

**DOWNTOWN TAFT SPECIFIC PLAN  
LOCAL TRANSPORTATION ANALYSIS**

**Draft: May 27, 2022**

**Prepared for:**

**City of Taft  
Planning and Development Services Department  
209 E. Kern Street  
Taft, CA 93268**

**Prepared by:**



Job Number 19403-T

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## **DOWNTOWN TAFT SPECIFIC PLAN LOCAL TRANSPORTATION ANALYSIS**

**Draft: May 27, 2022**

### **INTRODUCTION**

The following Local Transportation Analysis has been prepared for the Downtown Taft Specific Plan project in accordance with the Kern County *Standards for Traffic Engineering* (February 23, 2010) and the City of Taft *General Plan Circulation Element* (June 2010, Amended April 2017). The study evaluates the potential level of service (LOS) deficiencies and transportation improvements that may need to be considered in association with the traffic generated by the proposed Downtown Taft Specific Plan project. As also required, an Active Transportation and Public Transit Assessment is evaluated in this study. The site is generally bounded by the mid-block alley between Kern Street (State Route 33) and Lucard Street to the north, Front Street to the south, 10<sup>th</sup> Street to the west, and State Route 33 (SR-33/Westside Highway) to the east. **Exhibit 1** shows the project vicinity map.

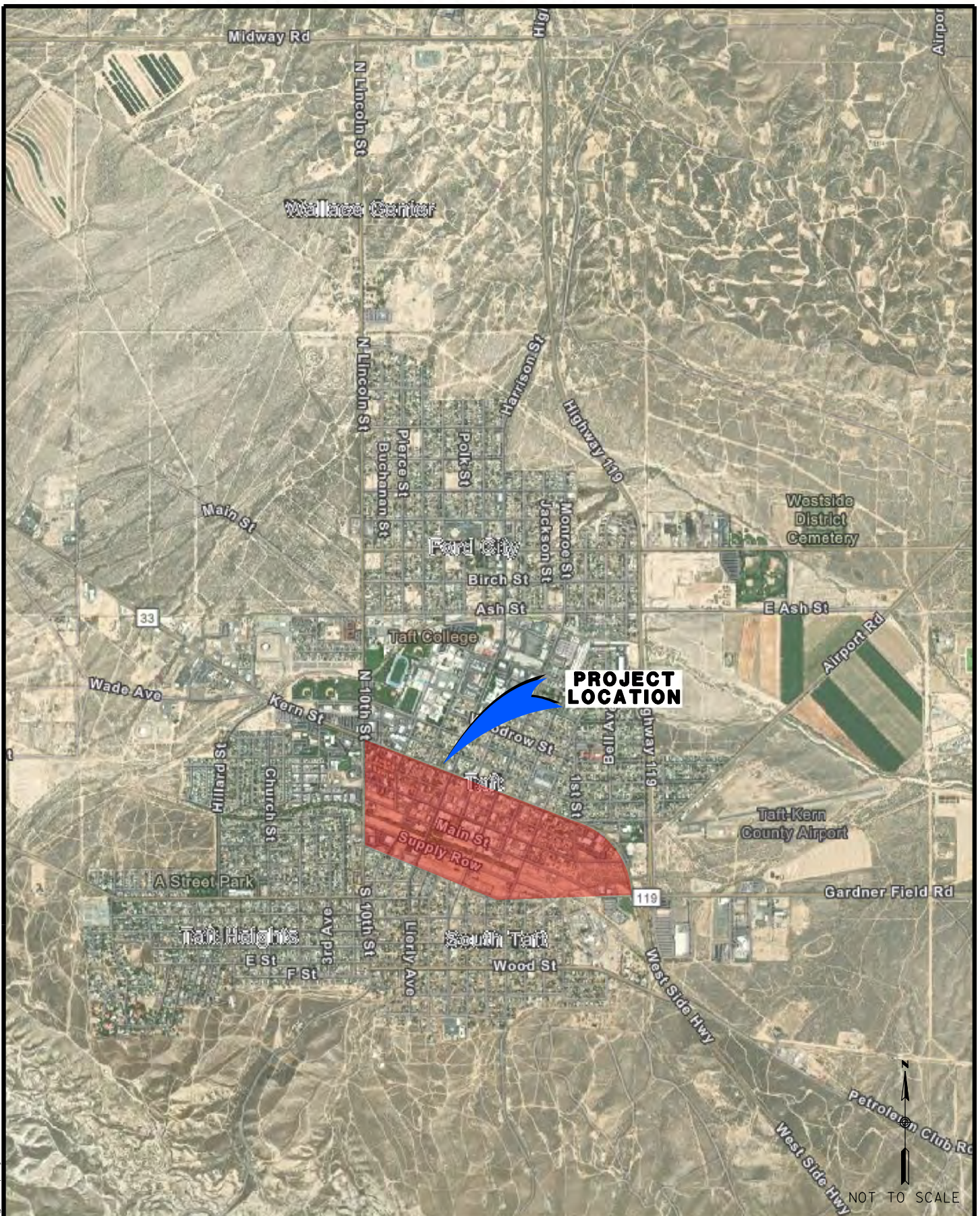
### **PROJECT DESCRIPTION**

The Downtown Taft Specific Plan covers approximately 212 acres and would allow for the development of up to 3,120 residential dwelling units (DU), and would expand the downtown district to develop up to 891,059 square-feet (SF) of commercial retail uses and up to 1,132,718 square-feet of commercial office uses. In addition, up to 224,039 square-feet of public institutional uses and up to 229,281 square-feet of industrial uses would be developed within the Specific Plan.

Below is a breakdown of the proposed land use types within the Downtown Taft Specific Plan:

|  |                            |
|--|----------------------------|
| <b><u>Residential Uses</u></b>                       | <b><u>3,120 DU</u></b>     |
| • Single-Family Detached Dwelling Units:             | 665 DU                     |
| • Single-Family Attached Dwelling Units (Townhomes): | 1,186 DU                   |
| • Multi-Family Dwelling Units:                       | 1,269 DU                   |
| <b><u>Retail Uses</u></b>                            | <b><u>891,059 SF</u></b>   |
| • Retail Services Building Area:                     | 695,038 SF                 |
| • Restaurants Building Area:                         | 59,762 SF                  |
| • Arts & Entertainment Building Area:                | 71,715 SF                  |
| • Accommodation Building Area                        | 64,543 SF                  |
| <b><u>Office Uses</u></b>                            | <b><u>1,132,718 SF</u></b> |
| • Office Services Building Area                      | 471,455 SF                 |
| • Medical Services Building Area                     | 661,262 SF                 |
| <b><u>Public Administration Uses</u></b>             | <b><u>224,039 SF</u></b>   |
| • Public Administration Building Area                | 116,500 SF                 |
| • Education Building Area                            | 107,539 SF                 |
| <b><u>Industrial Uses</u></b>                        | <b><u>229,281 SF</u></b>   |
| • Transportation/Warehousing Building Area           | 170,457 SF                 |
| • Wholesale Building Area                            | 58,824 SF                  |







Primary access to the Downtown Taft Specific Plan would be provided from Kern Street (SR-33), East Kern Street, Westside Highway (SR-33), 10<sup>th</sup> Street and 6<sup>th</sup> Street. Local access would be provided from all north-south streets intersecting Kern Street (SR-33) between 1<sup>st</sup> Street and 10<sup>th</sup> Street, Front Street, and Supply Row.

**Exhibit 2** shows the Downtown Taft Specific Plan preferred land use plan.

## **STUDY AREA AND ANALYSIS METHODOLOGY**

### **Project Study Area**

As agreed upon with the City of Taft Planning and Development Services staff, the following intersections and roadway segments are included in the project study area, which are also illustrated in **Exhibit 3**:

#### Study Intersections

1. Kern Street (SR-33) / 10<sup>th</sup> Street
2. Kern Street (SR-33) / 6<sup>th</sup> Street
3. Kern Street (SR-33) / 4<sup>th</sup> Street
4. Kern Street (SR-33) / E. Kern Street / 1<sup>st</sup> Street (5-legged intersection)
5. Center Street / 10<sup>th</sup> Street
6. Center Street / Westside Highway (SR-33)

#### Study Roadway Segments

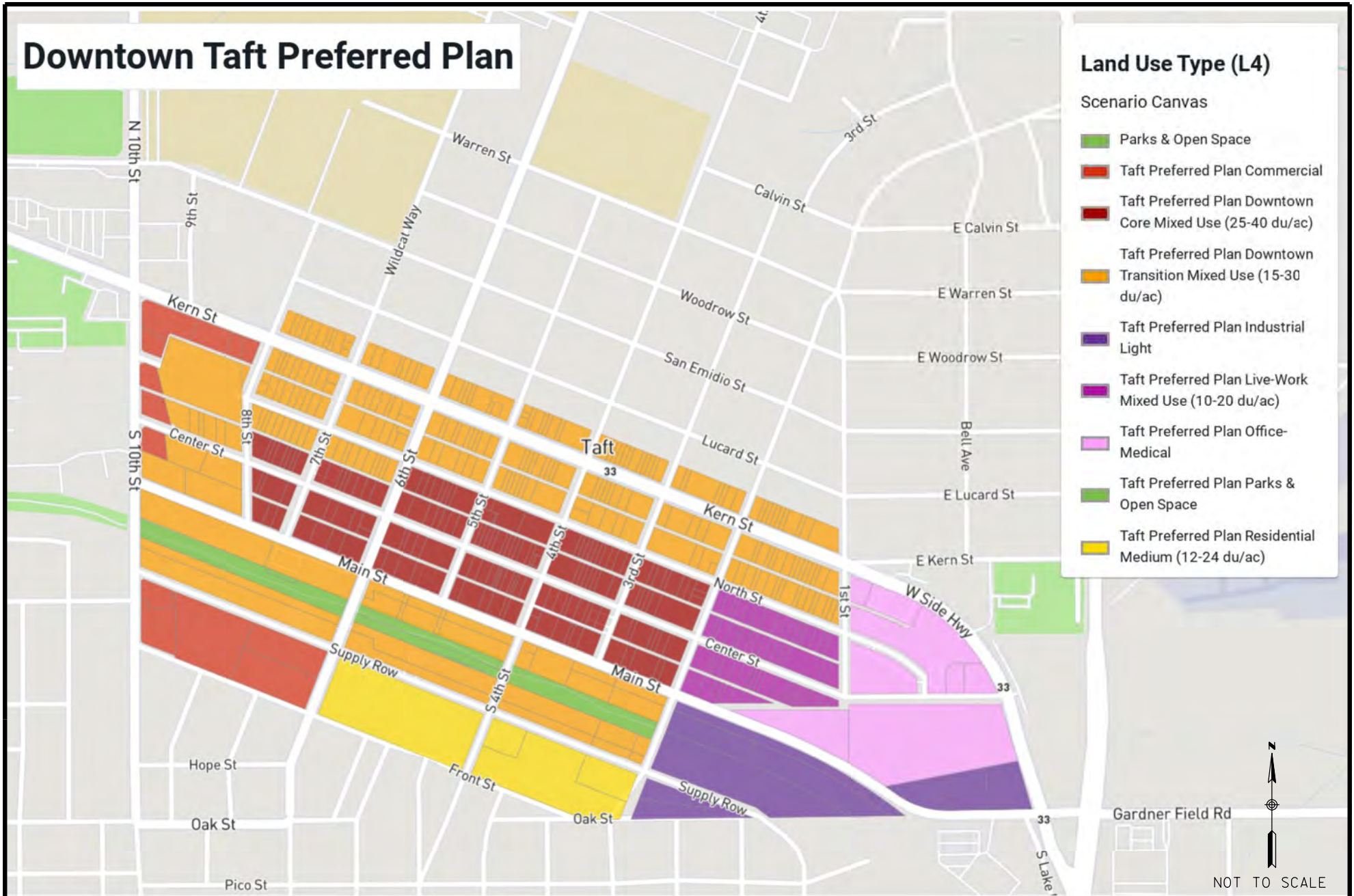
1. Kern Street (SR-33) between 10<sup>th</sup> Street and 6<sup>th</sup> Street
2. Kern Street (SR-33) between 6<sup>th</sup> Street and 1<sup>st</sup> Street
3. Westside Highway (SR-33) between 1<sup>st</sup> Street and Center Street
4. Westside Highway (SR-33) between Center Street and Main Street
5. Center Street between 10<sup>th</sup> Street and 6<sup>th</sup> Street
6. Center Street between 6<sup>th</sup> Street and Westside Highway
7. Main Street between 10<sup>th</sup> Street and 6<sup>th</sup> Street
8. Main Street between 6<sup>th</sup> Street and Westside Highway
9. 10<sup>th</sup> Street between Kern Street (SR-33) and Center Street
10. 6<sup>th</sup> Street between Kern Street (SR-33) and Center Street

### **Analysis Methodology**

As agreed upon with the City of Taft Planning and Development Services staff, the following scenarios were evaluated in this Local Transportation Analysis:

- **Existing Conditions:** This scenario reflects the conditions on the ground at the time the traffic count data was obtained (March 2022).
- **Horizon Year 2042 With Project Conditions:** This scenario reflects the Horizon Year 2042 traffic volumes with the buildout of the Downtown Taft Specific Plan project, based on the model volumes generated by the Kern Council of Governments (Kern COG) regional travel demand model with the proposed Specific Plan land uses.

# Downtown Taft Preferred Plan



## Land Use Type (L4)

### Scenario Canvas

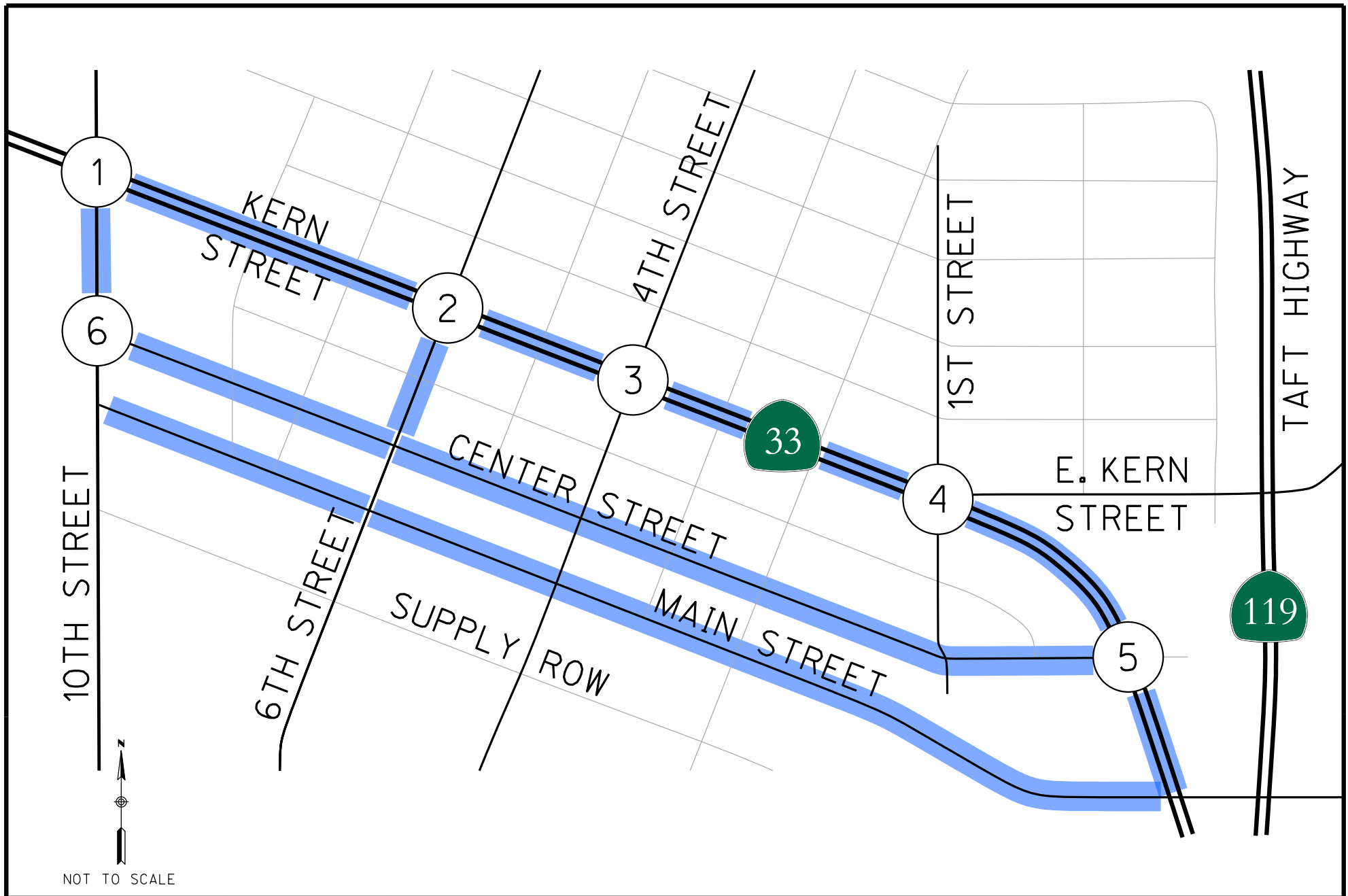
- Parks & Open Space
- Taft Preferred Plan Commercial
- Taft Preferred Plan Downtown Core Mixed Use (25-40 du/ac)
- Taft Preferred Plan Downtown Transition Mixed Use (15-30 du/ac)
- Taft Preferred Plan Industrial Light
- Taft Preferred Plan Live-Work Mixed Use (10-20 du/ac)
- Taft Preferred Plan Office-Medical
- Taft Preferred Plan Parks & Open Space
- Taft Preferred Plan Residential Medium (12-24 du/ac)

**RICK**  
ENGINEERING COMPANY

## EXHIBIT 2

DOWNTOWN TAFT SPECIFIC PLAN CONCEPTUAL MAP

DOWNTOWN TAFT SPECIFIC PLAN LOCAL TRANSPORTATION ANALYSIS



### EXHIBIT 3

PROJECT STUDY AREA

DOWNTOWN TAIT SPECIFIC PLAN LOCAL TRANSPORTATION ANALYSIS

#### LEGEND

- # = STUDY INTERSECTION
- = STUDY SEGMENT



### ***Intersection Analysis Methodology***

Intersection operations were determined at the study area intersections for the weekday AM and PM peak hours. The AM peak hour intersection analysis evaluates LOS during the hour with the highest vehicular traffic between 7:00 AM and 9:00 AM. The PM peak hour intersection analysis evaluates LOS during the hour with the highest vehicular traffic between 4:00 PM and 6:00 PM.

