		10.2	14.5	14.5
Actuated g/C Ratio	0.42	0.42			0.42		0.17	0.23		0.14	0.20	0.20
v/c Ratio	0.13	0.40			0.84		0.71	0.52		0.68	0.60	0.24
Control Delay	16.1	15.8			32.1		46.4	28.9		50.0	35.8	8.6
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	16.1	15.8			32.1		46.4	28.9		50.0	35.8	8.6
LOS	B	B			C		D	C		D	D	A
Approach Delay		15.8			32.1			37.5			36.0	
Approach LOS		B			C			D			D	
90th %ile Green (s)	37.8	37.8		37.8	37.8		14.0	25.2		10.8	22.0	22.0
90th %ile Term Code	Hold	Hold		Max	Max		Max	Hold		Max	Gap	Gap
70th %ile Green (s)	37.8	37.8		37.8	37.8		14.0	20.4		10.8	17.2	17.2
70th %ile Term Code	Hold	Hold		Max	Max		Max	Hold		Max	Gap	Gap
50th %ile Green (s)	34.1	34.1		34.1	34.1		14.0	17.9		10.8	14.7	14.7
50th %ile Term Code	Hold	Hold		Gap	Gap		Max	Hold		Max	Gap	Gap
30th %ile Green (s)	26.6	26.6		26.6	26.6		11.3	12.6		10.4	11.7	11.7
30th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Hold		Gap	Gap	Gap
10th %ile Green (s)	17.9	17.9		17.9	17.9		7.9	8.8		7.4	8.3	8.3
10th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Hold		Gap	Gap	Gap
Stops (vph)	15	124			349		127	116		100	134	12
Fuel Used(gal)	1	5			7		3	2		3	3	1
CO Emissions (g/hr)	37	332			516		192	156		212	244	59
NOx Emissions (g/hr)	7	65			100		37	30		41	47	11
VOC Emissions (g/hr)	9	77			120		44	36		49	57	14
Dilemma Vehicles (#)	0	0			0		0	0		0	0	0
Queue Length 50th (ft)	9	84			242		95	84		79	99	0
Queue Length 95th (ft)	24	124			307		148	119		#135	136	21
Internal Link Dist (ft)		1855			750			553			1248	
Turn Bay Length (ft)	130						125			160		100
Base Capacity (vph)	329	965			931		353	669		273	607	528

Synchro 11 Report

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.10	0.31			0.65		0.59	0.32		0.62	0.36	0.16

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 73.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 31.4

Intersection LOS: C

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 89.2

70th %ile Actuated Cycle: 84.4

50th %ile Actuated Cycle: 78.2

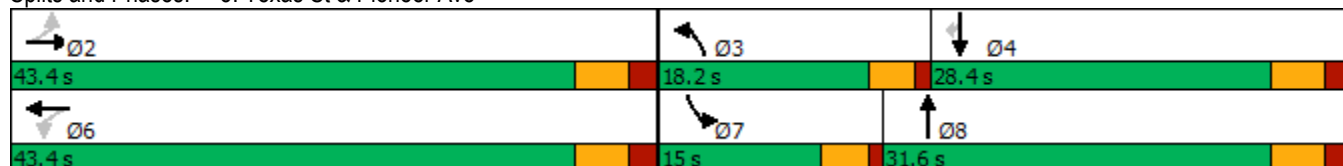
30th %ile Actuated Cycle: 65

10th %ile Actuated Cycle: 49.5

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: Texas St & Pioneer Ave



Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing AM
07/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	152	65	32	328	84	152	120	38	123	160	61
Future Volume (veh/h)	24	152	65	32	328	84	152	120	38	123	160	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.94	1.00		0.96	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	208	89	44	449	115	208	164	52	168	219	84
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	301	503	215	88	541	133	253	331	105	209	414	325
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.14	0.25	0.25	0.12	0.22	0.22
Sat Flow, veh/h	838	1238	530	74	1331	328	1781	1346	427	1781	1870	1467
Grp Volume(v), veh/h	33	0	297	608	0	0	208	0	216	168	219	84
Grp Sat Flow(s),veh/h/ln	838	0	1767	1733	0	0	1781	0	1773	1781	1870	1467
Q Serve(g_s), s	0.0	0.0	8.0	10.5	0.0	0.0	7.6	0.0	7.0	6.2	6.9	3.2
Cycle Q Clear(g_c), s	3.8	0.0	8.0	21.3	0.0	0.0	7.6	0.0	7.0	6.2	6.9	3.2
Prop In Lane	1.00		0.30	0.07		0.19	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	301	0	718	762	0	0	253	0	437	209	414	325
V/C Ratio(X)	0.11	0.00	0.41	0.80	0.00	0.00	0.82	0.00	0.49	0.80	0.53	0.26
Avail Cap(c_a), veh/h	433	0	998	1031	0	0	373	0	689	287	637	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	14.2	18.0	0.0	0.0	27.9	0.0	21.7	28.8	23.0	21.5
Incr Delay (d2), s/veh	0.2	0.0	0.4	3.2	0.0	0.0	5.7	0.0	0.9	7.7	1.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.1	8.5	0.0	0.0	3.5	0.0	2.9	3.0	3.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	0.0	14.6	21.2	0.0	0.0	33.6	0.0	22.5	36.5	24.0	21.9
LnGrp LOS	B	A	B	C	A	A	C	A	C	D	C	C
Approach Vol, veh/h		330			608			424			471	
Approach Delay, s/veh		14.4			21.2			28.0			28.1	
Approach LOS		B			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.8	13.7	20.4		32.8	12.1	22.1				
Change Period (Y+Rc), s		5.6	* 4.2	5.6		5.6	* 4.2	5.6				
Max Green Setting (Gmax), s		37.8	* 14	22.8		37.8	* 11	26.0				
Max Q Clear Time (g_c+I1), s		10.0	9.6	8.9		23.3	8.2	9.0				
Green Ext Time (p_c), s		2.2	0.1	1.3		3.9	0.1	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			23.3									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Redlands TTM 20528 (Pioneer)
6: Texas St & Domestic Ave

Existing AM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	2	93	1	0	0	5	32	1	5	0
Future Volume (vph)	1	0	2	93	1	0	0	5	32	1	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.919						0.884				
Flt Protected		0.980			0.953						0.991	
Satd. Flow (prot)	0	1678	0	0	1775	0	0	1647	0	0	1846	0
Flt Permitted		0.980			0.953						0.991	
Satd. Flow (perm)	0	1678	0	0	1775	0	0	1647	0	0	1846	0
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		344			524			1328			429	
Travel Time (s)		7.8			14.3			36.2			11.7	
Confl. Peds. (#/hr)						4			3			4
Confl. Bikes (#/hr)												
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	0	3	160	2	0	0	9	55	2	9	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	0	162	0	0	64	0	0	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	23.3%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	2	93	1	0	0	5	32	1	5	0
Future Vol, veh/h	1	0	2	93	1	0	0	5	32	1	5	0
Conflicting Peds, #/hr	0	0	0	0	0	4	0	0	3	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	58	58	58	58	58	58	58	58	58	58	58
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	3	160	2	0	0	9	55	2	9	0
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	59	84	13	55	57	44	13	0	0	67	0	0
Stage 1	17	17	-	40	40	-	-	-	-	-	-	-
Stage 2	42	67	-	15	17	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	937	806	1067	943	834	1026	1606	-	-	1535	-	-
Stage 1	1002	881	-	975	862	-	-	-	-	-	-	-
Stage 2	972	839	-	1005	881	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	928	800	1063	936	827	1019	1600	-	-	1531	-	-
Mov Cap-2 Maneuver	928	800	-	936	827	-	-	-	-	-	-	-
Stage 1	998	877	-	972	859	-	-	-	-	-	-	-
Stage 2	966	836	-	1001	877	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	8.6		9.7			0			1.2			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1600	-	-	1014	935	1531	-	-				
HCM Lane V/C Ratio	-	-	-	0.005	0.173	0.001	-	-				
HCM Control Delay (s)	0	-	-	8.6	9.7	7.4	0	-				
HCM Lane LOS	A	-	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.6	0	-	-				

Appendix E:

Existing Year 2022 PM Peak Hour Analysis Worksheets

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	423	568	193	30	325	166	54	391	54	229	17	91
Future Volume (vph)	423	568	193	30	325	166	54	391	54	229	17	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	245		0	160		0	0		0	110		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor			0.98			0.99						
Frt			0.850			0.850		0.982			0.873	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	1881	1583	1805	1845	1615	1805	3510	0	1752	1616	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3467	1881	1545	1805	1845	1594	1805	3510	0	1752	1616	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			172			198		12			103	
Link Speed (mph)		30			45			35			30	
Link Distance (ft)		1240			275			514			370	
Travel Time (s)		28.2			4.2			10.0			8.4	
Confl. Peds. (#/hr)			2			1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	2%	0%	3%	0%	0%	1%	1%	3%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	481	645	219	34	369	189	61	444	61	260	19	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	481	645	219	34	369	189	61	505	0	260	122	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	5.0	5.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	14.7	36.0	36.0	14.7	36.0	36.0	14.7	35.0		14.7	35.0	
Total Split (s)	25.0	47.9	47.9	14.7	37.6	37.6	14.7	35.0		22.4	42.7	
Total Split (%)	20.8%	39.9%	39.9%	12.3%	31.3%	31.3%	12.3%	29.2%		18.7%	35.6%	
Maximum Green (s)	20.3	41.9	41.9	10.0	31.6	31.6	10.0	29.0		17.7	36.7	
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	5.0	3.7	5.0		3.7	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.0	6.0	4.7	6.0	6.0	4.7	6.0		4.7	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		22.0			22.0	
Pedestrian Calls (#/hr)		2	2		1	1		0			0	
Act Effct Green (s)	18.5	41.5	41.5	10.2	26.3	26.3	10.2	20.5		18.0	32.1	
Actuated g/C Ratio	0.18	0.39	0.39	0.10	0.25	0.25	0.10	0.20		0.17	0.31	
v/c Ratio	0.79	0.87	0.31	0.20	0.80	0.35	0.35	0.73		0.87	0.22	
Control Delay	53.3	45.4	8.2	51.7	51.6	6.0	55.1	46.0		72.8	9.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	53.3	45.4	8.2	51.7	51.6	6.0	55.1	46.0		72.8	9.7	
LOS	D	D	A	D	D	A	E	D		E	A	
Approach Delay		42.2			37.0			47.0			52.7	
Approach LOS		D			D			D			D	
90th %ile Green (s)	20.3	41.9	41.9	10.0	31.6	31.6	10.0	27.8		17.7	35.5	
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Gap		Max	Hold	
70th %ile Green (s)	20.3	41.9	41.9	10.0	31.6	31.6	10.0	24.2		17.7	31.9	
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Gap		Max	Hold	
50th %ile Green (s)	20.3	41.9	41.9	10.0	31.6	31.6	10.0	20.8		17.7	28.5	
50th %ile Term Code	Max	Max	Max	Max	Hold	Hold	Max	Gap		Max	Hold	
30th %ile Green (s)	17.5	44.4	44.4	0.0	22.2	22.2	10.0	17.4		17.7	25.1	
30th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Max	Gap		Max	Hold	
10th %ile Green (s)	14.0	35.2	35.2	0.0	16.5	16.5	0.0	13.8		17.7	36.2	
10th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Skip	Gap		Max	Hold	
Stops (vph)	381	461	36	28	289	17	49	389		188	21	
Fuel Used(gal)	11	13	2	1	8	1	1	9		5	1	
CO Emissions (g/hr)	754	929	167	54	575	72	82	610		356	44	
NOx Emissions (g/hr)	147	181	32	11	112	14	16	119		69	9	
VOC Emissions (g/hr)	175	215	39	13	133	17	19	141		83	10	
Dilemma Vehicles (#)	0	0	0	0	13	0	0	15		0	0	
Queue Length 50th (ft)	171	436	22	23	238	0	42	178		187	10	
Queue Length 95th (ft)	#242	#699	77	57	364	46	89	230		#361	52	
Internal Link Dist (ft)		1160			195			434			290	
Turn Bay Length (ft)	245			160						110		
Base Capacity (vph)	681	773	736	174	564	625	174	994		300	640	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.71	0.83	0.30	0.20	0.65	0.30	0.35	0.51		0.87	0.19	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 105.1

Natural Cycle: 115

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 43.4

Intersection LOS: D

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 118.8

70th %ile Actuated Cycle: 115.2

50th %ile Actuated Cycle: 111.8

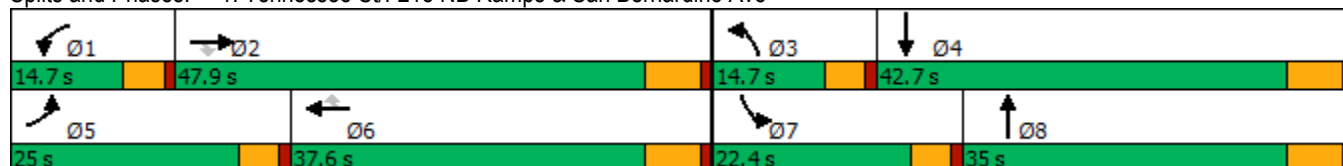
30th %ile Actuated Cycle: 96.2

10th %ile Actuated Cycle: 83.4

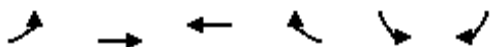
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Tennessee St/I-215 NB Ramps & San Bernardino Ave



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	423	568	193	30	325	166	54	391	54	229	17	91
Future Volume (veh/h)	423	568	193	30	325	166	54	391	54	229	17	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1870	1900	1856	1900	1900	1885	1885	1856	1811	1870
Adj Flow Rate, veh/h	481	645	219	34	369	189	61	444	61	260	19	103
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	2	0	3	0	0	1	1	3	6	2
Cap, veh/h	568	710	596	111	510	442	149	569	78	292	64	349
Arrive On Green	0.16	0.38	0.38	0.06	0.27	0.27	0.08	0.18	0.18	0.17	0.26	0.26
Sat Flow, veh/h	3483	1885	1581	1810	1856	1608	1810	3166	433	1767	245	1327
Grp Volume(v), veh/h	481	645	219	34	369	189	61	250	255	260	0	122
Grp Sat Flow(s), veh/h/ln	1742	1885	1581	1810	1856	1608	1810	1791	1807	1767	0	1572
Q Serve(g_s), s	13.2	32.0	9.9	1.8	17.8	9.5	3.2	13.1	13.3	14.2	0.0	6.1
Cycle Q Clear(g_c), s	13.2	32.0	9.9	1.8	17.8	9.5	3.2	13.1	13.3	14.2	0.0	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.84
Lane Grp Cap(c), veh/h	568	710	596	111	510	442	149	322	325	292	0	413
V/C Ratio(X)	0.85	0.91	0.37	0.31	0.72	0.43	0.41	0.78	0.78	0.89	0.00	0.30
Avail Cap(c_a), veh/h	716	800	671	183	594	515	183	526	531	317	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.1	29.1	22.3	44.3	32.4	29.4	43.0	38.6	38.7	40.3	0.0	29.1
Incr Delay (d2), s/veh	7.6	13.2	0.4	1.5	3.6	0.7	1.8	4.0	4.2	24.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	16.5	3.6	0.8	8.0	3.7	1.5	6.0	6.1	8.0	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	42.4	22.6	45.8	36.0	30.1	44.8	42.7	42.8	64.4	0.0	29.5
LnGrp LOS	D	D	C	D	D	C	D	D	D	E	A	C
Approach Vol, veh/h		1345			592			566			382	
Approach Delay, s/veh		41.1			34.7			43.0			53.2	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	43.2	12.8	31.9	20.8	33.1	21.0	23.7				
Change Period (Y+Rc), s	* 4.7	6.0	* 4.7	6.0	* 4.7	6.0	* 4.7	6.0				
Max Green Setting (Gmax), s	* 10	41.9	* 10	36.7	* 20	31.6	* 18	29.0				
Max Q Clear Time (g_c+I1), s	3.8	34.0	5.2	8.1	15.2	19.8	16.2	15.3				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.7	0.9	2.1	0.1	2.4				
Intersection Summary												
HCM 6th Ctrl Delay			41.7									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Traffic Volume (vph)	67	784	453	4	2	68
Future Volume (vph)	67	784	453	4	2	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	25
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.999			0.850
Flt Protected		0.996			0.950	
Satd. Flow (prot)	0	1855	1861	0	1770	1583
Flt Permitted		0.996			0.950	
Satd. Flow (perm)	0	1855	1861	0	1770	1583
Link Speed (mph)		45	45		35	
Link Distance (ft)		300	1369		1324	
Travel Time (s)		4.5	20.7		25.8	
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	71	834	482	4	2	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	905	486	0	2	72
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 82.4% ICU Level of Service E

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	67	784	453	4	2	68
Future Vol, veh/h	67	784	453	4	2	68
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	834	482	4	2	72
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	487	0	-	0	1461	485
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	976	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1076	-	-	-	142	582
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	365	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1075	-	-	-	124	581
Mov Cap-2 Maneuver	-	-	-	-	124	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	365	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.7	0		12.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1075	-	-	-	124	581
HCM Lane V/C Ratio	0.066	-	-	-	0.017	0.125
HCM Control Delay (s)	8.6	0	-	-	34.5	12.1
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1	0.4