The Level of Service (LOS) for signalized intersections was analyzed using the methodologies described in Chapter 19 of the 6<sup>th</sup> Edition Highway Capacity Manual (HCM 6). The LOS for signalized intersections is defined in terms of control delay, which is made up of several factors that relate to right-of-way control, geometrics and traffic volumes. The signalized intersection analysis also considers intersection spacing and coordination.

The LOS for two-way and all-way stop controlled intersections was calculated using the methodologies described in Chapters 20 and 21 of the 6<sup>th</sup> Edition HCM. The LOS for a two-way stop controlled intersection is determined by the computed control delay for each minor street movement and major street left-turns, and not for the intersection as a whole. The LOS reported reflects the highest delay and associated LOS for an individual movement, typically occurring on the stop controlled approach.

The computerized analysis of signalized and unsignalized intersection operations was performed utilizing the *Synchro 11* traffic analysis software. The *Synchro 11* software supports the HCM-6 methodologies for signalized and stop controlled intersections and was utilized to produce the analysis results.

The HCM-6 methodology for two-way stop controlled intersections within the *Synchro 11* software program does not accept analysis of a five-legged intersection. Therefore, the five-legged SR-33/East Kern Street/1<sup>st</sup> Street intersection was analyzed using the HCM-6 methodology within the *PTV Vistro Version 2021* software program.

Signal timing data and parameters such as cycle lengths, splits, clearance intervals, etc. were obtained from the current signal timing sheets provided by Caltrans District 6 and input into the Synchro software. Synchro reports delays, which correspond to a particular LOS, to describe the overall operation of an intersection.

The criteria for the LOS grade designations are provided in **Table 1**. LOS provides a quick overview of how well an intersection is performing. Within the City of Taft, LOS D or better is considered acceptable for all signalized and unsignalized intersections during the peak hours.

### ***Roadway Segment Analysis Methodology***

Roadway segments were analyzed based on the volume-to-capacity (v/c) ratios and the City's daily LOS capacity thresholds per Table 4.4-4 (Roadway Segment Daily Volume Thresholds) of the City of Taft General Plan Draft Environmental Impact Report (July 2009). The City of Taft considers LOS D or better to be acceptable for daily roadway segment operations. **Table 2** presents the roadway segment capacity and LOS thresholds utilized by the City of Taft.

**TABLE 1**  
**LOS CRITERIA FOR INTERSECTIONS**

| HCM: CONTROL DELAY (SEC/VEH)<br>ICU: VOLUME/CAPACITY (V/C) |                             |                               | DESCRIPTION   |
|--|-----------------------------|-------------------------------|---|
| LOS  | SIGNALIZED<br>INTERSECTIONS | UNSIGNALIZED<br>INTERSECTIONS |   |
| A  | ≤10 seconds                 | ≤10 seconds                   | Operations with very low delay and most vehicles do not stop.   |
| B  | >10 and ≤20 seconds         | >10 and ≤15 seconds           | Operations with good progression but with some restricted movements.  |
| C  | >20 and ≤35 seconds         | >15 and ≤25 seconds           | Operations where a significant number of vehicles are stopping with some backup and light congestion.                                     |
| D  | >35 and ≤55 seconds         | >25 and ≤35 seconds           | Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines. |
| E  | >55 and ≤80 seconds         | >35 and ≤50 seconds           | Operations where there is significant delay, extensive queuing, and poor progression.   |
| F  | >80 seconds                 | >50 seconds                   | Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.                         |

Source: 6<sup>th</sup> Edition Highway Capacity Manual. City of Taft General Plan DEIR (July 2009).

**TABLE 2**  
**LOS CRITERIA FOR ROADWAY SEGMENTS**

| Facility Type                          | Number of Lanes | Daily Volume Threshold |         |         |         |         |
|--|-----------------|------------------------|---------|---------|---------|---------|
|  |                 | LOS A                  | LOS B   | LOS C   | LOS D   | LOS E   |
| Residential                            | 2               | 600                    | 1,200   | 2,000   | 3,000   | 4,500   |
| Residential collector with frontage    | 2               | 1,600                  | 3,200   | 4,800   | 6,400   | 8,000   |
| Residential collector without frontage | 2               | 6,000                  | 7,000   | 8,000   | 9,000   | 10,000  |
|  | 2               | 9,000                  | 10,000  | 12,000  | 13,500  | 15,000  |
| Arterial, low access control           | 2               | 10,800                 | 12,600  | 14,400  | 16,200  | 18,000  |
|  | 4               | 18,000                 | 21,000  | 24,000  | 27,000  | 30,000  |
|  | 6               | 27,000                 | 31,500  | 36,000  | 40,500  | 45,000  |
| Arterial, moderate access control      | 2               | 12,000                 | 14,000  | 16,000  | 18,000  | 20,000  |
|  | 4               | 21,600                 | 25,200  | 28,800  | 32,400  | 36,000  |
|  | 6               | 32,400                 | 37,800  | 43,200  | 48,600  | 54,000  |
| Arterial, high access control          | 4               | 24,000                 | 28,000  | 32,000  | 36,000  | 40,000  |
|  | 6               | 36,000                 | 42,000  | 48,000  | 54,000  | 60,000  |
| Freeway                                | 4               | 60,000                 | 70,000  | 80,000  | 90,000  | 100,000 |
|  | 6               | 90,000                 | 105,000 | 120,000 | 135,000 | 150,000 |
| Expressway                             | 2               | 8,100                  | 13,300  | 18,900  | 24,300  | 27,000  |
|  | 4               | 16,200                 | 26,500  | 37,800  | 48,600  | 54,000  |
| Rural, 2-lane highway                  | 2               | 2,400                  | 4,800   | 7,900   | 13,500  | 22,900  |
| Rural, 2-lane road, paved shoulders    | 2               | 2,200                  | 4,300   | 7,100   | 12,200  | 20,000  |
| Rural, 2-lane road, no shoulders       | 2               | 1,800                  | 3,600   | 5,900   | 10,100  | 17,000  |

Source: City of Taft General Plan DEIR (July 2009).

## EXISTING TRANSPORTATION CONDITIONS

### *Existing Roadway Network*

The following is a brief description of roadways within the study area as identified in the *City of Taft General Plan* (Amended April 2017):

**Kern Street/State Route 33 (SR-33)** is classified as an Arterial Highway and extends from the northwest to the southeast boundaries of the City of Taft. The roadway is currently constructed with two travel lanes in each direction from approximately 500 feet west of Cascade Place to the intersection with 1<sup>st</sup> Street and East Kern Street. Southeast of 1<sup>st</sup> Street, SR-33 is reduced to one travel lane in each direction. A striped center two-way left-turn lane is currently provided along Kern Street/SR-33 from 500 feet of Cascade Place to 10<sup>th</sup> Street. No left-turn lanes are provided Kern Street/SR-33 southeast of 9<sup>th</sup> Street within the Specific Plan area, and opposing travel lanes are separated by a striped double yellow line. On-street parking along Kern Street/SR-33 is generally permitted between 10<sup>th</sup> Street and 1<sup>st</sup> Street, but is prohibited along SR-33 southeast of 1<sup>st</sup> Street. Bicycle facilities are currently not provided along Kern Street/SR-33. The posted speed limit on Kern Street/SR-33 is 35 mph between 10<sup>th</sup> Street and 1<sup>st</sup> Street, and is 40 mph southeast of 1<sup>st</sup> Street.

**10<sup>th</sup> Street** is classified as an Arterial and extends from Ash Street to A Street/Oak Street within the City of Taft. The roadway is currently constructed with two travel lanes in each direction and a striped center two-way left-turn lane from Ash Street to Main Street. 10<sup>th</sup> Street narrows from four travel lanes to three travel lanes with a center two-way left-turn lane between Main Street and Front Street. South of Front Street, 10<sup>th</sup> Street is striped with one travel lane in each direction without a center two-way left-turn lane. On-street parking is generally prohibited along 10<sup>th</sup> Street from Ash Street to Front Street. South of Front Street, on-street parking is generally permitted along the east side of the street. Bicycle facilities are currently not provided along 10<sup>th</sup> Street. The posted speed limit on 10<sup>th</sup> Street is 35 mph.

**6<sup>th</sup> Street** is classified as a Collector and extends from Ash Street to Oak Street within the City of Taft. The roadway is currently constructed with two travel lanes in each direction from Ash Street to Main Street. 6<sup>th</sup> Street narrows from four travel lanes to two travel lanes south of Main Street. The opposing travel lanes are separated by a striped double yellow lines. No left-turn lanes are provided along 6<sup>th</sup> Street. On-street parking is generally permitted along 6<sup>th</sup> Street. South of Front Street, on-street parking is generally permitted along the east side of the street. Bicycle facilities are currently not provided along 6<sup>th</sup> Street. The posted speed limit on 6<sup>th</sup> Street is 35 mph.

**Center Street** is classified as a Local Street and extends from 10<sup>th</sup> Street to SR-33 within the City of Taft. The roadway is currently constructed with one travel lane in each direction, and the opposing travel lanes are separated by a dashed yellow line. No left-turn lanes are provided along Center Street. On-street parking is generally permitted on both sides of Center Street, and angled parking spaces are provided along one or both sides of the street between 10<sup>th</sup> Street and 2<sup>nd</sup> Street. Bicycle facilities are currently not provided along Center Street. The posted speed limit on Center Street is 25 mph.



**Main Street** is classified as a Local Street and extends from 10<sup>th</sup> Street to SR-33 within the City of Taft. The roadway is currently constructed with one travel lane in each direction, and the opposing travel lanes are separated by a dashed yellow line. No left-turn lanes are provided along Main Street. On-street parking is generally permitted on one or both sides of Main Street between 10<sup>th</sup> Street and 2<sup>nd</sup> Street. On-street parking is generally prohibited along Main Street between 2<sup>nd</sup> Street and SR-33, except for a short section between 300 feet and 600 feet west of SR-33 where on-street parking is permitted along the north side of the roadway. Bicycle facilities are currently not provided along Main Street between 10<sup>th</sup> Street and 2<sup>nd</sup> Street. A Class II bicycle lane is currently provided in each direction of travel along Main Street between 2<sup>nd</sup> Street and SR-33. The posted speed limit on Main Street is 25 mph between 10<sup>th</sup> Street and 2<sup>nd</sup> Street, and is 35 mph between 2<sup>nd</sup> Street and SR-33.

**Exhibit 4** illustrates the existing (2022) transportation conditions within the study area as described above.

### ***Existing Transportation Volumes***

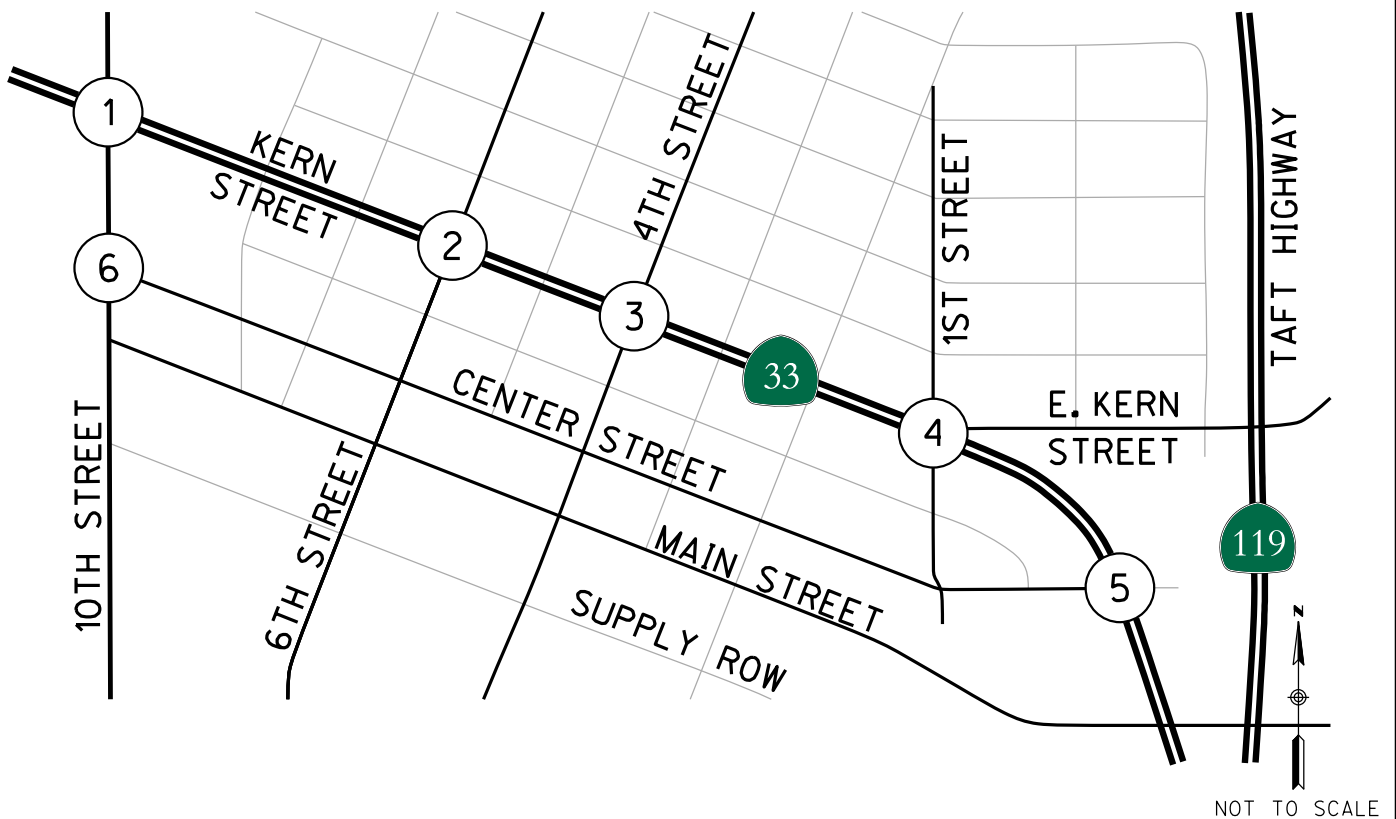
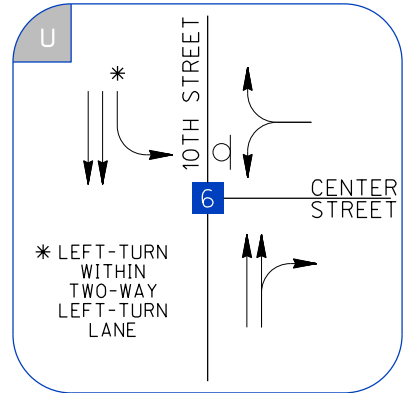
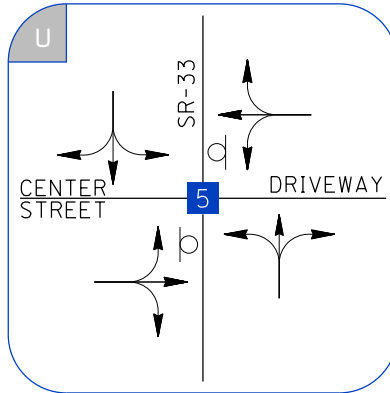
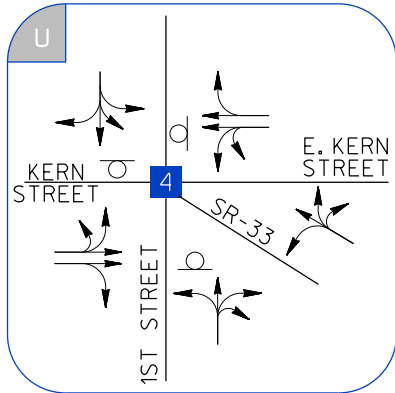
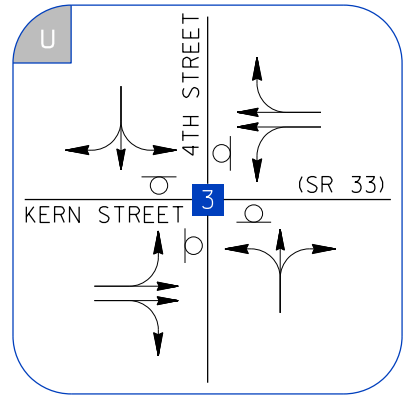
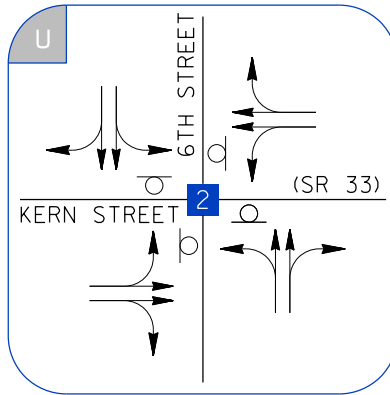
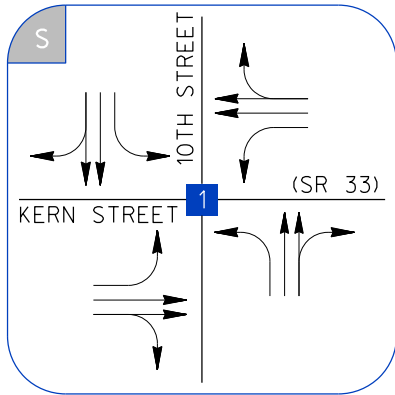
Existing vehicular, pedestrian and bicycle volumes at the following six (6) study intersections were obtained from counts conducted by Metro Traffic Data on Tuesday, March 15, 2022 during the AM (7-9) and PM (4-6) peak periods while local schools were in regular session:

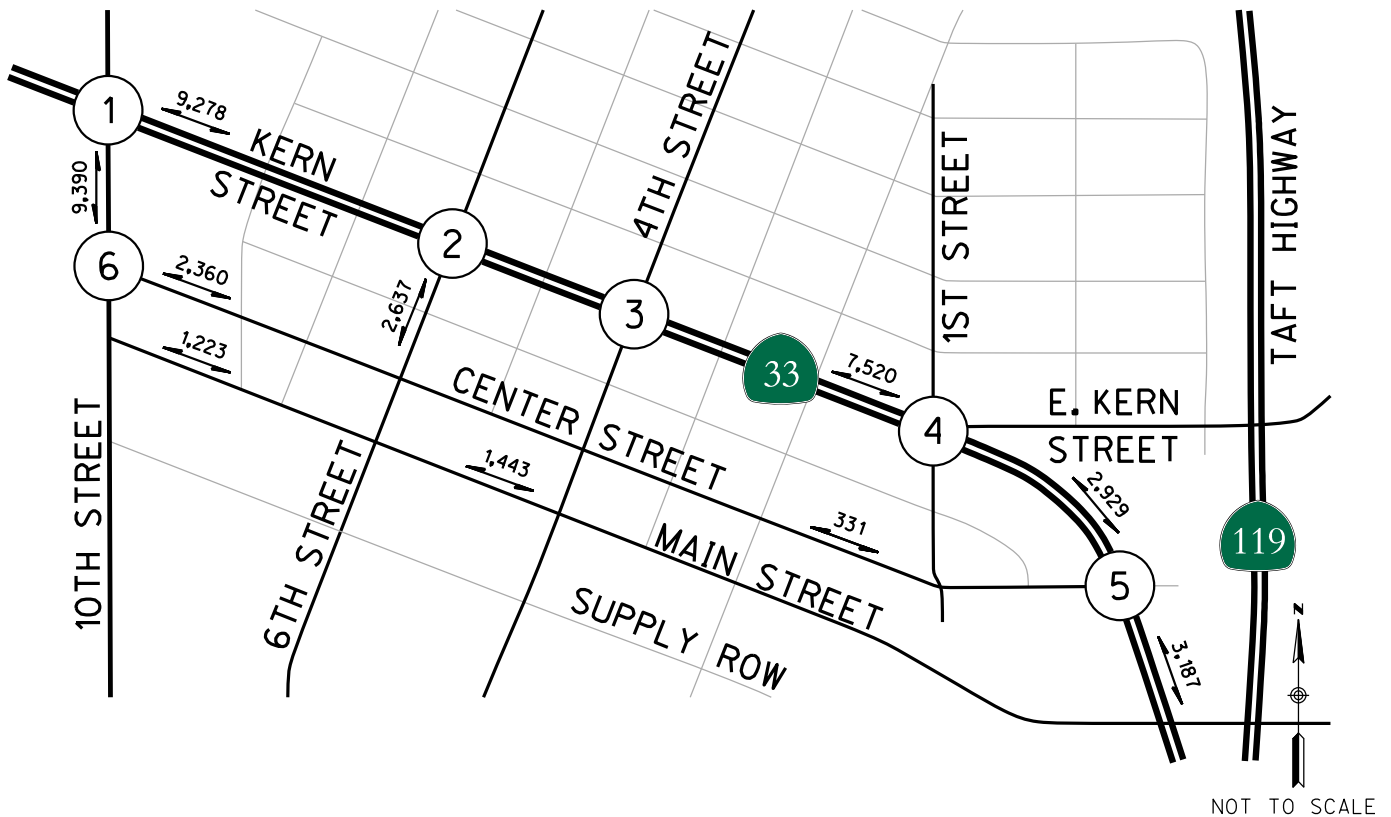
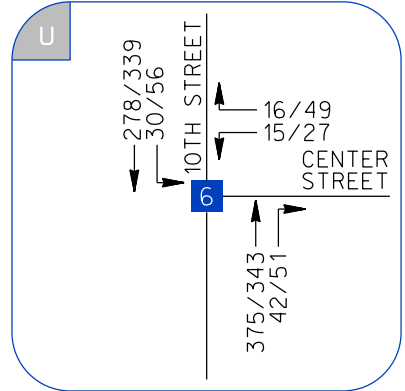
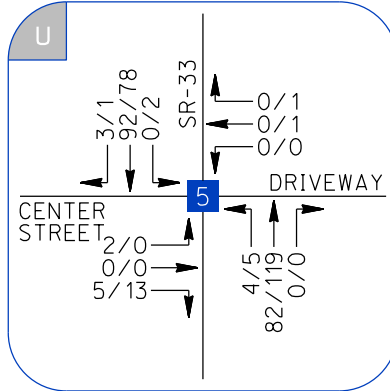
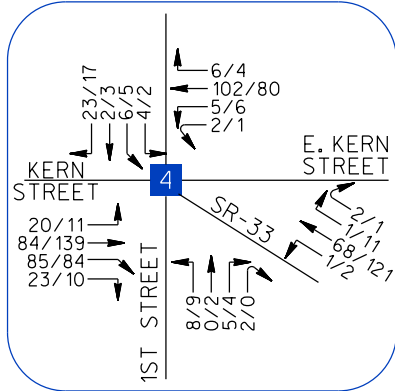
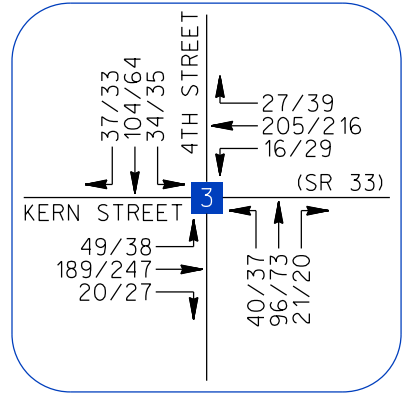
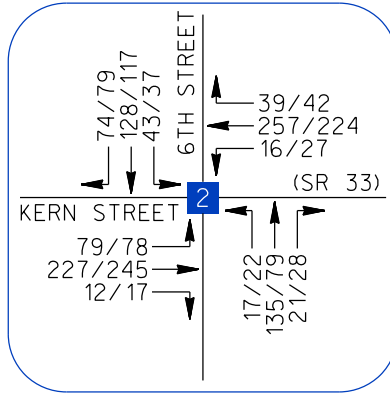
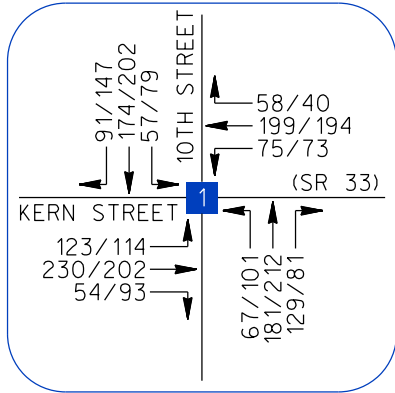
1. Kern Street (SR-33) / 10<sup>th</sup> Street
2. Kern Street (SR-33) / 6<sup>th</sup> Street
3. Kern Street (SR-33) / 4<sup>th</sup> Street
4. Kern Street (SR-33) / E. Kern Street / 1<sup>st</sup> Street (5-legged intersection)
5. Center Street / 10<sup>th</sup> Street
6. Center Street / Westside Highway (SR-33)

Additionally, machine counts were collected on Tuesday, March 15, 2022 on the following 10 roadway segments listed below in order to document the daily vehicular traffic volumes for a 24-hour period:

1. Kern Street (SR-33) between 10<sup>th</sup> Street and 6<sup>th</sup> Street
2. Kern Street (SR-33) between 6<sup>th</sup> Street and 1<sup>st</sup> Street
3. Westside Highway (SR-33) between 1<sup>st</sup> Street and Center Street
4. Westside Highway (SR-33) between Center Street and Main Street
5. Center Street between 10<sup>th</sup> Street and 6<sup>th</sup> Street
6. Center Street between 6<sup>th</sup> Street and Westside Highway
7. Main Street between 10<sup>th</sup> Street and 6<sup>th</sup> Street
8. Main Street between 6<sup>th</sup> Street and Westside Highway
9. 10<sup>th</sup> Street between Kern Street (SR-33) and Center Street
10. 6<sup>th</sup> Street between Kern Street (SR-33) and Center Street

**Exhibit 5** shows the existing intersection turning movement volumes and average daily traffic (ADT) volumes within the study area. **Appendix A** contains the vehicular, pedestrian and bicycle count data.





### Existing Intersection Operations

The existing intersection operations results are based on existing turning movement volumes collected, existing intersection geometry and existing signal timing.

**Table 3** shows the existing conditions intersection operations during the peak hours. **Appendix B** contains the existing conditions intersection operations worksheets.

**TABLE 3  
EXISTING INTERSECTION OPERATIONS**

| INTERSECTION |  |                | EXISTING (2022)    |     |
|--------------|--|----------------|--------------------|-----|
|              |  |                | DELAY <sup>1</sup> | LOS |
| 1            | Kern Street (SR-33) / 10th Street                              | AM peak (S)    |                    |     |
|              |  | OVERALL (S)    | 27.6               | C   |
|              |  | PM peak (S)    |                    |     |
|              |  | OVERALL (S)    | 26.7               | C   |
| 2            | Kern Street (SR-33) / 6th Street                               | AM peak (AWSC) |                    |     |
|              |  | OVERALL (AWSC) | 15.6               | C   |
|              |  | PM peak (AWSC) |                    |     |
|              |  | OVERALL (AWSC) | 12.0               | B   |
| 3            | Kern Street (SR-33) / 4th Street                               | AM peak (AWSC) |                    |     |
|              |  | OVERALL (AWSC) | 12.0               | B   |
|              |  | PM peak (AWSC) |                    |     |
|              |  | OVERALL (AWSC) | 10.9               | B   |
| 4            | Kern Street (SR-33) / E. Kern Street / 1st Street <sup>2</sup> | AM peak (TWSC) |                    |     |
|              |  | NBL            | 13.9               | B   |
|              |  | PM peak (TWSC) |                    |     |
|              |  | NBT            | 16.0               | C   |
| 5            | Center Street / Westside Highway (SR-33)                       | AM peak (TWSC) |                    |     |
|              |  | EBL            | 9.1                | A   |
|              |  | PM peak (TWSC) |                    |     |
|              |  | WBL            | 9.8                | A   |
| 6            | Center Street / 10th Street                                    | AM peak (OWSC) |                    |     |
|              |  | WBL            | 12.2               | B   |
|              |  | PM peak (OWSC) |                    |     |
|              |  | WBL            | 11.6               | B   |

Footnotes: S = Signalized; AWSC = All-Way-Stop Controlled; TWSC = Two-Way-Stop Controlled; OWSC = One-Way-Stop Controlled

<sup>1</sup>Delay is measured in seconds per vehicle.

<sup>2</sup>PTV Vistro software program was used as interface to HCM-6 methodology to analyze the 5-legged Kern Street (SR-33) / E. Kern Street / 1st Street because the Synchro 11 software program does not accept analysis of 5-legged intersections.

As shown in Table 3, all study intersections currently operate at LOS C or better during the AM and PM peak hours.



### ***Existing Conditions Roadway Segment Analysis***

The existing roadway level of service results are based on existing daily traffic volumes collected and functional classification roadway capacity. **Table 4** summarizes the roadway segment capacity analysis results under Existing Conditions. As shown in Table 4, all study roadway segments currently operate at LOS B or better.

## **PROJECT TRIP GENERATION**

The trip generation for the Downtown Taft Specific Plan project was calculated based on the published Institute of Transportation Engineers (ITE) 11<sup>th</sup> Edition Trip Generation Manual (September 2021) trip rates for the proposed land uses.

The specific ITE trip generation rates for the proposed residential land use types were applied, but due to the greater uncertainty of what specific types of retail or office uses would ultimately occupy the Specific Plan area, the “Shopping Center Over 150K” (ITE Land Use Code 820) trip rate was applied to all uses under the “Retail” category. In addition, the “Office Park” (ITE Land Use Code 750) trip rate was applied to all uses under the “Office” category.

Although 661,262 square-feet of the office uses is proposed as “medical services”, the only medical office trip rate in the 11<sup>th</sup> Edition ITE Trip Generation Manual is the “Medical-Dental Office Building Stand-Alone” (ITE Land Use Code 720), which is intended to only be used for a stand-alone medical office building. Applying the ITE Land Use Code 720 trip rate to the 661,262 square-feet of medical services use would result in an artificially high trip generation compared to the other proposed uses, and therefore the general “Office Park” ITE Land Use Code 750) trip rate was applied to the 661,262 square-feet of proposed medical services.

The average ITE trip rates were applied to the proposed residential land use types, but for all non-residential uses, fitted curve equations were applied, where available, to calculate the trip generation of the retail, office, public administration and industrial uses.

**Table 5** shows the ITE trip generation rates that were applied to the proposed Downtown Taft Specific Plan land uses, and **Table 6** presents the trip generation of the buildout of the Downtown Taft Specific Plan. **Appendix C** contains the 11<sup>th</sup> Edition ITE Trip Generation Manual (September 2021) trip rate sheets.

As shown in Table 6, the Downtown Taft Specific Plan project is forecast to generate a net total of 58,925 trips per day, with a net total of 3,862 trips occurring during the AM peak hour (2,350 IN, 1,512 OUT), and a net total of 5,145 trips occurring during the PM peak hour (2,109 IN, 3,036 OUT).

The net total trip generation of the Downtown Taft Specific Plan project accounts for an internal capture trip reduction that was calculated using the NCHRP Report 684 Internal Capture Estimation Tool, which is also shown in Table 6. The internal capture calculation worksheets are also provided in Appendix C.

**TABLE 4  
EXISTING CONDITIONS ROADWAY SEGMENT ANALYSIS**

| ROADWAY SEGMENT |  | Classification <sup>1</sup> | # of Lanes | Daily Capacity <sup>1</sup> | EXISTING (2022) |     |
|-----------------|--|-----------------------------|------------|-----------------------------|-----------------|-----|
|                 |  |                             |            |                             | Volume          | LOS |
| 1               | Kern Street (SR-33) between 10th Street and 6th Street         | Arterial Highway            | 4          | 30,000                      | 9,278           | A   |
| 2               | Kern Street (SR-33) between 6th Street and 1st Street          | Arterial Highway            | 4          | 30,000                      | 7,520           | A   |
| 3               | Westside Highway (SR-33) between 1st Street and Center Street  | Arterial Highway            | 2          | 18,000                      | 2,929           | A   |
| 4               | Westside Highway (SR-33) between Center Street and Main Street | Arterial Highway            | 2          | 18,000                      | 3,187           | A   |
| 5               | Center Street between 10th Street and 6th Street               | Collector                   | 2          | 8,000                       | 2,360           | B   |
| 6               | Center Street between 6th Street and Westside Highway (SR-33)  | Collector                   | 2          | 8,000                       | 331             | A   |
| 7               | Main Street between 10th Street and 6th Street                 | Collector                   | 2          | 8,000                       | 1,223           | A   |
| 8               | Main Street between 6th Street and Westside Highway (SR-33)    | Collector                   | 2          | 8,000                       | 1,443           | A   |
| 9               | 10th Street between Kern Street (SR-33) and Center Street      | Arterial                    | 4          | 30,000                      | 9,390           | A   |
| 10              | 6th Street between Kern Street (SR-33) and Center Street       | Collector                   | 4          | 15,000                      | 2,637           | A   |

Footnotes:

<sup>1</sup>Roadway classification and daily capacity taken from Table 4.4-4 (Roadway Segment Daily Volume Thresholds) of the City of Taft General Plan Draft Environmental Impact Report (July 2009)

**TABLE 5**  
**ITE TRIP GENERATION RATES**

| Land Use                                | Unit | Daily Rate<br>(per unit)       | AM Peak Hour             |                   |                    | PM Peak Hour                   |                   |                    |
|---|------|--------------------------------|--------------------------|-------------------|--------------------|--------------------------------|-------------------|--------------------|
|   |      |                                | Rate                     | Inbound<br>(% AM) | Outbound<br>(% AM) | Rate                           | Inbound<br>(% PM) | Outbound<br>(% PM) |
| Single-Family Detached<br>(LU Code 210) | DU   | 9.43                           | 0.70                     | 26%               | 74%                | 0.94                           | 63%               | 37%                |
| Single-Family Attached<br>(LU Code 215) | DU   | 7.20                           | 0.48                     | 31%               | 69%                | 0.57                           | 57%               | 43%                |
| Multi-Family Low-Rise<br>(LU Code 220)  | DU   | 6.74                           | 0.40                     | 24%               | 76%                | 0.51                           | 63%               | 37%                |
| Shopping Center >150k<br>(LU Code 820)  | KSF  | $T = 26.11(X) + 5863.73^a$     | $T = 0.59(X) + 133.55^a$ | 62%               | 38%                | $\ln(T) = 0.72\ln(X) + 3.02^a$ | 48%               | 52%                |
| Office Park<br>(LU Code 750)            | KSF  | $\ln(T) = 0.89\ln(X) + 3.10^a$ | $T = 0.94(X) + 194.06^a$ | 89%               | 11%                | $T = 1.26(X) + 20.98^a$        | 14%               | 86%                |
| Public Administration<br>(LU Code 730)  | KSF  | 22.59                          | 3.34                     | 75%               | 25%                | $\ln(T) = 0.97\ln(X) + 0.62^a$ | 25%               | 75%                |
| Warehousing<br>(LU Code 150)            | KSF  | $T = 1.58(X) + 38.29^a$        | $T = 0.12(X) + 23.62^a$  | 77%               | 23%                | $T = 0.12(X) + 26.48^a$        | 28%               | 72%                |

Footnotes:

Source: ITE Trip Generation Manual, 11th Edition (2021)

DU = Dwelling Unit; KSF = Thousand Square-Feet

<sup>a</sup>Fitted curve equation provided to calculate the trip generation.

**TABLE 6  
PROJECT TRIP GENERATION**

| Land Use   | Size     | Unit | Daily Trips    | AM Peak Hour |              |              | PM Peak Hour  |              |              |
|--|----------|------|----------------|--------------|--------------|--------------|---------------|--------------|--------------|
|  |          |      |                | Total        | Inbound      | Outbound     | Total         | Inbound      | Outbound     |
| Single-Family Detached (LU Code 210)               | 665      | DU   | 6,271          | 466          | 121          | 345          | 625           | 394          | 231          |
| Single-Family Attached (LU Code 215)               | 1,186    | DU   | 8,539          | 569          | 176          | 393          | 676           | 385          | 291          |
| Multi-Family Low-Rise (LU Code 220)                | 1,269    | DU   | 8,553          | 508          | 122          | 386          | 647           | 408          | 239          |
| Retail (LU Code 820)                               | 891.059  | KSF  | 29,129         | 659          | 409          | 250          | 2,726         | 1,308        | 1,418        |
| Office Park (LU Code 750)                          | 1132.718 | KSF  | 11,601         | 1,259        | 1,121        | 138          | 1,448         | 203          | 1,245        |
| Public Administration (LU Code 730)                | 224.039  | KSF  | 5,061          | 748          | 561          | 187          | 355           | 89           | 266          |
| Warehousing (LU Code 150)                          | 229.281  | KSF  | 401            | 51           | 39           | 12           | 54            | 15           | 39           |
| <b>Subtotal Project Trips</b>                      |          |      | <b>69,555</b>  | <b>4,260</b> | <b>2,549</b> | <b>1,711</b> | <b>6,531</b>  | <b>2,802</b> | <b>3,729</b> |
| <i>Internal Capture Trip Reduction<sup>a</sup></i> |          |      | <i>-10,630</i> | <i>-398</i>  | <i>-199</i>  | <i>-199</i>  | <i>-1,386</i> | <i>-693</i>  | <i>-693</i>  |
| <b>NET TOTAL PROJECT TRIPS</b>                     |          |      | <b>58,925</b>  | <b>3,862</b> | <b>2,350</b> | <b>1,512</b> | <b>5,145</b>  | <b>2,109</b> | <b>3,036</b> |

Footnotes:

Source: ITE Trip Generation Manual, 11th Edition (2021)

DU = Dwelling Unit; KSF = Thousand Square-Feet

<sup>a</sup>Internal capture was calculated using the NCHRP Report 684 Internal Capture Estimation Tool (see Appendix C).



## **HORIZON YEAR 2042 WITH PROJECT TRANSPORTATION CONDITIONS**

Horizon Year 2042 With Project conditions reflect the buildout of the Downtown Taft Specific Plan and City of Taft General Plan. The Kern Council of Governments (Kern COG) Year 2042 regional travel demand model was used to develop the Horizon Year 2042 With Project traffic volumes in the study area. RICK provided Kern COG the proposed land uses to input into the five Travel Analysis Zones (TAZs) that make up the Downtown Taft Specific Plan area in the Kern COG model, which are listed below:

- TAZ 1805
- TAZ 1806
- TAZ 1816
- TAZ 1817
- TAZ 1819

Kern COG conducted a model run with the proposed land use changes using the Year 2042 regional travel demand model and provided RICK with a model plot that illustrate the Horizon Year 2042 With Specific plan daily volumes for the Greater Taft Subarea. A copy of the Kern COG Horizon Year 2042 With Specific Plan Model ADT plot is contained in **Appendix D**.

### ***Horizon Year 2042 With Project Conditions Roadway Network***

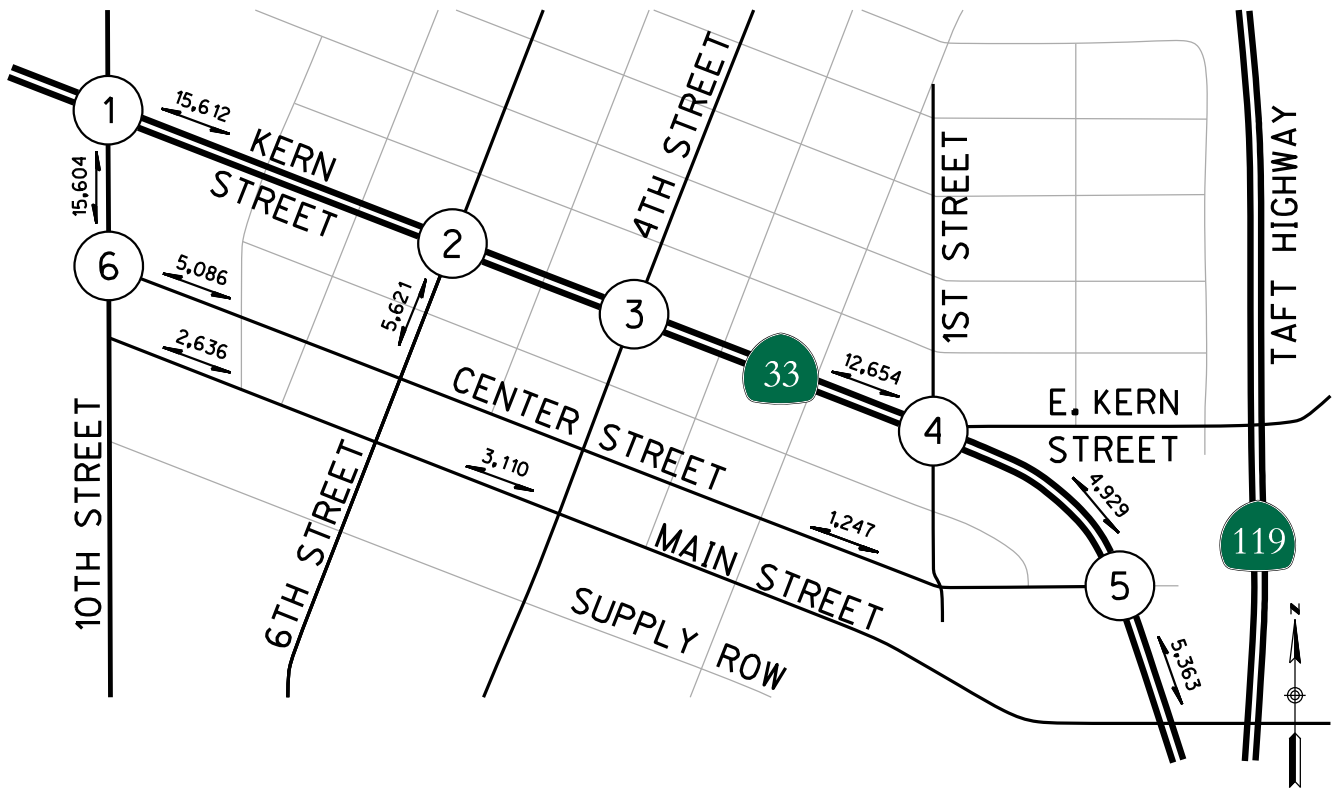
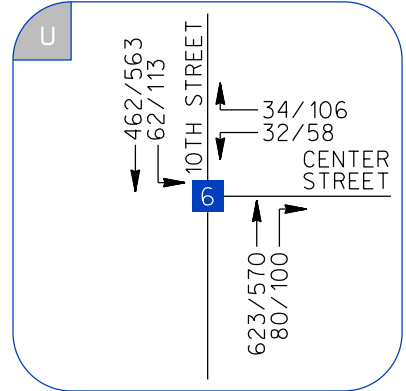
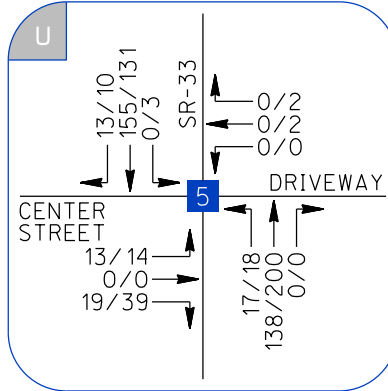
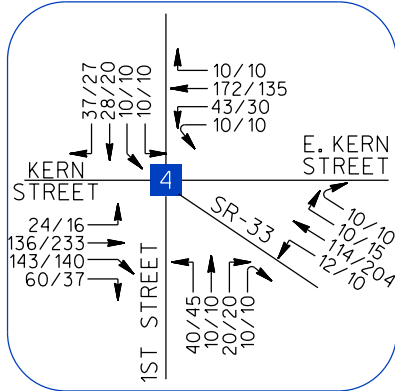
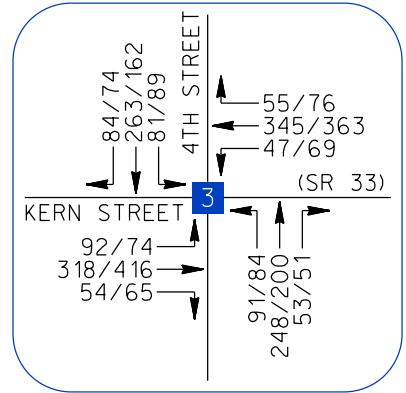
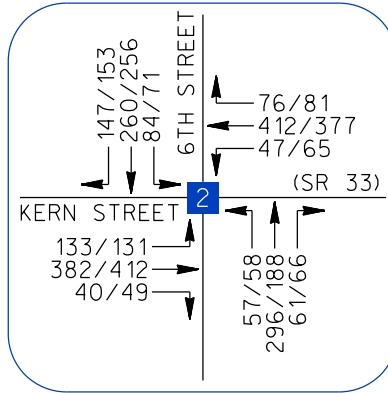
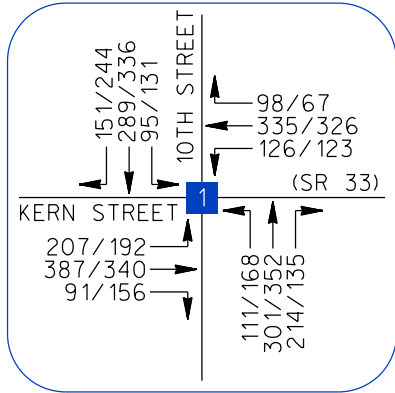
The Horizon Year 2042 With Project roadway network is based on the current Kern COG 2018 Regional Transportation Plan (RTP) and the buildout of the City of Taft General Plan Circulation Element. Neither the Kern COG 2018 RTP nor the City of Taft General Plan Circulation Element include any future roadway improvements within the Downtown Taft Specific Plan area. Therefore, the Horizon Year 2042 roadway network is essentially the same as existing conditions.