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↖	↗	↖	↗
Traffic Volume (vph)	325	23	47	79	7	64
Future Volume (vph)	325	23	47	79	7	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	170		0	25
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.991					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1846	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1846	0	1770	1863	1770	1583
Link Speed (mph)	25			25	35	
Link Distance (ft)	1771			1935	1324	
Travel Time (s)	48.3			52.8	25.8	
Confl. Peds. (#/hr)		1	1			
Confl. Bikes (#/hr)		5				
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	374	26	54	91	8	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	400	0	54	91	8	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 35.2% ICU Level of Service A						
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	325	23	47	79	7	64
Future Vol, veh/h	325	23	47	79	7	64
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	374	26	54	91	8	74
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	401	0	587	388
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	199	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1158	-	472	660
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	835	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1157	-	449	659
Mov Cap-2 Maneuver	-	-	-	-	449	-
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	796	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	3.1	11.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	449	659	-	-	1157	-
HCM Lane V/C Ratio	0.018	0.112	-	-	0.047	-
HCM Control Delay (s)	13.2	11.1	-	-	8.3	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0.1	-

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing PM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	292	80	41	83	1	36	28	95	9	24	13
Future Volume (vph)	26	292	80	41	83	1	36	28	95	9	24	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	125		0	160		100
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							0.98
Frt		0.968			0.999			0.884				0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1770	1798	0	0	1831	0	1770	1647	0	1770	1863	1583
Flt Permitted	0.669				0.739		0.950			0.950		
Satd. Flow (perm)	1246	1798	0	0	1375	0	1770	1647	0	1770	1863	1549
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			1			104				106
Link Speed (mph)		25			25			25				25
Link Distance (ft)		1935			830			633				1328
Travel Time (s)		52.8			22.6			17.3				36.2
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)			4			1						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	321	88	45	91	1	40	31	104	10	26	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	409	0	0	137	0	40	135	0	10	26	14
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								4
Detector Phase	2	2		6	6		3	8		7	4	4
Switch Phase												

Synchro 11 Report

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing PM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	28.6	28.6		32.6	32.6		9.5	23.6		9.5	27.6	27.6
Total Split (s)	32.9	32.9		32.9	32.9		9.5	27.6		9.5	27.6	27.6
Total Split (%)	47.0%	47.0%		47.0%	47.0%		13.6%	39.4%		13.6%	39.4%	39.4%
Maximum Green (s)	27.3	27.3		27.3	27.3		5.3	22.0		5.3	22.0	22.0
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.6		3.2	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6			5.6		4.2	5.6		4.2	5.6	5.6
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	16.0	16.0		20.0	20.0			11.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	14.8	14.8			14.1		7.1	10.0		7.0	8.6	8.6
Actuated g/C Ratio	0.45	0.45			0.43		0.22	0.30		0.21	0.26	0.26
v/c Ratio	0.05	0.50			0.23		0.10	0.24		0.03	0.05	0.03
Control Delay	8.7	11.1			9.8		19.4	7.2		19.7	16.5	0.1
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.7	11.1			9.8		19.4	7.2		19.7	16.5	0.1
LOS	A	B			A		B	A		B	B	A
Approach Delay		11.0			9.8			10.0			12.5	
Approach LOS		B			A			A			B	
90th %ile Green (s)	23.4	23.4		23.4	23.4		5.3	10.4		5.3	10.4	10.4
90th %ile Term Code	Gap	Gap		Hold	Hold		Max	Gap		Max	Hold	Hold
70th %ile Green (s)	17.0	17.0		17.0	17.0		5.3	16.1		0.0	6.6	6.6
70th %ile Term Code	Gap	Gap		Hold	Hold		Max	Hold		Skip	Gap	Gap
50th %ile Green (s)	12.1	12.1		12.1	12.1		0.0	6.1		0.0	6.1	6.1
50th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Gap		Skip	Hold	Hold
30th %ile Green (s)	9.5	9.5		9.5	9.5		0.0	5.6		0.0	5.6	5.6
30th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Hold		Skip	Hold	Hold
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Skip		Skip	Skip	Skip
Stops (vph)	16	226			72		34	36		11	22	0
Fuel Used(gal)	1	8			1		0	1		0	0	0
CO Emissions (g/hr)	37	548			98		33	69		13	31	10
NOx Emissions (g/hr)	7	107			19		6	13		2	6	2
VOC Emissions (g/hr)	9	127			23		8	16		3	7	2
Dilemma Vehicles (#)	0	0			0		0	0		0	0	0
Queue Length 50th (ft)	2	39			12		5	4		1	3	0
Queue Length 95th (ft)	17	154			57		36	46		15	24	0
Internal Link Dist (ft)		1855			750			553			1248	
Turn Bay Length (ft)	130						125			160		100
Base Capacity (vph)	1008	1459			1112		399	1179		399	1298	1111

Synchro 11 Report

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.03	0.28			0.12		0.10	0.11		0.03	0.02	0.01

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 32.9

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 10.6

Intersection LOS: B

Intersection Capacity Utilization 49.6%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 54.5

70th %ile Actuated Cycle: 44.3

50th %ile Actuated Cycle: 29.4

30th %ile Actuated Cycle: 26.3

10th %ile Actuated Cycle: 10

Splits and Phases: 5: Texas St & Pioneer Ave

 Ø2	 Ø3	 Ø4
32.9 s	9.5 s	27.6 s
 Ø6	 Ø7	 Ø8
32.9 s	9.5 s	27.6 s

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing PM
07/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	292	80	41	83	1	36	28	95	9	24	13
Future Volume (veh/h)	26	292	80	41	83	1	36	28	95	9	24	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	321	88	45	91	1	40	31	104	10	26	14
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	650	480	132	219	350	3	83	61	206	24	241	204
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.05	0.16	0.16	0.01	0.13	0.13
Sat Flow, veh/h	1304	1408	386	202	1027	9	1781	377	1265	1781	1870	1580
Grp Volume(v), veh/h	29	0	409	137	0	0	40	0	135	10	26	14
Grp Sat Flow(s),veh/h/ln	1304	0	1794	1238	0	0	1781	0	1643	1781	1870	1580
Q Serve(g_s), s	0.0	0.0	6.2	0.3	0.0	0.0	0.7	0.0	2.4	0.2	0.4	0.2
Cycle Q Clear(g_c), s	0.5	0.0	6.2	6.5	0.0	0.0	0.7	0.0	2.4	0.2	0.4	0.2
Prop In Lane	1.00		0.22	0.33		0.01	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	650	0	611	572	0	0	83	0	267	24	241	204
V/C Ratio(X)	0.04	0.00	0.67	0.24	0.00	0.00	0.48	0.00	0.51	0.42	0.11	0.07
Avail Cap(c_a), veh/h	1323	0	1538	1314	0	0	296	0	1135	296	1292	1091
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.1	0.0	9.0	7.6	0.0	0.0	14.8	0.0	12.2	15.6	12.3	12.2
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.2	0.0	0.0	1.6	0.0	1.5	4.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.9	0.5	0.0	0.0	0.3	0.0	0.8	0.1	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.1	0.0	10.2	7.8	0.0	0.0	16.4	0.0	13.7	20.0	12.4	12.3
LnGrp LOS	A	A	B	A	A	A	B	A	B	B	B	B
Approach Vol, veh/h		438			137			175			50	
Approach Delay, s/veh		10.0			7.8			14.3			13.9	
Approach LOS		B			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.5	5.7	9.7		16.5	4.6	10.8				
Change Period (Y+Rc), s		5.6	* 4.2	5.6		5.6	* 4.2	5.6				
Max Green Setting (Gmax), s		27.3	* 5.3	22.0		27.3	* 5.3	22.0				
Max Q Clear Time (g_c+I1), s		8.2	2.7	2.4		8.5	2.2	4.4				
Green Ext Time (p_c), s		2.7	0.0	0.1		0.7	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			10.8									
HCM 6th LOS			B									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Redlands TTM 20528 (Pioneer)
6: Texas St & Domestic Ave

Existing PM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	24	0	0	0	4	33	0	4	0
Future Volume (vph)	0	0	0	24	0	0	0	4	33	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.881				
Flt Protected					0.950							
Satd. Flow (prot)	0	1863	0	0	1770	0	0	1641	0	0	1863	0
Flt Permitted					0.950							
Satd. Flow (perm)	0	1863	0	0	1770	0	0	1641	0	0	1863	0
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		344			524			1328			429	
Travel Time (s)		7.8			14.3			36.2			11.7	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	28	0	0	0	5	38	0	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	28	0	0	43	0	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	13.7%											
Analysis Period (min)	15											
ICU Level of Service A												