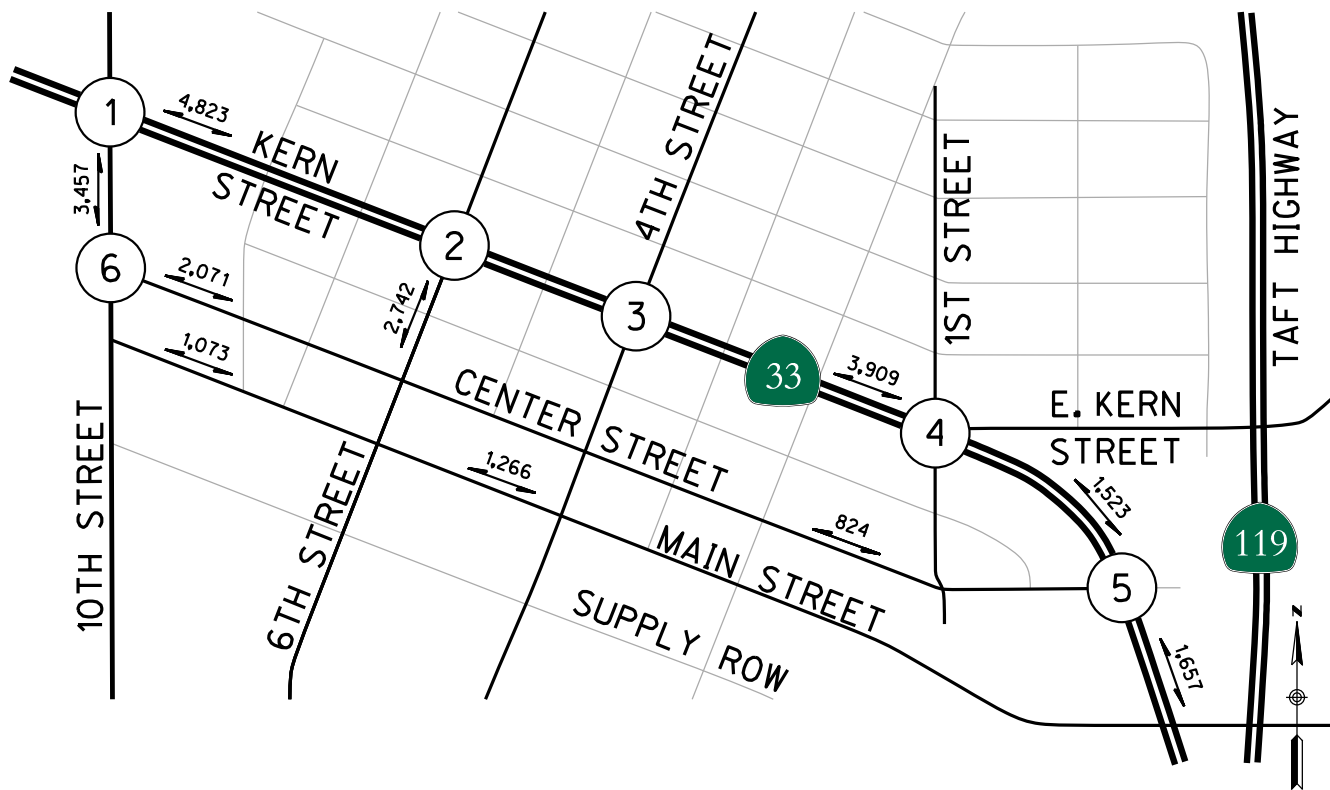
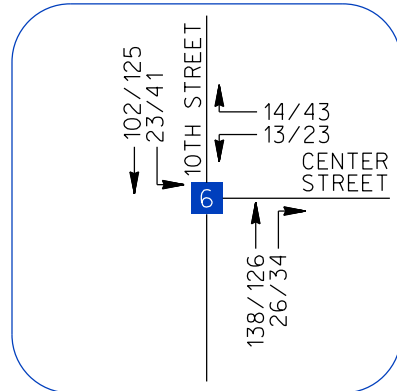
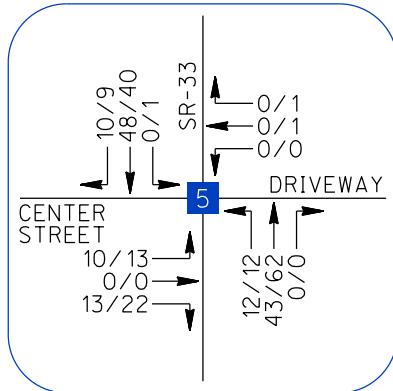
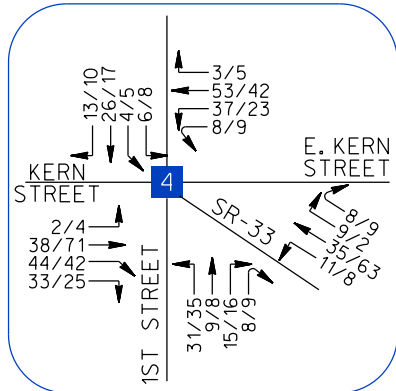
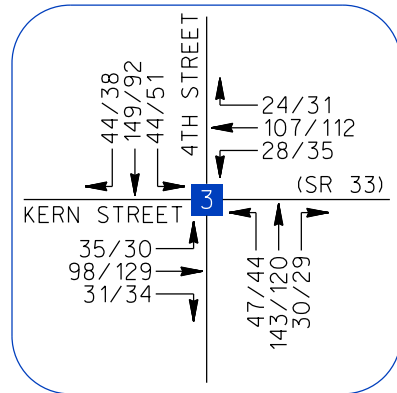
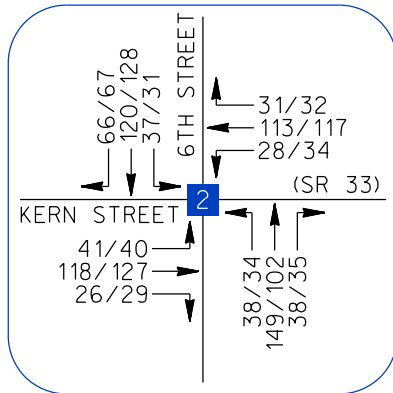
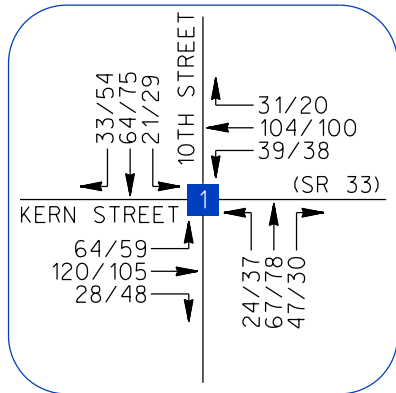
### ***Horizon Year 2042 With Project Conditions Traffic Volumes***

The Horizon Year 2042 With Project traffic volumes were derived based on the forecast growth in traffic in the Kern COG regional travel demand model. Growth factors were developed based on the forecast traffic growth from Baseline Year 2020 to Horizon Year 2042 with the Downtown Taft Specific Plan. These growth factors were applied to the existing conditions (Year 2022) daily traffic volumes to reflect 20 years of traffic growth from 2022 to 2042.

The Horizon Year 2042 With Project daily traffic volumes derived from the model growth in traffic were post-processed to develop the intersection turning movement volumes during the AM and PM peak hours. Adjustments were made where appropriate to reflect changes in traffic patterns and growth on all legs of the study intersections. The Horizon Year 2042 With Project intersection post-processing worksheets are also provided in Appendix D. **Exhibit 6** illustrates the Horizon Year 2042 With Project traffic volumes at the study intersections and roadway segments with the buildout of the Downtown Taft Specific Plan.

Project-specific daily and AM/PM peak hour trips associated with the proposed Downtown Taft Specific Plan land uses were calculated based on the changes in the daily traffic volumes between the Horizon Year 2042 baseline (without project) volumes from the Kern COG regional travel demand model and the Horizon Year 2042 With Specific Plan volumes from the model run conducted by Kern COG. The Horizon Year 2042 baseline volumes were also post-processed to derive the Horizon Year 2042 baseline AM/PM peak hour turning movement volumes, and the project-specific AM/PM peak hour trips were calculated by subtracting the Horizon Year 2042 baseline volumes from the Horizon Year 2042 With Project volumes. **Exhibit 7** illustrates the project-specific daily and AM/PM peak hour trips with the buildout of the Downtown Taft Specific Plan.





### *Horizon Year 2042 With Project Conditions Intersection Operations*

**Table 7** displays the operational analysis results for the study intersections under Horizon Year 2042 conditions with the buildout of the Downtown Taft Specific Plan. **Appendix E** contains the Horizon Year 2042 With Project intersection analysis worksheets.

**TABLE 7  
HORIZON YEAR 2042 WITH PROJECT INTERSECTION OPERATIONS**

| INTERSECTION   |         |         | HORIZON YR (2042)<br>WITH PROJECT |     |
|--|---------|---------|-----------------------------------|-----|
|  |         |         | DELAY <sup>1</sup>                | LOS |
| 1 Kern Street (SR-33) / 10th Street                              | AM peak | (S)     |                                   |     |
|  |         | OVERALL | 45.0                              | D   |
|  | PM peak | (S)     |                                   |     |
|  |         | OVERALL | 40.0                              | D   |
| 2 Kern Street (SR-33) / 6th Street                               | AM peak | (AWSC)  |                                   |     |
|  |         | OVERALL | 117.7                             | F   |
|  | PM peak | (AWSC)  |                                   |     |
|  |         | OVERALL | 42.9                              | E   |
| 3 Kern Street (SR-33) / 4th Street                               | AM peak | (AWSC)  |                                   |     |
|  |         | OVERALL | 118.8                             | F   |
|  | PM peak | (AWSC)  |                                   |     |
|  |         | OVERALL | 55.4                              | F   |
| 4 Kern Street (SR-33) / E. Kern Street / 1st Street <sup>2</sup> | AM peak | (TWSC)  |                                   |     |
|  |         | NBT     | 47.6                              | E   |
|  | PM peak | (TWSC)  |                                   |     |
|  |         | NBT     | 67.2                              | F   |
| 5 Center Street / Westside Highway (SR-33)                       | AM peak | (TWSC)  |                                   |     |
|  |         | EBL     | 10.3                              | B   |
|  | PM peak | (TWSC)  |                                   |     |
|  |         | WBL     | 11.0                              | B   |
| 6 Center Street / 10th Street                                    | AM peak | (OWSC)  |                                   |     |
|  |         | WBL     | 18.6                              | C   |
|  | PM peak | (OWSC)  |                                   |     |
|  |         | WBL     | 19.1                              | C   |

Footnotes: S = Signalized; AWSC = All-Way-Stop Controlled; TWSC = Two-Way-Stop Controlled; OWSC = One-Way-Stop Controlled

<sup>1</sup>Delay is measured in seconds per vehicle.

<sup>2</sup>PTV Vistro software program was used as interface to HCM-6 methodology to analyze the 5-legged Kern Street (SR-33) / E. Kern Street / 1st Street because the Synchro 11 software program does not accept analysis of 5-legged intersections.



As shown in Table 7, the following intersections are forecast to operate at a deficient LOS E or F during the AM and PM peak hours under Horizon Year 2042 conditions with the buildout of the Downtown Taft Specific Plan:

- Kern Street (SR-33) / 6th Street (AM: LOS F; PM: LOS E)
- Kern Street (SR-33) / 4th Street (AM/PM: LOS F)
- Kern Street (SR-33) / E. Kern Street / 1st Street (AM: LOS E; PM: LOS F)

### ***Horizon Year 2042 With Project Conditions Roadway Segment Analysis***

**Table 8** summarizes the roadway segment capacity analysis results under Horizon Year 2042 conditions with the buildout of the Downtown Taft Specific Plan. As shown in Table 8, all study roadway segments are forecast to operate at LOS D or better under Horizon Year 2042 conditions with the buildout of the Downtown Taft Specific Plan.

## **ACTIVE TRANSPORTATION AND PUBLIC TRANSIT ASSESSMENT**

### ***Existing Pedestrian Network***

Sidewalks are generally provided along both sides of most roadways within the Specific Plan area. Below are descriptions of the existing pedestrian facilities along key roadways within the Specific Plan:

#### **Kern Street/West Side Highway (SR-33)**

Sidewalk widths range from 12 feet to 15 feet along both sides of Kern Street (SR-33) between 10<sup>th</sup> Street and 8<sup>th</sup> Street. Sidewalks along Kern Street (SR-33) between 8<sup>th</sup> Street and 1<sup>st</sup> Street are primarily non-contiguous on both sides of the roadway and are approximately five (5) feet in width. Several wide sections of sidewalk 12-15 feet in width are also provided along Kern Street (SR-33) between 8<sup>th</sup> Street and 1<sup>st</sup> Street. No pedestrian facilities are provided along West Side Highway (SR-33) southwest of the Kern Street (SR-33)/East Kern Street/1<sup>st</sup> Street intersection.

Pedestrian crossings are provided at most intersections along the Kern Street (SR-33) corridor between 10<sup>th</sup> Street and 1<sup>st</sup> Street. Signalized pedestrian crossings with high-visibility ladder crosswalks are provided across all four legs of the Kern Street (SR-33)/10<sup>th</sup> Street intersection. There are also several uncontrolled pedestrian crossings across Kern Street (SR-33) where high-visibility ladder crosswalks are provided and solar-powered LED enhanced pedestrian crossing signs with push-button activation, which are provided at the following intersections: Kern Street (SR-33)/8<sup>th</sup> Street, Kern Street (SR-33)/7<sup>th</sup> Street, Kern Street (SR-33)/5<sup>th</sup> Street, Kern Street (SR-33)/3<sup>rd</sup> Street, Kern Street (SR-33)/2<sup>nd</sup> Street, and Kern Street (SR-33)/East Kern Street/1<sup>st</sup> Street. High-visibility ladder crosswalks are also provided across all four legs of the all-way-stop controlled intersections of Kern Street (SR-33)/6<sup>th</sup> Street and Kern Street (SR-33)/4<sup>th</sup> Street.

#### **Center Street**

Contiguous sidewalks treated with pavers are provided along both sides of Center Street between 10<sup>th</sup> Street and 2<sup>nd</sup> Street adjacent to primarily commercial uses, and range between 6 feet and 12 feet in width. East of 2<sup>nd</sup> Street, land uses transition from commercial to residential, and the standard 5-foot wide contiguous sidewalks are provided on both sides of Center Street between 2<sup>nd</sup> Street and 1<sup>st</sup> Street. No sidewalks are provided along Center Street between 1<sup>st</sup> Street and SR-33, where adjacent properties are primarily undeveloped.

**TABLE 8  
HORIZON YEAR 2042 WITH PROJECT ROADWAY SEGMENT ANALYSIS**

| ROADWAY SEGMENT |  | Classification <sup>1</sup> | # of Lanes | Capacity <sup>1</sup> | HORIZON YR (2042) WITH PROJECT |     |
|-----------------|--|-----------------------------|------------|-----------------------|--------------------------------|-----|
|                 |  |                             |            |                       | Volume                         | LOS |
| 1               | Kern Street (SR-33) between 10th Street and 6th Street         | Arterial Highway            | 4          | 30,000                | 15,612                         | A   |
| 2               | Kern Street (SR-33) between 6th Street and 1st Street          | Arterial Highway            | 4          | 30,000                | 12,654                         | A   |
| 3               | Westside Highway (SR-33) between 1st Street and Center Street  | Arterial Highway            | 2          | 18,000                | 4,929                          | A   |
| 4               | Westside Highway (SR-33) between Center Street and Main Street | Arterial Highway            | 2          | 18,000                | 5,363                          | A   |
| 5               | Center Street between 10th Street and 6th Street               | Collector                   | 2          | 8,000                 | 5,086                          | D   |
| 6               | Center Street between 6th Street and Westside Highway (SR-33)  | Collector                   | 2          | 8,000                 | 1,247                          | A   |
| 7               | Main Street between 10th Street and 6th Street                 | Collector                   | 2          | 8,000                 | 2,636                          | B   |
| 8               | Main Street between 6th Street and Westside Highway (SR-33)    | Collector                   | 2          | 8,000                 | 3,110                          | B   |
| 9               | 10th Street between Kern Street (SR-33) and Center Street      | Arterial                    | 4          | 30,000                | 15,604                         | A   |
| 10              | 6th Street between Kern Street (SR-33) and Center Street       | Collector                   | 4          | 15,000                | 5,621                          | A   |

Footnotes:

<sup>1</sup>Roadway classification and daily capacity taken from Table 4.4-4 (Roadway Segment Daily Volume Thresholds) of the City of Taft General Plan Draft Environmental Impact Report (July 2009)

Both controlled and uncontrolled pedestrian crossings are provided at several intersections and at mid-block locations along Center Street between 10<sup>th</sup> Street and 2<sup>nd</sup> Street. High-visibility ladder crosswalks and/or crosswalks treated with pavers are provided at uncontrolled mid-block crossings between 7<sup>th</sup> Street and 6<sup>th</sup> Street, between 6<sup>th</sup> Street and 5<sup>th</sup> Street, between 5<sup>th</sup> Street and 4<sup>th</sup> Street, between 4<sup>th</sup> Street and 3<sup>rd</sup> Street, and between 3<sup>rd</sup> Street and 2<sup>nd</sup> Street. High-visibility ladder crosswalks are also provided across Center Street and other intersection legs at the intersections of Center Street/7<sup>th</sup> Street, Center Street/6<sup>th</sup> Street, Center Street/4<sup>th</sup> Street, Center Street/3<sup>rd</sup> Street, and Center Street/2<sup>nd</sup> Street. Crosswalks treated with pavers are provided across all four legs of the Center Street/5<sup>th</sup> Street intersection.