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	24	0	0	0	4	33	0	4	0
Future Vol, veh/h	0	0	0	24	0	0	0	4	33	0	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	28	0	0	0	5	38	0	5	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	29	49	5	30	30	25	5	0	0	44	0	0
Stage 1	5	5	-	25	25	-	-	-	-	-	-	-
Stage 2	24	44	-	5	5	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	980	843	1078	979	863	1051	1616	-	-	1564	-	-
Stage 1	1017	892	-	993	874	-	-	-	-	-	-	-
Stage 2	994	858	-	1017	892	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	980	842	1078	978	862	1050	1616	-	-	1563	-	-
Mov Cap-2 Maneuver	980	842	-	978	862	-	-	-	-	-	-	-
Stage 1	1017	892	-	992	873	-	-	-	-	-	-	-
Stage 2	994	857	-	1017	892	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			8.8			0			0		
HCM LOS	A			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1616	-	-	-	978	1563	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.029	-	-	-				
HCM Control Delay (s)	0	-	-	0	8.8	0	-	-				
HCM Lane LOS	A	-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-				

Appendix F: Existing Year With Project AM Peak Hour Analysis Worksheets

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	313	101	41	525	262	31	196	39	152	12	86
Future Volume (vph)	103	313	101	41	525	262	31	196	39	152	12	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	245		0	160		0	0		0	110		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.975			0.868	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3273	1810	1583	1752	1845	1583	1752	3395	0	1719	1542	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3273	1810	1583	1752	1845	1583	1752	3395	0	1719	1542	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			155			261			18			97
Link Speed (mph)		30			45			35			30	
Link Distance (ft)		1240			275			514			370	
Travel Time (s)		28.2			4.2			10.0			8.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	5%	2%	3%	3%	2%	3%	4%	2%	5%	14%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	116	352	113	46	590	294	35	220	44	171	13	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	116	352	113	46	590	294	35	264	0	171	110	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	5.0	5.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	14.7	36.0	36.0	14.7	36.0	36.0	14.7	35.0		14.7	35.0	
Total Split (s)	14.7	50.3	50.3	14.7	50.3	50.3	14.7	35.0		20.0	40.3	
Total Split (%)	12.3%	41.9%	41.9%	12.3%	41.9%	41.9%	12.3%	29.2%		16.7%	33.6%	
Maximum Green (s)	10.0	44.3	44.3	10.0	44.3	44.3	10.0	29.0		15.3	34.3	
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	5.0	3.7	5.0		3.7	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.0	6.0	4.7	6.0	6.0	4.7	6.0		4.7	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		22.0			22.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	10.2	43.3	43.3	10.2	36.5	36.5	10.2	12.9		13.8	23.4	
Actuated g/C Ratio	0.11	0.46	0.46	0.11	0.38	0.38	0.11	0.14		0.15	0.25	
v/c Ratio	0.33	0.43	0.14	0.25	0.83	0.38	0.19	0.56		0.68	0.24	
Control Delay	45.6	21.8	1.7	47.0	38.4	5.3	45.9	42.0		55.8	11.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	45.6	21.8	1.7	47.0	38.4	5.3	45.9	42.0		55.8	11.3	
LOS	D	C	A	D	D	A	D	D		E	B	
Approach Delay		22.6			28.4			42.5			38.4	
Approach LOS		C			C			D			D	
90th %ile Green (s)	10.0	44.3	44.3	10.0	44.3	44.3	10.0	16.6		15.3	21.9	
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Gap		Max	Hold	
70th %ile Green (s)	10.0	44.3	44.3	10.0	44.3	44.3	10.0	14.3		15.3	19.6	
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Gap		Max	Hold	
50th %ile Green (s)	10.0	38.5	38.5	10.0	38.5	38.5	10.0	12.8		15.3	18.1	
50th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Max	Gap		Max	Hold	
30th %ile Green (s)	10.0	47.7	47.7	0.0	33.0	33.0	0.0	11.0		13.5	29.2	
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Skip	Gap		Gap	Hold	
10th %ile Green (s)	10.0	39.1	39.1	0.0	24.4	24.4	0.0	10.0		10.0	24.7	
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Skip	Min		Min	Hold	
Stops (vph)	91	206	4	37	451	34	30	194		133	21	
Fuel Used(gal)	2	6	1	1	12	2	1	4		3	1	
CO Emissions (g/hr)	172	388	72	70	816	118	44	304		203	44	
NOx Emissions (g/hr)	33	76	14	14	159	23	9	59		39	9	
VOC Emissions (g/hr)	40	90	17	16	189	27	10	70		47	10	
Dilemma Vehicles (#)	0	0	0	0	24	0	0	9		0	0	
Queue Length 50th (ft)	35	162	0	27	322	13	20	76		101	7	
Queue Length 95th (ft)	67	255	14	67	482	64	54	123		#203	53	
Internal Link Dist (ft)		1160			195			434			290	
Turn Bay Length (ft)	245			160						110		
Base Capacity (vph)	349	870	841	187	873	886	187	1064		280	626	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.33	0.40	0.13	0.25	0.68	0.33	0.19	0.25		0.61	0.18	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 95.1

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 30.1

Intersection LOS: C

Intersection Capacity Utilization 70.6%

ICU Level of Service C

Analysis Period (min) 15

90th %ile Actuated Cycle: 107.6

70th %ile Actuated Cycle: 105.3

50th %ile Actuated Cycle: 98

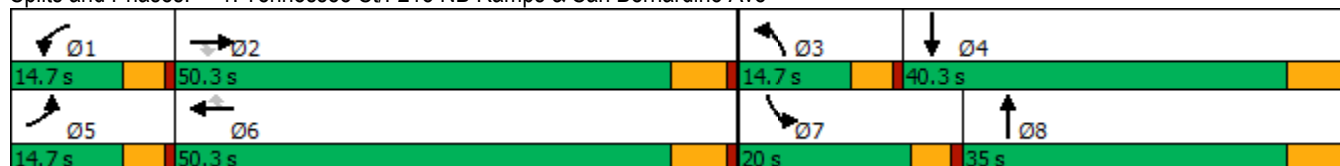
30th %ile Actuated Cycle: 88.9

10th %ile Actuated Cycle: 75.8

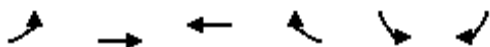
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Tennessee St/I-215 NB Ramps & San Bernardino Ave



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	313	101	41	525	262	31	196	39	152	12	86
Future Volume (veh/h)	103	313	101	41	525	262	31	196	39	152	12	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1826	1870	1856	1856	1870	1856	1841	1870	1826	1693	1811
Adj Flow Rate, veh/h	116	352	113	46	590	294	35	220	44	171	13	97
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	5	2	3	3	2	3	4	2	5	14	6
Cap, veh/h	382	744	646	141	691	590	119	363	71	212	31	230
Arrive On Green	0.12	0.41	0.41	0.08	0.37	0.37	0.07	0.12	0.12	0.12	0.18	0.18
Sat Flow, veh/h	3319	1826	1585	1767	1856	1585	1767	2914	572	1739	173	1288
Grp Volume(v), veh/h	116	352	113	46	590	294	35	130	134	171	0	110
Grp Sat Flow(s), veh/h/ln	1659	1826	1585	1767	1856	1585	1767	1749	1738	1739	0	1461
Q Serve(g_s), s	2.6	11.4	3.7	2.0	23.5	11.5	1.5	5.7	5.9	7.7	0.0	5.4
Cycle Q Clear(g_c), s	2.6	11.4	3.7	2.0	23.5	11.5	1.5	5.7	5.9	7.7	0.0	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.88
Lane Grp Cap(c), veh/h	382	744	646	141	691	590	119	218	216	212	0	261
V/C Ratio(X)	0.30	0.47	0.17	0.33	0.85	0.50	0.29	0.60	0.62	0.81	0.00	0.42
Avail Cap(c_a), veh/h	413	1007	874	220	1023	874	220	631	627	331	0	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	17.5	15.2	34.9	23.2	19.4	35.6	33.3	33.4	34.4	0.0	29.3
Incr Delay (d2), s/veh	0.4	0.5	0.1	1.3	4.8	0.7	1.3	2.6	2.9	7.9	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.6	1.2	0.9	9.9	4.0	0.7	2.5	2.5	3.6	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	17.9	15.3	36.2	28.0	20.1	37.0	35.9	36.2	42.3	0.0	30.4
LnGrp LOS	C	B	B	D	C	C	D	D	D	D	A	C
Approach Vol, veh/h		581			930			299			281	
Approach Delay, s/veh		20.4			25.9			36.2			37.6	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	38.7	10.1	20.4	13.9	35.9	14.5	16.0				
Change Period (Y+Rc), s	* 4.7	6.0	* 4.7	6.0	* 4.7	6.0	* 4.7	6.0				
Max Green Setting (Gmax), s	* 10	44.3	* 10	34.3	* 10	44.3	* 15	29.0				
Max Q Clear Time (g_c+I1), s	4.0	13.4	3.5	7.4	4.6	25.5	9.7	7.9				
Green Ext Time (p_c), s	0.0	2.7	0.0	0.6	0.1	4.4	0.2	1.4				
Intersection Summary												
HCM 6th Ctrl Delay				27.4								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	205	299	635	23	4	193
Future Volume (vph)	205	299	635	23	4	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	25
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.995			0.850
Flt Protected		0.980			0.950	
Satd. Flow (prot)	0	1825	1853	0	1770	1583
Flt Permitted		0.980			0.950	
Satd. Flow (perm)	0	1825	1853	0	1770	1583
Link Speed (mph)		45	45		35	
Link Distance (ft)		300	1369		1324	
Travel Time (s)		4.5	20.7		25.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	230	336	713	26	4	217
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	566	739	0	4	217
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