### **Main Street**

Most of the segment of Main Street between 10<sup>th</sup> Street and 7<sup>th</sup> Street is currently lacking sidewalks along one or both sides of the roadway. Along Main Street between 7<sup>th</sup> Street and 3<sup>rd</sup> Street, a mix of contiguous and non-contiguous sidewalks are provided on both sides of the street, with a few missing gaps along undeveloped parcels. Sidewalk widths range from 5 feet to 10 feet along Main Street between 7<sup>th</sup> Street and 3<sup>rd</sup> Street. Along Main Street between 3<sup>rd</sup> Street and 2<sup>nd</sup> Street, sidewalks are only provided along the north side of the street, and along Main Street between 2<sup>nd</sup> Street and SR-33, where adjacent properties are primarily undeveloped, sidewalks are not provided except for short sections along developed parcels.

An uncontrolled mid-block pedestrian crossing with a crosswalk treated with pavers is provided across Main Street between 6<sup>th</sup> Street and 4<sup>th</sup> Street on the east leg of the former Main Street/5<sup>th</sup> Street intersection. The former 5<sup>th</sup> Street between Center Street and Main Street was converted to a linear park in which vehicular traffic is prohibited.

### **10<sup>th</sup> Street**

Contiguous sidewalks ranging between 5 feet and 10 feet in width are currently provided on both sides of 10<sup>th</sup> Street between Kern Street (SR-33) and Main Street. Contiguous sidewalks are only provided along the west side of 10<sup>th</sup> Street between Main Street and Supply Row, and along 10<sup>th</sup> Street south of Supply Row, contiguous sidewalks are provided on both sides of the street. An uncontrolled mid-block pedestrian crossing with a high-visibility ladder crosswalk is provided across 10<sup>th</sup> Street at the location where the Taft Rails to Trails Multi-Use Path crosses 10<sup>th</sup> Street.

### **6<sup>th</sup> Street**

Contiguous sidewalks approximately 10 feet in width are currently provided on both sides of 6<sup>th</sup> Street between Kern Street (SR-33) and Main Street. Between Main Street and Supply Row, contiguous sidewalks approximately 5 feet in width are currently provided on both sides of 6<sup>th</sup> Street. Contiguous sidewalk is currently only provided along the west side of 6<sup>th</sup> Street between Supply Row and Front Street.

High-visibility ladder crosswalks are provided across 6<sup>th</sup> Street at the intersections of 6<sup>th</sup> Street/Kern Street (SR-33), 6<sup>th</sup> Street/North Street, 6<sup>th</sup> Street/Center Street, and at an uncontrolled mid-block pedestrian crossing at the location where the Taft Rails to Trails Multi-Use Path crosses 6<sup>th</sup> Street between Main Street and Supply Row.

### ***Existing Bicycle Network***

Most of the roadways within the Specific Plan area are currently lacking bicycle facilities except for Main Street between 2<sup>nd</sup> Street and SR-33, where a narrow shoulder with “bike lane” signage is provided in both directions of travel, but the shoulder lane is discontinuous in the eastbound direction. The lane widths of the existing bicycle lanes and associated signage along Main Street between 2<sup>nd</sup> Street and SR-33 are substandard, and therefore these existing bicycle lanes are not considered Class II bicycle lanes.

A Class I bike path (Taft Rails to Trails) is currently provided within the Specific Plan area between Main Street and Supply Row. The Taft Rails to Trails bike path is oriented in a general east-west direction and is approximately two (2) miles in length. The bike path is approximately 12 feet wide and is divided by a dashed line along the western and eastern sections, but is undivided through the middle section of the bike path. There are no current plans to extend the existing Taft Rails to Trails Class I bike path, although the City of Taft General Plan Circulation Element identifies future trail connections to the community of Fellows to the northwest and the community of Maricopa to the southeast.

### ***Existing Transit Network***

Taft Area Transit (TAT) and Kern Transit currently provide the following transit bus routes within the Specific Plan area and through the City of Taft:

- **TAT Taft-Maricopa Route:** The Taft-Maricopa Route extends between the Cities of Taft and Maricopa via Kern Street/SR-33. Within the City of Taft, the Taft-Maricopa Route extends north from Kern Street (SR-33) onto Wildcat Way (aligned with 7<sup>th</sup> Street) and provides transit access to Taft High School, Taft College, and the Albertsons shopping center. The route continues west along Ash Street and heads south on 10<sup>th</sup> Street back to Kern Street (SR-33), and proceeds southeast along Kern Street (SR-33) through the Specific Plan area toward Maricopa.

Service is currently provided Monday through Friday between 7:12am and 6:05pm, and runs three (3) times daily. During the morning peak hour, the Taft-Maricopa Route begins at the Maricopa Post Office at 7:12am, and ends at the bus stop along eastbound Kern Street (SR-33) at 2<sup>nd</sup> Street at 7:42am. The Taft-Maricopa Route runs again in the afternoon, beginning at Kern Street (SR-33) at 2<sup>nd</sup> Street at 1:34pm. The afternoon route circulates through the City of Taft and heads to Maricopa, then returns to circulate through Taft a second time and ends at the bus stop along eastbound Kern Street (SR-33) at 2<sup>nd</sup> Street at 2:25pm. A third route runs during the evening peak hour, beginning at Kern Street (SR-33) at 2<sup>nd</sup> Street at 5:14pm. The evening route circulates through the City of Taft then heads to Maricopa, and then returns to circulate through Taft a second time and ends at the bus stop along eastbound Kern Street (SR-33) at 2<sup>nd</sup> Street at 6:05pm.

- **Kern Transit Route 120 (Taft-Bakersfield):** Kern Transit Route 120 extends between Taft and Bakersfield via 6<sup>th</sup> Street, Harrison Street, Highway 119, Highway 43, and Highway 58. Within the City of Taft and the Specific Plan area, Route 120 heads south on 6<sup>th</sup> Street, heads west on Kern Street (SR-33), heads south on 8<sup>th</sup> Street, heads east on Main Street, heads south on 4<sup>th</sup> Street, heads west on Supply Row to the Taft Transit Center (550 Supply Row), continues west on Supply Row, and heads north on 6<sup>th</sup> Street back to Highway 119 and Bakersfield. Within the City of Taft, stops are provided at Taft College, the Heritage Park Senior Complex, (8<sup>th</sup> Street at North Street), and the Taft Transit Center.

Service is currently provided Monday through Friday between 6:10am and 9:02pm, and runs four (4) times daily. Service is also provided on Saturday between 7:50am and 6:57pm, and runs three (3) times daily from Taft to Bakersfield, and two (2) times daily from Bakersfield to Taft. During the weekday morning hours, westbound Route 120 departs the Downtown Bakersfield Transit Center at 6:10am, and arrives at the Taft Transit Center at 7:16am. Eastbound Route 120 during the morning hours departs Taft College at 7:40am and arrives at the Downtown Bakersfield Transit Center at 9:07am. Headways during the morning peak period are approximately every two (2) hours. Route 120 also operates afternoon service between Taft and Bakersfield from 12:47pm to 3:57pm. During the evening hours, westbound Route 120 departs the Downtown Bakersfield Transit Center at 5:47pm and arrives at the Taft Transit Center at 7:09pm. Eastbound Route 120 during the evening hours departs Taft College at 7:35pm and arrives at the Downtown Bakersfield Transit Center at 9:02pm.

The Taft Area Transit (TAT) Taft-Maricopa Route and Kern Transit Route 120 maps and schedules as described above are provided in **Appendix F**.

A total of four (4) transit bus stops for the Taft Area Transit (TAT) Taft-Maricopa Route are currently provided along Kern Street (SR-33) within the Specific Plan area, which are listed below:

- Eastbound Kern Street (SR-33) at 5<sup>th</sup> Street: No shelter or amenities provided.
- Eastbound Kern Street (SR-33) at 2<sup>nd</sup> Street: No shelter or amenities provided.
- Westbound Kern Street (SR-33) at 2<sup>nd</sup> Street: No shelter or amenities provided.
- Westbound Kern Street (SR-33) at 4<sup>th</sup> Street: Bench, shelter and trash receptacle provided.

The Taft Transit Center, located at 550 Supply Row within the Specific Plan area, serves Kern Transit Route 120 between Taft and Bakersfield. One transit bus stop is also provided for Kern Transit Route 120 within the Specific Plan area along southbound 8<sup>th</sup> Street at North Street next to the Heritage Park Senior Complex, where a bench and shelter is provided.

### ***Future Pedestrian Network***

The *Kern Region Active Transportation Plan* (Alta Planning + Design, March 2018) provides recommendations for future pedestrian facility improvements in the City of Taft in order of priority and are ranked as Tier 1 (highest priority), Tier 2 (medium priority) and Tier 3 (lowest priority). Below is a list of the recommended Tier 1 and Tier 2 pedestrian facility improvements from the *Kern Region Active Transportation Plan* that are within and adjacent to the Downtown Taft Specific Plan area, in order of priority:

#### **Tier 1 Projects (Highest Priority: 1-10 Years)**

- 10<sup>th</sup> Street from Ash Street to Main Street: Pedestrian corridor improvements (high-visibility crossings and traffic calming measures)
- 6<sup>th</sup> Street from Ash Street to Main Street: Pedestrian corridor improvements (high-visibility crossings and traffic calming measures)

#### **Tier 2 Projects (Medium Priority: 10-15 Years)**

- Kern Street (SR-33) from Cascade Place to Taft Highway: Pedestrian corridor improvements (some corridor improvements have already been completed)



All of the above-listed planned future pedestrian corridor improvements are anticipated to be completed prior to buildout of the Downtown Taft Specific Plan.

### ***Recommended Future Pedestrian Facility Improvements With Specific Plan***

In addition to the above-listed planned future pedestrian corridor improvements, the following pedestrian facility improvements are recommended to enhance pedestrian safety and access within the Downtown Taft Specific Plan:

- North Street from 8<sup>th</sup> Street to 1<sup>st</sup> Street: Improve existing sidewalks and provide high-visibility crosswalks at all intersections.
- Center Street from 2<sup>nd</sup> Street to Westside Highway (SR-33): Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- Main Street from 10<sup>th</sup> Street to 2<sup>nd</sup> Street: Close the existing sidewalk gaps and provide wide sidewalks (10+ feet in width) along both sides of the street. Provide high-visibility crosswalks at all intersections.
- Main Street from 2<sup>nd</sup> Street to Westside Highway (SR-33): Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- Supply Row from 10<sup>th</sup> Street to 2<sup>nd</sup> Street: Provide wide sidewalks (10+ feet in width) along both sides of the street, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- 6<sup>th</sup> Street from Main Street to Front Street: Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- 4<sup>th</sup> Street from Kern Street (SR-33) to Front Street: Improve existing sidewalks and provide high-visibility crosswalks at all intersections.
- 2<sup>nd</sup> Street/Olive Avenue from Kern Street (SR-33) to Front Street: Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- Front Street from 10<sup>th</sup> Street to Oak Street: Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.

### ***Future Bicycle Network***

The *Kern Region Active Transportation Plan* (Alta Planning + Design, March 2018) provides recommendations for future bicycle facility improvements in the City of Taft in order of priority and are ranked as Tier 1 (highest priority), Tier 2 (medium priority) and Tier 3 (lowest priority). Below is a list of the recommended Tier 1 and Tier 2 bicycle facility improvements from the *Kern Region Active Transportation Plan* that are within and adjacent to the Downtown Taft Specific Plan area, in order of priority:

#### **Tier 1 Projects (Highest Priority: 1-10 Years)**

- 6<sup>th</sup> Street from Ash Street to Oak Street: Class II Buffered Bike Lanes
- 10<sup>th</sup> Street from Ash Street to Center Street: Class IV Cycle Track
- Kern Street (SR-33) from Cascade Place to 1<sup>st</sup> Street: Class II Buffered Bike Lanes
- 10<sup>th</sup> Street from Center Street to F Street: Class II Bike Lanes
- 2<sup>nd</sup> Street from Calvin Street to Supply Row: Class III Bike Boulevard

### **Tier 2 Projects (Medium Priority: 10-15 Years)**

- 1<sup>st</sup> Street from Calvin Street to Kern Street: Class II Buffered Bike Lanes
- Westside Highway (SR-33) from 1<sup>st</sup> Street to SR-119: Class II Bike Lanes

All of the above-listed planned future bicycle facility improvements are anticipated to be completed prior to buildout of the Downtown Taft Specific Plan.

### ***Recommended Future Bicycle Facility Improvements With Specific Plan***

In addition to the above-listed planned future bicycle facility projects, the following bicycle facility improvements are recommended to enhance bicycle safety and improve access to the future land uses within the Downtown Taft Specific Plan:

- 2<sup>nd</sup> Street from Kern Street (SR-33) to Supply Row: Provide Class II bike lanes (upgrade from planned Class III Bike Boulevard in *Kern Region Active Transportation Plan*)
- 1<sup>st</sup> Street from Kern Street (SR-33) to Center Street: Provide Class II bike lanes
- Center Street from 2<sup>nd</sup> Street to West Side Highway (SR-33): Provide Class II bike lanes
- Main Street from 2<sup>nd</sup> Street to West Side Highway (SR-33): Provide Class II bike lanes
- North Street from 8<sup>th</sup> Street to 1<sup>st</sup> Street: Provide Class III Bike Boulevard
- 8<sup>th</sup> Street from Kern Street (SR-33) to Main Street: Provide Class III Bike Boulevard

### ***Future Transit Network***

Specific planned future transit network or facility improvements within or adjacent to the Downtown Taft Specific Plan area are not identified, but below are recommended future transit network and facility improvements that are consistent with transit policies in the City of Taft *General Plan Circulation Element* (June 2010, Amended April 2017).

### ***Recommended Future Transit Network and Facility Improvements With Specific Plan***

- Coordinate with Taft Area Transit (TAT) to provide benches, shelters and trash receptacles at the existing bus stops along Kern Street (SR-33).
- Coordinate with Taft Area Transit (TAT) to expand the Taft-Maricopa Route to include 10<sup>th</sup> Street between Kern Street (SR-33) and Main Street, and Main Street between 10<sup>th</sup> Street and West Side Highway (SR-33), and to install sheltered bus stops along the expanded route.
- Coordinate with Taft Area Transit (TAT) to provide all-day service and to expand weekday hours of operation to between 6:00am and 7:00pm and to provide limited weekend service for the Taft-Maricopa Route.
- Coordinate with Kern Transit to expand Route 120 to include Kern Street (SR-33) between 6<sup>th</sup> Street and 2<sup>nd</sup> Street, 2<sup>nd</sup> Street between Kern Street (SR-33) and Main Street, and Main Street between 4<sup>th</sup> Street and 2<sup>nd</sup> Street.
- Coordinate with Kern Transit to provide additional sheltered bus stops along both the existing Route 120 and the recommended expanded Route 120 within the Downtown Taft Specific Plan area.
- Coordinate with Kern Transit to expand the Route 120 weekday and Saturday hours of operation with the first eastbound bus leaving Taft at 6:00am, and with the last westbound bus arriving in Taft at 9:00pm.

## CONCLUSIONS AND RECOMMENDATIONS

This Local Transportation Analysis evaluated the potential level of service (LOS) deficiencies and transportation improvements that may need to be considered in association with the traffic generated by the proposed Downtown Taft Specific Plan project. Below is a summary of the analysis findings and recommended transportation improvements:

### *Intersection Operations Analysis Findings*

The results of the Existing Conditions intersection analysis showed that all study intersections are currently operating at LOS C or better during the AM and PM peak hours.