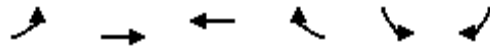
Intersection Capacity Utilization 75.2% ICU Level of Service D

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	4.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	205	299	635	23	4	193
Future Vol, veh/h	205	299	635	23	4	193
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	230	336	713	26	4	217
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	739	0	-	0	1522	726
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	796	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	867	-	-	-	130	425
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	444	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	867	-	-	-	88	425
Mov Cap-2 Maneuver	-	-	-	-	88	-
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	444	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.3	0		22.5		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	867	-	-	-	88	425
HCM Lane V/C Ratio	0.266	-	-	-	0.051	0.51
HCM Control Delay (s)	10.6	0	-	-	48.1	22
HCM Lane LOS	B	A	-	-	E	C
HCM 95th %tile Q(veh)	1.1	-	-	-	0.2	2.8

Redlands TTM 20528 (Pioneer)
3: Pioneer Ave & Project Drwy

Existing + Proj AM
07/14/2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↶		↶	
Traffic Volume (vph)	5	203	227	14	44	16
Future Volume (vph)	5	203	227	14	44	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.992		0.964	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	1861	1848	0	1733	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	1861	1848	0	1733	0
Link Speed (mph)		25	30		30	
Link Distance (ft)		1438	342		366	
Travel Time (s)		39.2	7.8		8.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	6	231	258	16	50	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	237	274	0	68	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 24.8%						
ICU Level of Service A						
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	203	227	14	44	16
Future Vol, veh/h	5	203	227	14	44	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	231	258	16	50	18
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	274	0	-	0	509	266
Stage 1	-	-	-	-	266	-
Stage 2	-	-	-	-	243	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1289	-	-	-	524	773
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	797	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1289	-	-	-	521	773
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	797	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		12.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1289	-	-	-	571	
HCM Lane V/C Ratio	0.004	-	-	-	0.119	
HCM Control Delay (s)	7.8	0	-	-	12.2	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.4	

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	209	38	159	217	24	204
Future Volume (vph)	209	38	159	217	24	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	170		0	25
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1824	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1824	0	1770	1863	1770	1583
Link Speed (mph)	25			25	35	
Link Distance (ft)	342			1935	1324	
Travel Time (s)	9.3			52.8	25.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	337	61	256	350	39	329
Shared Lane Traffic (%)						
Lane Group Flow (vph)	398	0	256	350	39	329
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.4%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	6.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	209	38	159	217	24	204
Future Vol, veh/h	209	38	159	217	24	204
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	170	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	337	61	256	350	39	329
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	398	0	1230	368
Stage 1	-	-	-	-	368	-
Stage 2	-	-	-	-	862	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1161	-	196	677
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	414	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1161	-	153	677
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	323	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	3.8		17.4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	153	677	-	-	1161	-
HCM Lane V/C Ratio	0.253	0.486	-	-	0.221	-
HCM Control Delay (s)	36.3	15.2	-	-	9	-
HCM Lane LOS	E	C	-	-	A	-
HCM 95th %tile Q(veh)	1	2.7	-	-	0.8	-

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing + Proj AM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	153	75	32	328	84	156	121	38	123	163	61
Future Volume (vph)	24	153	75	32	328	84	156	121	38	123	163	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	125		0	160		100
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99			0.99				0.91
Frt		0.951			0.974			0.964				0.850
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	1770	1753	0	0	1784	0	1770	1773	0	1770	1863	1583
Flt Permitted	0.327				0.955		0.950			0.950		
Satd. Flow (perm)	609	1753	0	0	1710	0	1770	1773	0	1770	1863	1447
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			16			18				84
Link Speed (mph)		25			25			25				25
Link Distance (ft)		1935			830			633			1328	
Travel Time (s)		52.8			22.6			17.3			36.2	
Confl. Peds. (#/hr)			17			29			19			33
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	33	210	103	44	449	115	214	166	52	168	223	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	313	0	0	608	0	214	218	0	168	223	84
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								4
Detector Phase	2	2		6	6		3	8		7	4	4
Switch Phase												

Synchro 11 Report

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing + Proj AM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	28.6	28.6		32.6	32.6		9.5	31.6		9.5	27.6	27.6
Total Split (s)	43.4	43.4		43.4	43.4		18.2	31.6		15.0	28.4	28.4
Total Split (%)	48.2%	48.2%		48.2%	48.2%		20.2%	35.1%		16.7%	31.6%	31.6%
Maximum Green (s)	37.8	37.8		37.8	37.8		14.0	26.0		10.8	22.8	22.8
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.6		3.2	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6			5.6		4.2	5.6		4.2	5.6	5.6
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	16.0	16.0		20.0	20.0			19.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	30.6	30.6			30.6		12.4	16.8		10.2	14.6	14.6
Actuated g/C Ratio	0.42	0.42			0.42		0.17	0.23		0.14	0.20	0.20
v/c Ratio	0.13	0.42			0.85		0.72	0.52		0.69	0.60	0.24
Control Delay	16.2	16.1			32.4		47.5	28.8		50.3	36.0	8.6
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	16.2	16.1			32.4		47.5	28.8		50.3	36.0	8.6
LOS	B	B			C		D	C		D	D	A
Approach Delay		16.1			32.4			38.1			36.2	
Approach LOS		B			C			D			D	
90th %ile Green (s)	37.8	37.8		37.8	37.8		14.0	25.4		10.8	22.2	22.2
90th %ile Term Code	Hold	Hold		Max	Max		Max	Hold		Max	Gap	Gap
70th %ile Green (s)	37.8	37.8		37.8	37.8		14.0	20.6		10.8	17.4	17.4
70th %ile Term Code	Hold	Hold		Max	Max		Max	Hold		Max	Gap	Gap
50th %ile Green (s)	34.3	34.3		34.3	34.3		14.0	18.1		10.8	14.9	14.9
50th %ile Term Code	Hold	Hold		Gap	Gap		Max	Hold		Max	Gap	Gap
30th %ile Green (s)	26.9	26.9		26.9	26.9		11.7	13.1		10.5	11.9	11.9
30th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Hold		Gap	Gap	Gap
10th %ile Green (s)	18.0	18.0		18.0	18.0		8.1	9.1		7.4	8.4	8.4
10th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Hold		Gap	Gap	Gap
Stops (vph)	15	130			349		130	117		100	137	12
Fuel Used(gal)	1	5			7		3	2		3	4	1
CO Emissions (g/hr)	37	350			518		199	157		212	249	59
NOx Emissions (g/hr)	7	68			101		39	30		41	48	11
VOC Emissions (g/hr)	9	81			120		46	36		49	58	14
Dilemma Vehicles (#)	0	0			0		0	0		0	0	0
Queue Length 50th (ft)	9	89			243		99	85		80	102	0
Queue Length 95th (ft)	24	130			308		152	120		#135	138	21
Internal Link Dist (ft)		1855			750			553			1248	
Turn Bay Length (ft)	130						125			160		100
Base Capacity (vph)	326	956			924		351	665		271	602	524

Synchro 11 Report

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.10	0.33			0.66		0.61	0.33		0.62	0.37	0.16