Under Horizon Year 2042 conditions with the buildout of the Downtown Taft Specific Plan, the intersection analysis results showed that the following intersections are forecast to operate at a deficient LOS E or F during the AM and PM peak hours:

- Kern Street (SR-33) / 6th Street (AM: LOS F; PM: LOS E)
- Kern Street (SR-33) / 4th Street (AM/PM: LOS F)
- Kern Street (SR-33) / E. Kern Street / 1st Street (AM: LOS E; PM: LOS F)

### *Roadway Segment Analysis Findings*

The results of the Existing Conditions roadway segment operations analysis showed that all study roadway segments currently operate at LOS B or better.

Under Horizon Year 2042 conditions with the buildout of the Downtown Taft Specific Plan, the roadway segment analysis results showed that all study roadway segments are forecast to operate at LOS D or better.

### *Recommended Transportation Improvements*

The following improvements are recommended to improve operations at the three deficient study intersections to acceptable levels of service:

#### Kern Street (SR-33) / 6th Street

- Install traffic signal
- Restripe eastbound and westbound approaches to provide one left-turn lane, one through lane, and one shared through/right-turn lane
- Restripe northbound and southbound approaches to provide one left-turn lane, one through lane, and one right-turn lane
- Coordinate with Caltrans to determine the signal interconnect requirements between the existing signal at 10<sup>th</sup> Street and the proposed signals at 6<sup>th</sup> Street and 4<sup>th</sup> Street

Kern Street (SR-33) / 4th Street

- Install traffic signal
- Restripe eastbound and westbound approaches to provide one left-turn lane, one through lane, and one shared through/right-turn lane
- Restripe northbound and southbound approaches to provide one left-turn lane and one shared through/right-turn lane
- Coordinate with Caltrans to determine the signal interconnect requirements between the existing signal at 10<sup>th</sup> Street and the proposed signals at 6<sup>th</sup> Street and 4<sup>th</sup> Street

Kern Street (SR-33) / E. Kern Street / 1st Street

- Install stop signs on the eastbound (Kern Street/SR-33) and northwestbound (SR-33) approaches to convert intersection to all-way stop control.

The recommended transportation improvements as described above are also illustrated graphically in **Exhibit 8**.

The Peak Hour Warrant (Warrant 3) from the *California Manual on Uniform Traffic Devices* (CA-MUTCD, 2014 Edition, Revision 6, March 30, 2021) was conducted at the Kern Street (SR-33) / 6th Street and Kern Street (SR-33) / 4th Street intersections to determine if installation of a traffic signal would be justified under Horizon Year 2042 conditions with the buildout of the Downtown Taft Specific Plan as recommended.

The findings showed that the CA MUTCD Peak Hour Warrant (Warrant 3) is **Satisfied** at both the Kern Street (SR-33) / 6th Street and Kern Street (SR-33) / 4th Street intersections during the AM and PM peak hours. The CA MUTCD Peak Hour Warrant (Warrant 3) worksheets are provided in **Appendix G**.

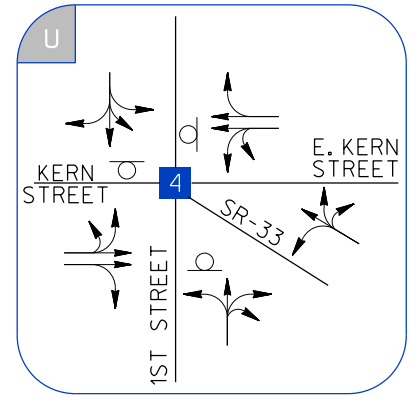
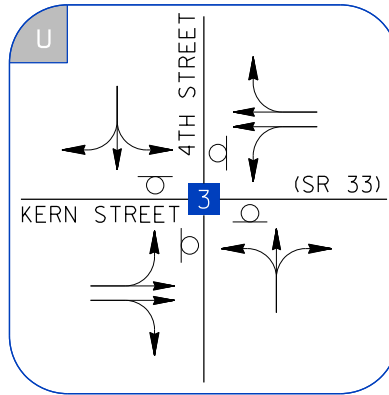
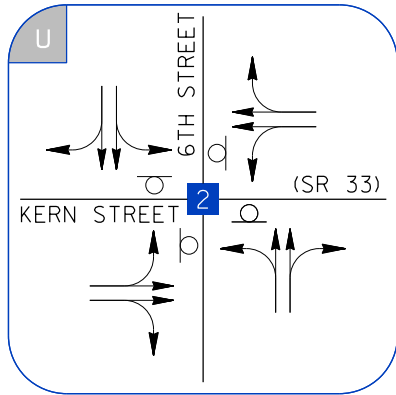
The recommended installation of traffic signals at the Kern Street (SR-33) / 6th Street and Kern Street (SR-33) / 4th Street intersections would be subject to Caltrans approval as they would be operated and maintained by Caltrans. It is anticipated that the two proposed signals at the Kern Street (SR-33) / 6th Street and Kern Street (SR-33) / 4th Street intersections would need to be coordinated due to the distance between the two intersections (approximately 925 feet). Caltrans may also require the two intersections to be interconnected to the existing signal at the Kern Street (SR-33) / 10th Street intersection, which is located approximately 1,750 feet (1/3 mile) west of 6<sup>th</sup> Street.

The guidance for application of multi-way stop control in Section 2B.07 of the CA MUTCD (2014 Edition, Revision 6, March 30, 2021) was reviewed to determine if installation of all-way stop control at the Kern Street (SR-33) / E. Kern Street / 1st Street intersection would be justified based on the future Horizon Year 2042 traffic volumes with the buildout of the Downtown Taft Specific Plan. The findings show that the Horizon Year 2042 approach volumes at the Kern Street (SR-33) / E. Kern Street / 1st Street intersection during the peak hours exceed the CA MUTCD multi-stop control criteria based on minimum volumes and delay. The CA MUTCD multi-way stop evaluation worksheet is also provided in **Appendix G**.

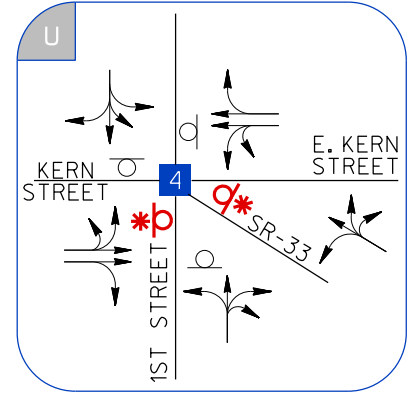
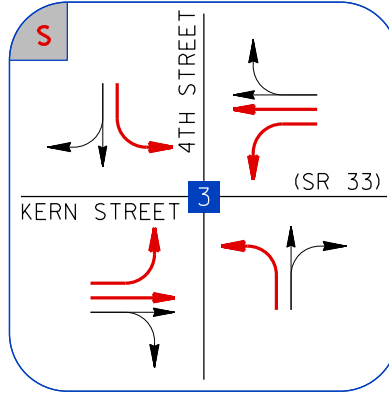
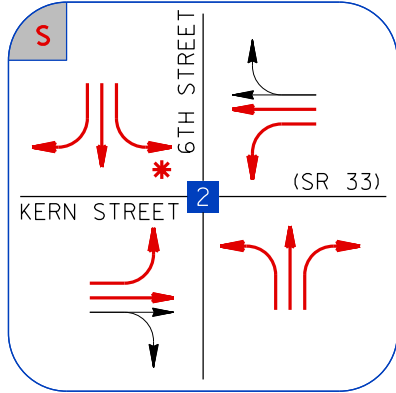
**Table 9** shows the operational analysis results for the three deficient study intersections with the recommended improvements as previously described. **Appendix H** contains the Horizon Year 2042 With Project intersection analysis worksheets with the recommended improvements.

As shown in Table 9, the recommended improvements are anticipated to improve operations to LOS D or better during both the AM and PM peak hours.

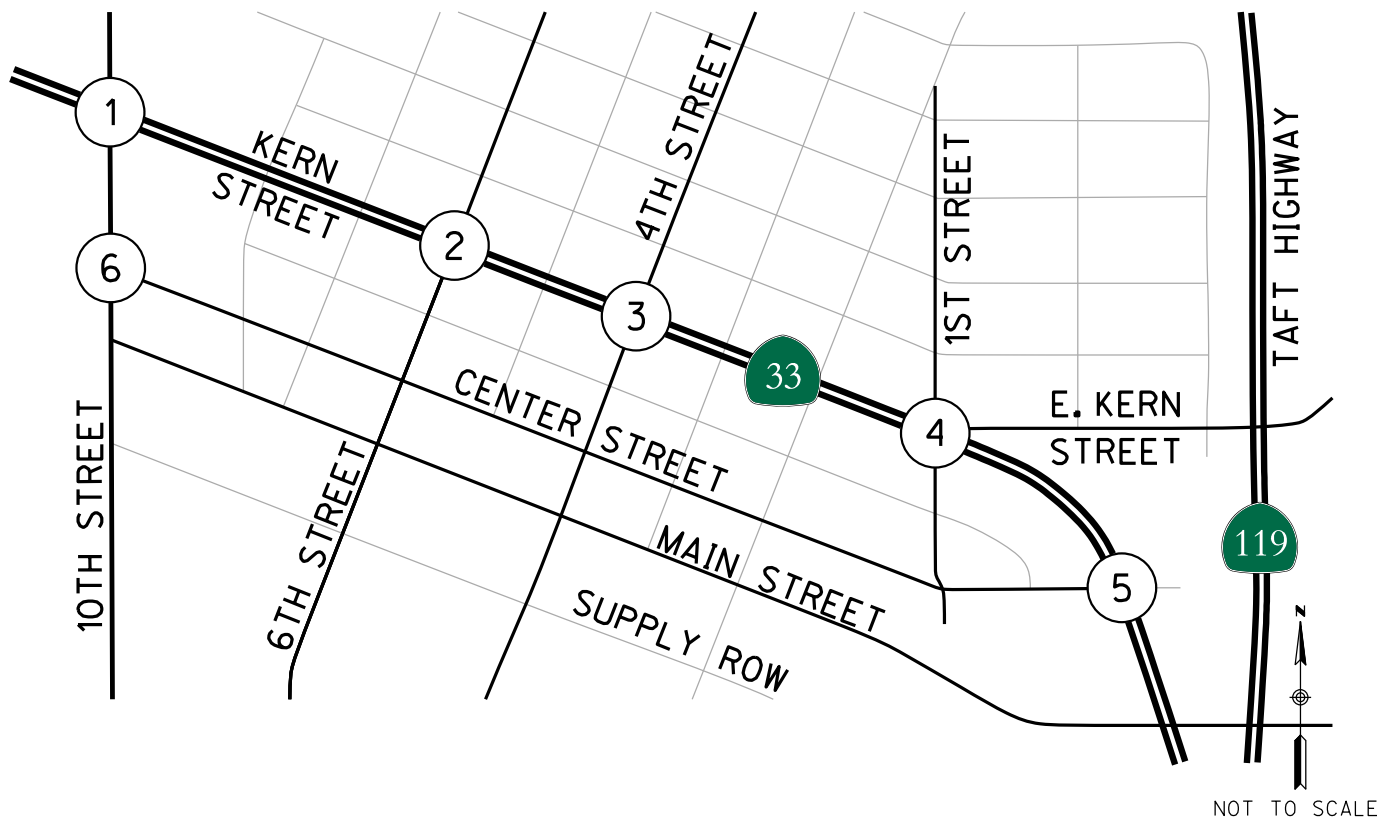
# EXISTING CONDITIONS



# RECOMMENDED IMPROVEMENTS



\* = PROPOSED STOP SIGN



**TABLE 9**  
**HORIZON YEAR 2042 WITH PROJECT INTERSECTION OPERATIONS**  
**WITH RECOMMENDED IMPROVEMENTS**

| INTERSECTION |  | HORIZON YR (2042) WITH PROJECT               |                    |                   |                   |                    |                |      |   |
|--------------|--|--|--------------------|-------------------|-------------------|--------------------|----------------|------|---|
|              |  | WITHOUT IMPROVEMENTS                         |                    |                   | WITH IMPROVEMENTS |                    |                |      |   |
|              |  | CONTROL                                      | DELAY <sup>1</sup> | LOS               | CONTROL           | DELAY <sup>1</sup> | LOS            |      |   |
| 2            | Kern Street (SR-33) / 6 <sup>th</sup> Street                 | AM peak                                      | (AWSC)<br>OVERALL  | 117.7             | F                 | (S)<br>OVERALL     | 34.2           | C    |   |
|              |  | PM peak                                      | (AWSC)<br>OVERALL  | 42.9              | E                 | (S)<br>OVERALL     | 30.2           | C    |   |
|              | 3  | Kern Street (SR-33) / 4 <sup>th</sup> Street | AM peak            | (AWSC)<br>OVERALL | 118.8             | F                  | (S)<br>OVERALL | 35.8 | D |
|              |  |  | PM peak            | (AWSC)<br>OVERALL | 55.4              | F                  | (S)<br>OVERALL | 31.1 | C |
| 4            | Kern Street (SR-33) / E. Kern Street/ 1 <sup>st</sup> Street | AM peak                                      | (TWSC)<br>NBT      | 47.6              | E                 | (AWSC)<br>OVERALL  | 12.3           | B    |   |
|              |  | PM peak                                      | (TWSC)<br>NBT      | 67.2              | F                 | (AWSC)<br>OVERALL  | 13.9           | B    |   |

Footnotes: S = Signalized; AWSC = All-Way-Stop Controlled; TWSC = Two-Way-Stop Controlled

<sup>1</sup>Delay is measured in seconds per vehicle.

### ***Active Transportation and Transit Assessment Recommendations***

Based on the findings of the assessment of existing and planned future pedestrian, bicycle and transit facilities, the following pedestrian, bicycle and transit network and facility improvements are recommended to be implemented within the Downtown Taft Specific Plan area:

#### **Recommended Pedestrian Facility Improvements**

- North Street from 8<sup>th</sup> Street to 1<sup>st</sup> Street: Improve existing sidewalks and provide high-visibility crosswalks at all intersections.
- Center Street from 2<sup>nd</sup> Street to Westside Highway (SR-33): Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- Main Street from 10<sup>th</sup> Street to 2<sup>nd</sup> Street: Close the existing sidewalk gaps and provide wide sidewalks (10+ feet in width) along both sides of the street. Provide high-visibility crosswalks at all intersections.
- Main Street from 2<sup>nd</sup> Street to Westside Highway (SR-33): Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- Supply Row from 10<sup>th</sup> Street to 2<sup>nd</sup> Street: Provide wide sidewalks (10+ feet in width) along both sides of the street, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.



- 6<sup>th</sup> Street from Main Street to Front Street: Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- 4<sup>th</sup> Street from Kern Street (SR-33) to Front Street: Improve existing sidewalks and provide high-visibility crosswalks at all intersections.
- 2<sup>nd</sup> Street/Olive Avenue from Kern Street (SR-33) to Front Street: Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.
- Front Street from 10<sup>th</sup> Street to Oak Street: Improve existing sidewalks, close the existing sidewalk gaps, and provide high-visibility crosswalks at all intersections.

#### Recommended Bicycle Facility Improvements

- 2<sup>nd</sup> Street from Kern Street (SR-33) to Supply Row: Provide Class II bike lanes (upgrade from planned Class III Bike Boulevard in *Kern Region Active Transportation Plan*)
- 1<sup>st</sup> Street from Kern Street (SR-33) to Center Street: Provide Class II bike lanes
- Center Street from 2<sup>nd</sup> Street to West Side Highway (SR-33): Provide Class II bike lanes
- Main Street from 2<sup>nd</sup> Street to West Side Highway (SR-33): Provide Class II bike lanes
- North Street from 8<sup>th</sup> Street to 1<sup>st</sup> Street: Provide Class III Bike Boulevard
- 8<sup>th</sup> Street from Kern Street (SR-33) to Main Street: Provide Class III Bike Boulevard

#### Recommended Future Transit Network and Facility Improvements

- Coordinate with Taft Area Transit (TAT) to provide benches, shelters and trash receptacles at the existing bus stops along Kern Street (SR-33).
- Coordinate with Taft Area Transit (TAT) to expand the Taft-Maricopa Route to include 10<sup>th</sup> Street between Kern Street (SR-33) and Main Street, and Main Street between 10<sup>th</sup> Street and West Side Highway (SR-33), and to install sheltered bus stops along the expanded route.
- Coordinate with Taft Area Transit (TAT) to provide all-day service and to expand weekday hours of operation to between 6:00am and 7:00pm and to provide limited weekend service for the Taft-Maricopa Route.
- Coordinate with Kern Transit to expand Route 120 to include Kern Street (SR-33) between 6<sup>th</sup> Street and 2<sup>nd</sup> Street, 2<sup>nd</sup> Street between Kern Street (SR-33) and Main Street, and Main Street between 4<sup>th</sup> Street and 2<sup>nd</sup> Street.
- Coordinate with Kern Transit to provide additional sheltered bus stops along both the existing Route 120 and the recommended expanded Route 120 within the Downtown Taft Specific Plan area.
- Coordinate with Kern Transit to expand the Route 120 weekday and Saturday hours of operation with the first eastbound bus leaving Taft at 6:00am, and with the last westbound bus arriving in Taft at 9:00pm.