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 73.7

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 31.7

Intersection LOS: C

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 89.4

70th %ile Actuated Cycle: 84.6

50th %ile Actuated Cycle: 78.6

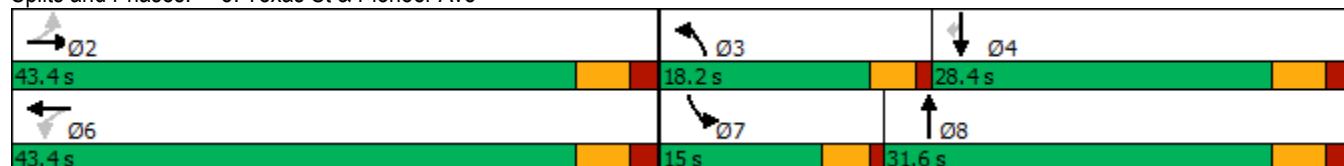
30th %ile Actuated Cycle: 65.9

10th %ile Actuated Cycle: 49.9

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: Texas St & Pioneer Ave



Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing + Proj AM
07/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	153	75	32	328	84	156	121	38	123	163	61
Future Volume (veh/h)	24	153	75	32	328	84	156	121	38	123	163	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.94	1.00		0.96	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	210	103	44	449	115	214	166	52	168	223	84
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	478	235	87	539	133	259	338	106	209	414	325
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.15	0.25	0.25	0.12	0.22	0.22
Sat Flow, veh/h	839	1179	578	74	1330	328	1781	1351	423	1781	1870	1467
Grp Volume(v), veh/h	33	0	313	608	0	0	214	0	218	168	223	84
Grp Sat Flow(s),veh/h/ln	839	0	1758	1732	0	0	1781	0	1774	1781	1870	1467
Q Serve(g_s), s	0.0	0.0	8.7	10.8	0.0	0.0	7.9	0.0	7.1	6.2	7.1	3.2
Cycle Q Clear(g_c), s	3.9	0.0	8.7	21.6	0.0	0.0	7.9	0.0	7.1	6.2	7.1	3.2
Prop In Lane	1.00		0.33	0.07		0.19	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	297	0	713	760	0	0	259	0	443	209	414	325
V/C Ratio(X)	0.11	0.00	0.44	0.80	0.00	0.00	0.83	0.00	0.49	0.81	0.54	0.26
Avail Cap(c_a), veh/h	425	0	981	1018	0	0	368	0	681	284	630	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	0.0	14.6	18.3	0.0	0.0	28.1	0.0	21.7	29.1	23.3	21.8
Incr Delay (d2), s/veh	0.2	0.0	0.4	3.4	0.0	0.0	7.0	0.0	0.8	8.1	1.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.3	8.6	0.0	0.0	3.8	0.0	3.0	3.1	3.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	0.0	15.0	21.6	0.0	0.0	35.1	0.0	22.6	37.3	24.4	22.2
LnGrp LOS	B	A	B	C	A	A	D	A	C	D	C	C
Approach Vol, veh/h		346			608			432			475	
Approach Delay, s/veh		14.8			21.6			28.8			28.6	
Approach LOS		B			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		33.1	14.1	20.6		33.1	12.1	22.5				
Change Period (Y+Rc), s		5.6	* 4.2	5.6		5.6	* 4.2	5.6				
Max Green Setting (Gmax), s		37.8	* 14	22.8		37.8	* 11	26.0				
Max Q Clear Time (g_c+I1), s		10.7	9.9	9.1		23.6	8.2	9.1				
Green Ext Time (p_c), s		2.4	0.1	1.3		3.9	0.1	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Redlands TTM 20528 (Pioneer)
6: Texas St & Domestic Ave

Existing + Proj AM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	5	93	2	0	1	5	32	1	5	0
Future Volume (vph)	1	2	5	93	2	0	1	5	32	1	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.913						0.887				
Flt Protected		0.993			0.953			0.998			0.991	
Satd. Flow (prot)	0	1689	0	0	1775	0	0	1649	0	0	1846	0
Flt Permitted		0.993			0.953			0.998			0.991	
Satd. Flow (perm)	0	1689	0	0	1775	0	0	1649	0	0	1846	0
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		344			524			1328			429	
Travel Time (s)		7.8			14.3			36.2			11.7	
Confl. Peds. (#/hr)						4			3			4
Confl. Bikes (#/hr)												
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	3	9	160	3	0	2	9	55	2	9	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	163	0	0	66	0	0	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	23.3%											
Analysis Period (min)	15											
ICU Level of Service A												

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	5	93	2	0	1	5	32	1	5	0
Future Vol, veh/h	1	2	5	93	2	0	1	5	32	1	5	0
Conflicting Peds, #/hr	0	0	0	0	0	4	0	0	3	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	58	58	58	58	58	58	58	58	58	58	58
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	3	9	160	3	0	2	9	55	2	9	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	63	88	13	63	61	44	13	0	0	67	0	0
Stage 1	17	17	-	44	44	-	-	-	-	-	-	-
Stage 2	46	71	-	19	17	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	932	802	1067	932	830	1026	1606	-	-	1535	-	-
Stage 1	1002	881	-	970	858	-	-	-	-	-	-	-
Stage 2	968	836	-	1000	881	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	921	795	1063	917	823	1019	1600	-	-	1531	-	-
Mov Cap-2 Maneuver	921	795	-	917	823	-	-	-	-	-	-	-
Stage 1	997	877	-	966	855	-	-	-	-	-	-	-
Stage 2	959	833	-	987	877	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	8.8			9.8			0.2			1.2		
HCM LOS	A			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1600	-	-	963	915	1531	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.014	0.179	0.001	-	-				
HCM Control Delay (s)	7.3	0	-	8.8	9.8	7.4	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0	-	-				

Appendix G:

Existing Year With Project PM Peak Hour Analysis

Worksheets

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	423	575	193	30	342	170	54	391	54	259	17	91
Future Volume (vph)	423	575	193	30	342	170	54	391	54	259	17	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	245		0	160		0	0		0	110		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor			0.98			0.99						
Frt			0.850			0.850		0.982			0.873	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	1881	1583	1805	1845	1615	1805	3510	0	1752	1616	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3467	1881	1545	1805	1845	1594	1805	3510	0	1752	1616	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			198		12			103	
Link Speed (mph)		30			45			35			30	
Link Distance (ft)		1240			275			514			370	
Travel Time (s)		28.2			4.2			10.0			8.4	
Confl. Peds. (#/hr)			2			1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	2%	0%	3%	0%	0%	1%	1%	3%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	481	653	219	34	389	193	61	444	61	294	19	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	481	653	219	34	389	193	61	505	0	294	122	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	5.0	5.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	14.7	36.0	36.0	14.7	36.0	36.0	14.7	35.0		14.7	35.0	
Total Split (s)	25.0	47.9	47.9	14.7	37.6	37.6	14.7	35.0		22.4	42.7	
Total Split (%)	20.8%	39.9%	39.9%	12.3%	31.3%	31.3%	12.3%	29.2%		18.7%	35.6%	
Maximum Green (s)	20.3	41.9	41.9	10.0	31.6	31.6	10.0	29.0		17.7	36.7	
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	5.0	3.7	5.0		3.7	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.0	6.0	4.7	6.0	6.0	4.7	6.0		4.7	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		22.0			22.0	
Pedestrian Calls (#/hr)		2	2		1	1		0			0	
Act Effct Green (s)	18.5	42.5	42.5	10.1	27.4	27.4	10.1	20.6		17.9	32.0	
Actuated g/C Ratio	0.17	0.40	0.40	0.10	0.26	0.26	0.10	0.19		0.17	0.30	
v/c Ratio	0.80	0.87	0.30	0.20	0.82	0.35	0.35	0.73		0.99	0.22	
Control Delay	54.0	45.1	8.3	51.8	52.7	6.3	55.4	46.5		97.6	9.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	54.0	45.1	8.3	51.8	52.7	6.3	55.4	46.5		97.6	9.7	
LOS	D	D	A	D	D	A	E	D		F	A	
Approach Delay		42.3			38.1			47.5			71.8	
Approach LOS		D			D			D			E	
90th %ile Green (s)	20.3	41.9	41.9	10.0	31.6	31.6	10.0	27.8		17.7	35.5	
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Gap		Max	Hold	
70th %ile Green (s)	20.3	41.9	41.9	10.0	31.6	31.6	10.0	24.2		17.7	31.9	
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Gap		Max	Hold	
50th %ile Green (s)	20.3	41.9	41.9	10.0	31.6	31.6	10.0	20.8		17.7	28.5	
50th %ile Term Code	Max	Max	Max	Max	Hold	Hold	Max	Gap		Max	Hold	
30th %ile Green (s)	17.8	46.3	46.3	0.0	23.8	23.8	10.0	17.7		17.7	25.4	
30th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Max	Gap		Max	Hold	
10th %ile Green (s)	14.0	38.3	38.3	0.0	19.6	19.6	0.0	13.8		17.7	36.2	
10th %ile Term Code	Gap	Gap	Gap	Skip	Hold	Hold	Skip	Gap		Max	Hold	
Stops (vph)	383	463	37	28	302	18	49	389		204	21	
Fuel Used(gal)	11	13	2	1	9	1	1	9		7	1	
CO Emissions (g/hr)	759	936	167	54	608	75	82	614		491	44	
NOx Emissions (g/hr)	148	182	33	11	118	15	16	119		95	9	
VOC Emissions (g/hr)	176	217	39	13	141	17	19	142		114	10	
Dilemma Vehicles (#)	0	0	0	0	14	0	0	15		0	0	
Queue Length 50th (ft)	171	444	22	23	254	0	42	178		~233	10	
Queue Length 95th (ft)	#242	#712	78	57	#397	49	89	230		#422	52	
Internal Link Dist (ft)		1160			195			434			290	
Turn Bay Length (ft)	245			160						110		
Base Capacity (vph)	672	769	732	172	557	619	172	980		296	633	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.72	0.85	0.30	0.20	0.70	0.31	0.35	0.52		0.99	0.19	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 106.1

Natural Cycle: 125

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 46.6

Intersection LOS: D

Intersection Capacity Utilization 83.3%

ICU Level of Service E

Analysis Period (min) 15

90th %ile Actuated Cycle: 118.8

70th %ile Actuated Cycle: 115.2

50th %ile Actuated Cycle: 111.8

30th %ile Actuated Cycle: 98.4

10th %ile Actuated Cycle: 86.5

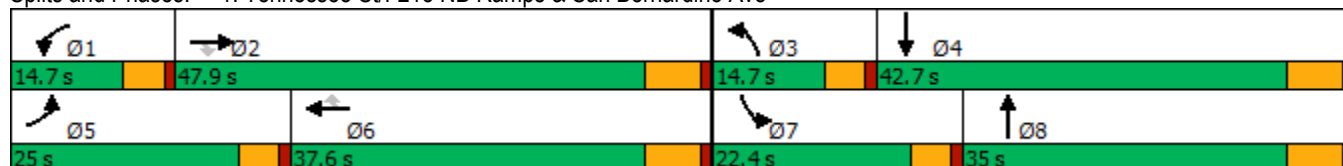
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Tennessee St/I-215 NB Ramps & San Bernardino Ave



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	423	575	193	30	342	170	54	391	54	259	17	91
Future Volume (veh/h)	423	575	193	30	342	170	54	391	54	259	17	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1870	1900	1856	1900	1900	1885	1885	1856	1811	1870
Adj Flow Rate, veh/h	481	653	219	34	389	193	61	444	61	294	19	103
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	2	0	3	0	0	1	1	3	6	2
Cap, veh/h	564	710	596	110	511	443	146	564	77	307	66	360
Arrive On Green	0.16	0.38	0.38	0.06	0.28	0.28	0.08	0.18	0.18	0.17	0.27	0.27
Sat Flow, veh/h	3483	1885	1581	1810	1856	1608	1810	3166	433	1767	245	1327
Grp Volume(v), veh/h	481	653	219	34	389	193	61	250	255	294	0	122
Grp Sat Flow(s), veh/h/ln	1742	1885	1581	1810	1856	1608	1810	1791	1807	1767	0	1572
Q Serve(g_s), s	13.7	33.6	10.2	1.8	19.6	10.1	3.3	13.6	13.7	16.8	0.0	6.2
Cycle Q Clear(g_c), s	13.7	33.6	10.2	1.8	19.6	10.1	3.3	13.6	13.7	16.8	0.0	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.84
Lane Grp Cap(c), veh/h	564	710	596	110	511	443	146	319	322	307	0	427
V/C Ratio(X)	0.85	0.92	0.37	0.31	0.76	0.44	0.42	0.78	0.79	0.96	0.00	0.29
Avail Cap(c_a), veh/h	695	776	651	178	576	499	178	510	515	307	0	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	30.2	22.9	45.8	33.8	30.3	44.5	39.9	40.0	41.6	0.0	29.3
Incr Delay (d2), s/veh	8.5	15.3	0.4	1.6	5.2	0.7	1.9	4.2	4.4	39.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	17.7	3.8	0.8	9.1	3.9	1.5	6.2	6.4	10.6	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	45.5	23.3	47.3	39.0	31.0	46.4	44.2	44.4	81.3	0.0	29.6
LnGrp LOS	D	D	C	D	D	C	D	D	D	F	A	C
Approach Vol, veh/h		1353			616			566			416	
Approach Delay, s/veh		43.5			37.0			44.5			66.1	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	44.3	12.9	33.6	21.2	34.0	22.4	24.1				
Change Period (Y+Rc), s	* 4.7	6.0	* 4.7	6.0	* 4.7	6.0	* 4.7	6.0				
Max Green Setting (Gmax), s	* 10	41.9	* 10	36.7	* 20	31.6	* 18	29.0				
Max Q Clear Time (g_c+I1), s	3.8	35.6	5.3	8.2	15.7	21.6	18.8	15.7				
Green Ext Time (p_c), s	0.0	2.7	0.0	0.7	0.8	2.0	0.0	2.4				

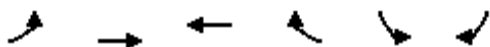
Intersection Summary

HCM 6th Ctrl Delay 45.5

HCM 6th LOS D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	↰
Traffic Volume (vph)	104	784	453	4	2	89
Future Volume (vph)	104	784	453	4	2	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	25
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.999			0.850
Flt Protected		0.994			0.950	
Satd. Flow (prot)	0	1852	1861	0	1770	1583
Flt Permitted		0.994			0.950	
Satd. Flow (perm)	0	1852	1861	0	1770	1583
Link Speed (mph)		45	45		35	
Link Distance (ft)		300	1369		1324	
Travel Time (s)		4.5	20.7		25.8	
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	111	834	482	4	2	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	945	486	0	2	95
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

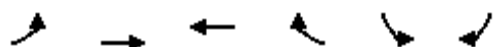
Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 84.4% ICU Level of Service E

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	104	784	453	4	2	89
Future Vol, veh/h	104	784	453	4	2	89
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	834	482	4	2	95
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	487	0	-	0	1541	485
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	1056	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1076	-	-	-	127	582
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	335	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1075	-	-	-	102	581
Mov Cap-2 Maneuver	-	-	-	-	102	-
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	335	-
Approach	EB	WB		SB		
HCM Control Delay, s	1	0		13		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1075	-	-	-	102	581
HCM Lane V/C Ratio	0.103	-	-	-	0.021	0.163
HCM Control Delay (s)	8.7	0	-	-	41	12.4
HCM Lane LOS	A	A	-	-	E	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.1	0.6



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	18	348	86	50	28	11
Future Volume (vph)	18	348	86	50	28	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.950		0.961	
Flt Protected		0.998			0.966	
Satd. Flow (prot)	0	1859	1770	0	1729	0
Flt Permitted		0.998			0.966	
Satd. Flow (perm)	0	1859	1770	0	1729	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1438	342		366	
Travel Time (s)		32.7	7.8		8.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	20	395	98	57	32	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	415	155	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 40.2% ICU Level of Service A						
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	348	86	50	28	11
Future Vol, veh/h	18	348	86	50	28	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	395	98	57	32	13
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	155	0	-	0	562	127
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	435	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1425	-	-	-	488	923
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1425	-	-	-	479	923
Mov Cap-2 Maneuver	-	-	-	-	479	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	653	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.4	0		12.1		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1425	-	-	-	554	
HCM Lane V/C Ratio	0.014	-	-	-	0.08	
HCM Control Delay (s)	7.6	0	-	-	12.1	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↖	↗	↖	↗
Traffic Volume (vph)	332	44	47	92	44	64
Future Volume (vph)	332	44	47	92	44	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	170		0	25
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.984					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1833	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1833	0	1770	1863	1770	1583
Link Speed (mph)	25			25	35	
Link Distance (ft)	342			1935	1324	
Travel Time (s)	9.3			52.8	25.8	
Confl. Peds. (#/hr)		1	1			
Confl. Bikes (#/hr)		5				
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	382	51	54	106	51	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	433	0	54	106	51	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	36.8%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection							
Int Delay, s/veh	2.8						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations							
Traffic Vol, veh/h	332	44	47	92	44	64	
Future Vol, veh/h	332	44	47	92	44	64	
Conflicting Peds, #/hr	0	1	1	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	170	-	0	25	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	87	87	87	87	87	87	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	382	51	54	106	51	74	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	434	0	623	409	
Stage 1	-	-	-	-	409	-	
Stage 2	-	-	-	-	214	-	
Critical Hdwy	-	-	4.12	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	-	-	2.218	-	3.518	3.318	
Pot Cap-1 Maneuver	-	-	1126	-	450	642	
Stage 1	-	-	-	-	671	-	
Stage 2	-	-	-	-	822	-	
Platoon blocked, %	-	-		-			
Mov Cap-1 Maneuver	-	-	1125	-	428	641	
Mov Cap-2 Maneuver	-	-	-	-	428	-	
Stage 1	-	-	-	-	670	-	
Stage 2	-	-	-	-	783	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		2.8		12.6		
HCM LOS	B						
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	428		641	-	-	1125	-
HCM Lane V/C Ratio	0.118		0.115	-	-	0.048	-
HCM Control Delay (s)	14.5		11.3	-	-	8.4	-
HCM Lane LOS	B		B	-	-	A	-
HCM 95th %tile Q(veh)	0.4		0.4	-	-	0.2	-

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing + Proj PM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	292	87	41	84	1	48	31	95	9	26	13
Future Volume (vph)	26	292	87	41	84	1	48	31	95	9	26	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	125		0	160		100
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							0.98
Frt		0.965			0.999			0.887				0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1770	1792	0	0	1831	0	1770	1652	0	1770	1863	1583
Flt Permitted	0.669				0.733		0.950			0.950		
Satd. Flow (perm)	1246	1792	0	0	1364	0	1770	1652	0	1770	1863	1549
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			1			104				106
Link Speed (mph)		25			25			25				25
Link Distance (ft)		1935			830			633				1328
Travel Time (s)		52.8			22.6			17.3				36.2
Confl. Peds. (#/hr)												1
Confl. Bikes (#/hr)			4			1						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	321	96	45	92	1	53	34	104	10	29	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	417	0	0	138	0	53	138	0	10	29	14
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								4
Detector Phase	2	2		6	6		3	8		7	4	4
Switch Phase												

Synchro 11 Report

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing + Proj PM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	28.6	28.6		32.6	32.6		9.5	23.6		9.5	27.6	27.6
Total Split (s)	32.9	32.9		32.9	32.9		9.5	27.6		9.5	27.6	27.6
Total Split (%)	47.0%	47.0%		47.0%	47.0%		13.6%	39.4%		13.6%	39.4%	39.4%
Maximum Green (s)	27.3	27.3		27.3	27.3		5.3	22.0		5.3	22.0	22.0
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.6		3.2	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6			5.6		4.2	5.6		4.2	5.6	5.6
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	16.0	16.0		20.0	20.0			11.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	15.0	15.0			14.3		7.2	10.1		7.1	8.7	8.7
Actuated g/C Ratio	0.45	0.45			0.43		0.22	0.30		0.21	0.26	0.26
v/c Ratio	0.05	0.51			0.23		0.14	0.24		0.03	0.06	0.03
Control Delay	8.7	11.2			9.8		19.7	7.4		19.9	16.7	0.1
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.7	11.2			9.8		19.7	7.4		19.9	16.7	0.1
LOS	A	B			A		B	A		B	B	A
Approach Delay		11.0			9.8			10.8			12.9	
Approach LOS		B			A			B			B	
90th %ile Green (s)	24.0	24.0		24.0	24.0		5.3	10.6		5.3	10.6	10.6
90th %ile Term Code	Gap	Gap		Hold	Hold		Max	Gap		Max	Hold	Hold
70th %ile Green (s)	17.3	17.3		17.3	17.3		5.3	16.2		0.0	6.7	6.7
70th %ile Term Code	Gap	Gap		Hold	Hold		Max	Hold		Skip	Gap	Gap
50th %ile Green (s)	12.2	12.2		12.2	12.2		0.0	6.2		0.0	6.2	6.2
50th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Gap		Skip	Hold	Hold
30th %ile Green (s)	9.7	9.7		9.7	9.7		0.0	5.6		0.0	5.6	5.6
30th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Hold		Skip	Hold	Hold
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Skip		Skip	Skip	Skip
Stops (vph)	16	229			73		43	39		12	23	0
Fuel Used(gal)	1	8			1		1	1		0	0	0
CO Emissions (g/hr)	37	558			99		43	71		13	33	10
NOx Emissions (g/hr)	7	109			19		8	14		3	6	2
VOC Emissions (g/hr)	9	129			23		10	17		3	8	2
Dilemma Vehicles (#)	0	0			0		0	0		0	0	0
Queue Length 50th (ft)	2	40			12		7	4		1	4	0
Queue Length 95th (ft)	17	158			58		45	48		15	25	0
Internal Link Dist (ft)		1855			750			553			1248	
Turn Bay Length (ft)	130						125			160		100
Base Capacity (vph)	1003	1448			1098		397	1176		397	1290	1105

Synchro 11 Report

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.03	0.29			0.13		0.13	0.12		0.03	0.02	0.01

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 33.2

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 10.9

Intersection LOS: B

Intersection Capacity Utilization 50.7%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 55.3

70th %ile Actuated Cycle: 44.7

50th %ile Actuated Cycle: 29.6

30th %ile Actuated Cycle: 26.5

10th %ile Actuated Cycle: 10

Splits and Phases: 5: Texas St & Pioneer Ave

 Ø2	 Ø3	 Ø4
32.9 s	9.5 s	27.6 s
 Ø6	 Ø7	 Ø8
32.9 s	9.5 s	27.6 s

Redlands TTM 20528 (Pioneer)
5: Texas St & Pioneer Ave

Existing + Proj PM
07/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	292	87	41	84	1	48	31	95	9	26	13
Future Volume (veh/h)	26	292	87	41	84	1	48	31	95	9	26	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	321	96	45	92	1	53	34	104	10	29	14
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	636	473	141	213	346	3	104	70	215	24	240	203
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.06	0.17	0.17	0.01	0.13	0.13
Sat Flow, veh/h	1303	1377	412	196	1007	9	1781	406	1241	1781	1870	1580
Grp Volume(v), veh/h	29	0	417	138	0	0	53	0	138	10	29	14
Grp Sat Flow(s),veh/h/ln	1303	0	1789	1212	0	0	1781	0	1647	1781	1870	1580
Q Serve(g_s), s	0.0	0.0	6.5	0.3	0.0	0.0	0.9	0.0	2.5	0.2	0.4	0.3
Cycle Q Clear(g_c), s	0.6	0.0	6.5	6.8	0.0	0.0	0.9	0.0	2.5	0.2	0.4	0.3
Prop In Lane	1.00		0.23	0.33		0.01	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	636	0	614	562	0	0	104	0	286	24	240	203
V/C Ratio(X)	0.05	0.00	0.68	0.25	0.00	0.00	0.51	0.00	0.48	0.42	0.12	0.07
Avail Cap(c_a), veh/h	1275	0	1490	1264	0	0	288	0	1106	288	1256	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.2	0.0	9.2	7.8	0.0	0.0	15.0	0.0	12.2	16.0	12.6	12.6
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.2	0.0	0.0	1.4	0.0	1.3	4.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.0	0.5	0.0	0.0	0.4	0.0	0.8	0.1	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.3	0.0	10.5	8.0	0.0	0.0	16.4	0.0	13.5	20.4	12.9	12.7
LnGrp LOS	A	A	B	A	A	A	B	A	B	C	B	B
Approach Vol, veh/h		446			138			191			53	
Approach Delay, s/veh		10.3			8.0			14.3			14.3	
Approach LOS		B			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.9	6.1	9.8		16.9	4.6	11.3				
Change Period (Y+Rc), s		5.6	* 4.2	5.6		5.6	* 4.2	5.6				
Max Green Setting (Gmax), s		27.3	* 5.3	22.0		27.3	* 5.3	22.0				
Max Q Clear Time (g_c+I1), s		8.5	2.9	2.4		8.8	2.2	4.5				
Green Ext Time (p_c), s		2.8	0.0	0.1		0.7	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			11.1									
HCM 6th LOS			B									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Redlands TTM 20528 (Pioneer)
6: Texas St & Domestic Ave

Existing + Proj PM
07/14/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	2	24	2	0	3	4	33	0	4	0
Future Volume (vph)	0	1	2	24	2	0	3	4	33	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.910						0.888				
Flt Protected					0.955			0.997				
Satd. Flow (prot)	0	1695	0	0	1779	0	0	1649	0	0	1863	0
Flt Permitted					0.955			0.997				
Satd. Flow (perm)	0	1695	0	0	1779	0	0	1649	0	0	1863	0
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		344			524			1328			429	
Travel Time (s)		7.8			14.3			36.2			11.7	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1	2	28	2	0	3	5	38	0	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	30	0	0	46	0	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	20.2%											
Analysis Period (min)	15											
ICU Level of Service A												

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	2	24	2	0	3	4	33	0	4	0
Future Vol, veh/h	0	1	2	24	2	0	3	4	33	0	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	2	28	2	0	3	5	38	0	5	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	36	55	5	38	36	25	5	0	0	44	0	0
Stage 1	5	5	-	31	31	-	-	-	-	-	-	-
Stage 2	31	50	-	7	5	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	970	836	1078	967	856	1051	1616	-	-	1564	-	-
Stage 1	1017	892	-	986	869	-	-	-	-	-	-	-
Stage 2	986	853	-	1015	892	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	966	833	1078	961	853	1050	1616	-	-	1563	-	-
Mov Cap-2 Maneuver	966	833	-	961	853	-	-	-	-	-	-	-
Stage 1	1015	892	-	983	866	-	-	-	-	-	-	-
Stage 2	981	850	-	1011	892	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	8.7		8.9		0.5		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1616	-	-	982 952	1563	-	-
HCM Lane V/C Ratio	0.002	-	-	0.004 0.032	-	-	-
HCM Control Delay (s)	7.2	0	-	8.7 8.9	0	-	-
HCM Lane LOS	A	A	-	A A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0 0.1	0	-	-