## REFERENCES

1. Kern County, Standards for Traffic Engineering, February 2010.
2. City of Taft, General Plan Circulation Element, June 2010, Amended April 2017.
3. City of Taft, General Plan Draft Environmental Impact Report, July 2009.
4. Kern Council of Governments, 2018 Regional Transportation Plan, August 2018.
5. State of California Office of Planning and Research (OPR), Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018.
6. Institute of Transportation Engineers (ITE), Trip Generation Manual, 11<sup>th</sup> Edition, September 2021.
7. Transportation Research Board, Highway Capacity Manual 6<sup>th</sup> Edition, Washington, D.C., 2016.
8. Trafficware LLC, Synchro, Version 11, Sugar Land, Texas, 2021.
9. Alta Planning + Design, Kern Region Active Transportation Plan, March 2018.
10. California Department of Transportation, California Manual on Uniform Traffic Control Devices (MUTCD), 2014 Edition, Revision 6, March 2021.

## **APPENDIX A**

### **VEHICLE, PEDESTRIAN AND BICYCLE COUNTS**



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

# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
5620 Friars Rd  
San Diego, CA 92110

LOCATION Kern St @ 10th St

LATITUDE 35.1449

COUNTY Kern

LONGITUDE -119.4652

COLLECTION DATE Tuesday, March 15, 2022

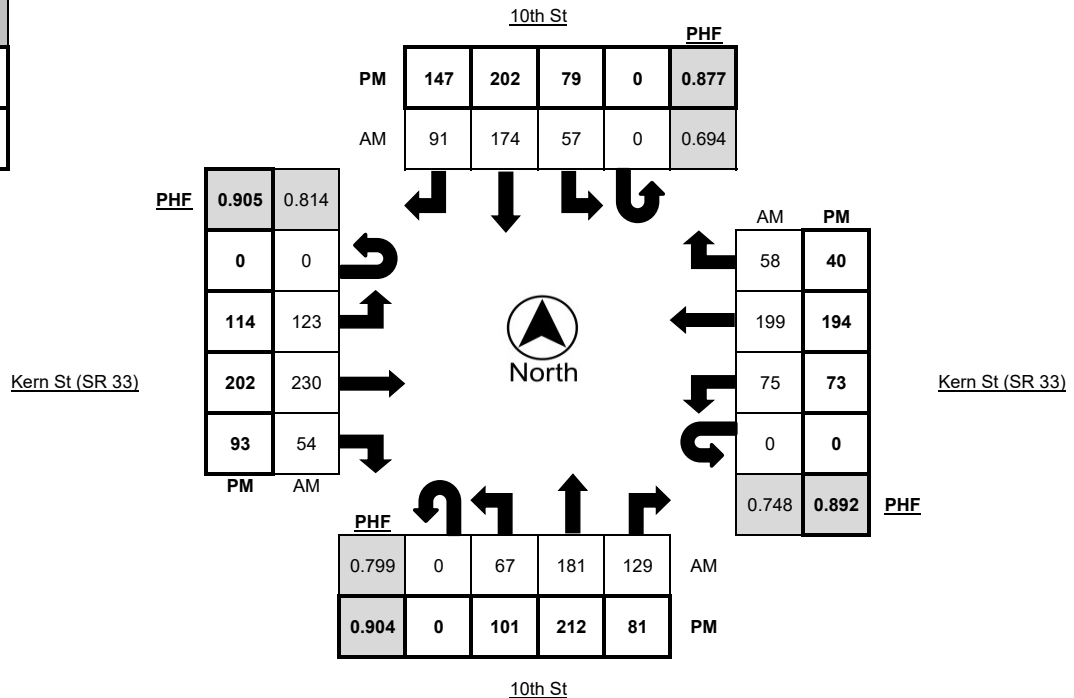
WEATHER Clear

|                   | Northbound |            |            |            |           | Southbound |           |            |            |           | Eastbound |            |            |           |           | Westbound |            |            |           |           |
|-------------------|------------|------------|------------|------------|-----------|------------|-----------|------------|------------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Time              | U-Turn     | Left       | Thru       | Right      | Trucks    | U-Turn     | Left      | Thru       | Right      | Trucks    | U-Turn    | Left       | Thru       | Right     | Trucks    | U-Turn    | Left       | Thru       | Right     | Trucks    |
| 7:00 AM - 7:15 AM | 0          | 13         | 33         | 15         | 2         | 0          | 18        | 17         | 22         | 3         | 0         | 18         | 42         | 17        | 6         | 0         | 8          | 26         | 7         | 3         |
| 7:15 AM - 7:30 AM | 0          | 10         | 46         | 51         | 3         | 0          | 13        | 30         | 21         | 2         | 0         | 33         | 62         | 12        | 5         | 0         | 13         | 42         | 13        | 0         |
| 7:30 AM - 7:45 AM | 0          | 22         | 57         | 39         | 7         | 0          | 21        | 62         | 33         | 3         | 0         | 42         | 66         | 17        | 5         | 0         | 31         | 60         | 20        | 3         |
| 7:45 AM - 8:00 AM | 0          | 16         | 45         | 30         | 1         | 0          | 13        | 50         | 24         | 0         | 0         | 28         | 53         | 14        | 2         | 0         | 22         | 57         | 15        | 1         |
| 8:00 AM - 8:15 AM | 0          | 19         | 33         | 9          | 2         | 0          | 10        | 32         | 13         | 1         | 0         | 20         | 49         | 11        | 7         | 0         | 9          | 40         | 10        | 6         |
| 8:15 AM - 8:30 AM | 0          | 15         | 35         | 14         | 4         | 0          | 9         | 31         | 23         | 4         | 0         | 16         | 36         | 6         | 3         | 0         | 7          | 24         | 11        | 5         |
| 8:30 AM - 8:45 AM | 0          | 11         | 26         | 12         | 2         | 0          | 3         | 22         | 22         | 3         | 0         | 21         | 33         | 13        | 5         | 0         | 8          | 30         | 4         | 2         |
| 8:45 AM - 9:00 AM | 0          | 13         | 22         | 13         | 1         | 0          | 9         | 21         | 20         | 0         | 0         | 20         | 42         | 8         | 3         | 0         | 8          | 36         | 10        | 1         |
| <b>TOTAL</b>      | <b>0</b>   | <b>119</b> | <b>297</b> | <b>183</b> | <b>22</b> | <b>0</b>   | <b>96</b> | <b>265</b> | <b>178</b> | <b>16</b> | <b>0</b>  | <b>198</b> | <b>383</b> | <b>98</b> | <b>36</b> | <b>0</b>  | <b>106</b> | <b>315</b> | <b>90</b> | <b>21</b> |

|                   | Northbound |            |            |            |          | Southbound |            |            |            |          | Eastbound |            |            |            |           | Westbound |            |            |           |           |
|-------------------|------------|------------|------------|------------|----------|------------|------------|------------|------------|----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|-----------|-----------|
| Time              | U-Turn     | Left       | Thru       | Right      | Trucks   | U-Turn     | Left       | Thru       | Right      | Trucks   | U-Turn    | Left       | Thru       | Right      | Trucks    | U-Turn    | Left       | Thru       | Right     | Trucks    |
| 4:00 PM - 4:15 PM | 0          | 22         | 41         | 25         | 1        | 0          | 16         | 49         | 30         | 1        | 0         | 33         | 47         | 24         | 3         | 0         | 20         | 55         | 5         | 3         |
| 4:15 PM - 4:30 PM | 0          | 25         | 47         | 20         | 2        | 0          | 14         | 50         | 38         | 0        | 0         | 31         | 39         | 19         | 5         | 0         | 20         | 46         | 11        | 1         |
| 4:30 PM - 4:45 PM | 0          | 20         | 39         | 18         | 0        | 0          | 19         | 48         | 31         | 1        | 0         | 36         | 50         | 31         | 3         | 0         | 20         | 55         | 10        | 0         |
| 4:45 PM - 5:00 PM | 0          | 33         | 47         | 26         | 1        | 0          | 18         | 40         | 33         | 1        | 0         | 34         | 56         | 23         | 3         | 0         | 16         | 38         | 9         | 3         |
| 5:00 PM - 5:15 PM | 0          | 22         | 65         | 22         | 1        | 0          | 17         | 62         | 43         | 3        | 0         | 25         | 50         | 21         | 3         | 0         | 24         | 53         | 9         | 0         |
| 5:15 PM - 5:30 PM | 0          | 25         | 45         | 15         | 2        | 0          | 20         | 52         | 31         | 1        | 0         | 29         | 48         | 25         | 2         | 0         | 17         | 47         | 13        | 0         |
| 5:30 PM - 5:45 PM | 0          | 21         | 55         | 18         | 0        | 0          | 24         | 48         | 40         | 0        | 0         | 26         | 48         | 24         | 3         | 0         | 16         | 56         | 9         | 2         |
| 5:45 PM - 6:00 PM | 0          | 25         | 36         | 27         | 1        | 1          | 15         | 47         | 41         | 0        | 0         | 29         | 50         | 19         | 0         | 0         | 22         | 43         | 15        | 1         |
| <b>TOTAL</b>      | <b>0</b>   | <b>193</b> | <b>375</b> | <b>171</b> | <b>8</b> | <b>1</b>   | <b>143</b> | <b>396</b> | <b>287</b> | <b>7</b> | <b>0</b>  | <b>243</b> | <b>388</b> | <b>186</b> | <b>22</b> | <b>0</b>  | <b>155</b> | <b>393</b> | <b>81</b> | <b>10</b> |

| PEAK HOUR         | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
|                   | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 7:15 AM - 8:15 AM | 0          | 67   | 181  | 129   | 13     | 0          | 57   | 174  | 91    | 6      | 0         | 123  | 230  | 54    | 19     | 0         | 75   | 199  | 58    | 10     |
| 4:45 PM - 5:45 PM | 0          | 101  | 212  | 81    | 4      | 0          | 79   | 202  | 147   | 5      | 0         | 114  | 202  | 93    | 11     | 0         | 73   | 194  | 40    | 5      |

|    | PHF   | Trucks |
|----|-------|--------|
| AM | 0.765 | 3.3%   |
| PM | 0.931 | 1.6%   |





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

# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**LOCATION** Kern St @ 10th St

**LATITUDE** 35.1449

**COUNTY** Kern

**LONGITUDE** -119.4652

**COLLECTION DATE** Tuesday, March 15, 2022

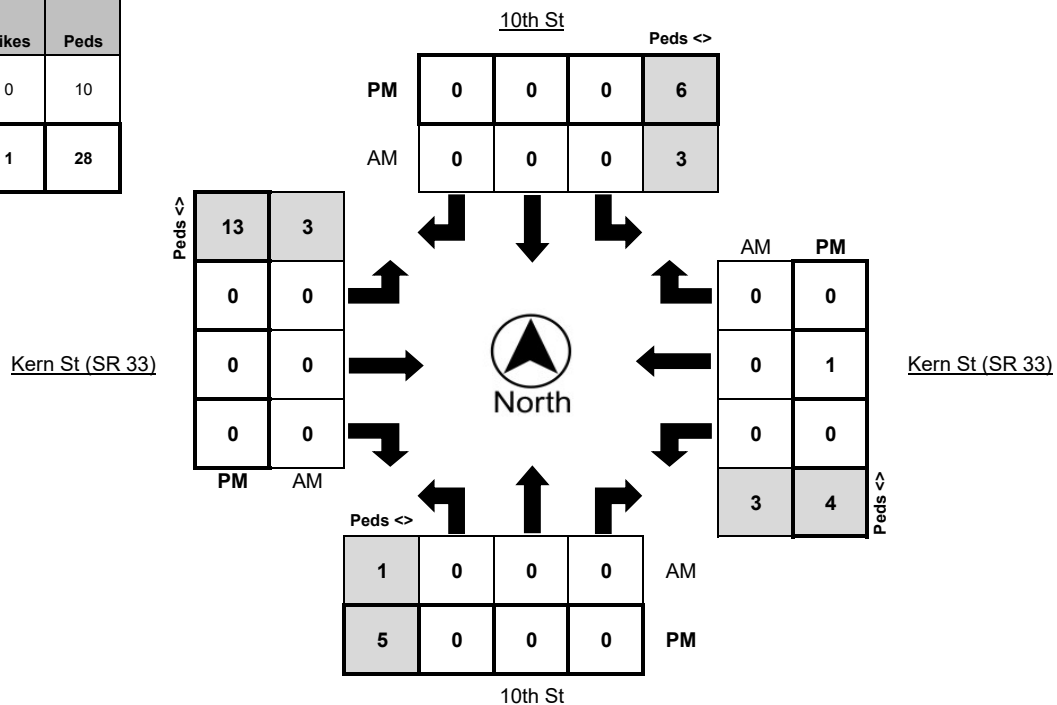
**WEATHER** Clear

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

| Time              | Northbound Bikes |          |          | N.Leg Peds | Southbound Bikes |          |          | S.Leg Peds | Eastbound Bikes |          |          | E.Leg Peds | Westbound Bikes |          |          | W.Leg Peds |
|-------------------|------------------|----------|----------|------------|------------------|----------|----------|------------|-----------------|----------|----------|------------|-----------------|----------|----------|------------|
|                   | Left             | Thru     | Right    |            | Left             | Thru     | Right    |            | Left            | Thru     | Right    |            | Left            | Thru     | Right    |            |
| 4:00 PM - 4:15 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 2          | 0               | 0        | 0        | 1          |
| 4:15 PM - 4:30 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 1          |
| 4:30 PM - 4:45 PM | 0                | 0        | 0        | 2          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 9          | 0               | 0        | 0        | 1          |
| 4:45 PM - 5:00 PM | 0                | 0        | 0        | 3          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 4          |
| 5:00 PM - 5:15 PM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 3          | 0               | 0        | 0        | 2          | 0               | 1        | 0        | 4          |
| 5:15 PM - 5:30 PM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 2          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 4          |
| 5:30 PM - 5:45 PM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 1          |
| 5:45 PM - 6:00 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 2          |
| <b>TOTAL</b>      | <b>0</b>         | <b>0</b> | <b>0</b> | <b>8</b>   | <b>0</b>         | <b>0</b> | <b>0</b> | <b>6</b>   | <b>0</b>        | <b>0</b> | <b>0</b> | <b>15</b>  | <b>0</b>        | <b>1</b> | <b>0</b> | <b>18</b>  |

| PEAK HOUR         | Northbound Bikes |      |       | N.Leg Peds | Southbound Bikes |      |       | S.Leg Peds | Eastbound Bikes |      |       | E.Leg Peds | Westbound Bikes |      |       | W.Leg Peds |
|-------------------|------------------|------|-------|------------|------------------|------|-------|------------|-----------------|------|-------|------------|-----------------|------|-------|------------|
|                   | Left             | Thru | Right |            | Left             | Thru | Right |            | Left            | Thru | Right |            | Left            | Thru | Right |            |
| 7:15 AM - 8:15 AM | 0                | 0    | 0     | 3          | 0                | 0    | 0     | 1          | 0               | 0    | 0     | 3          | 0               | 0    | 0     | 3          |
| 4:45 PM - 5:45 PM | 0                | 0    | 0     | 6          | 0                | 0    | 0     | 5          | 0               | 0    | 0     | 4          | 0               | 1    | 0     | 13         |

|               | Bikes | Peds |
|---------------|-------|------|
| AM Peak Total | 0     | 10   |
| PM Peak Total | 1     | 28   |



# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
5620 Friars Rd  
San Diego, CA 92110

**LOCATION** Kern St @ 6th St

LATITUDE 35.1431

COUNTY Kern

**LONGITUDE** -119.4596

**COLLECTION DATE** Tuesday, March 15, 2022

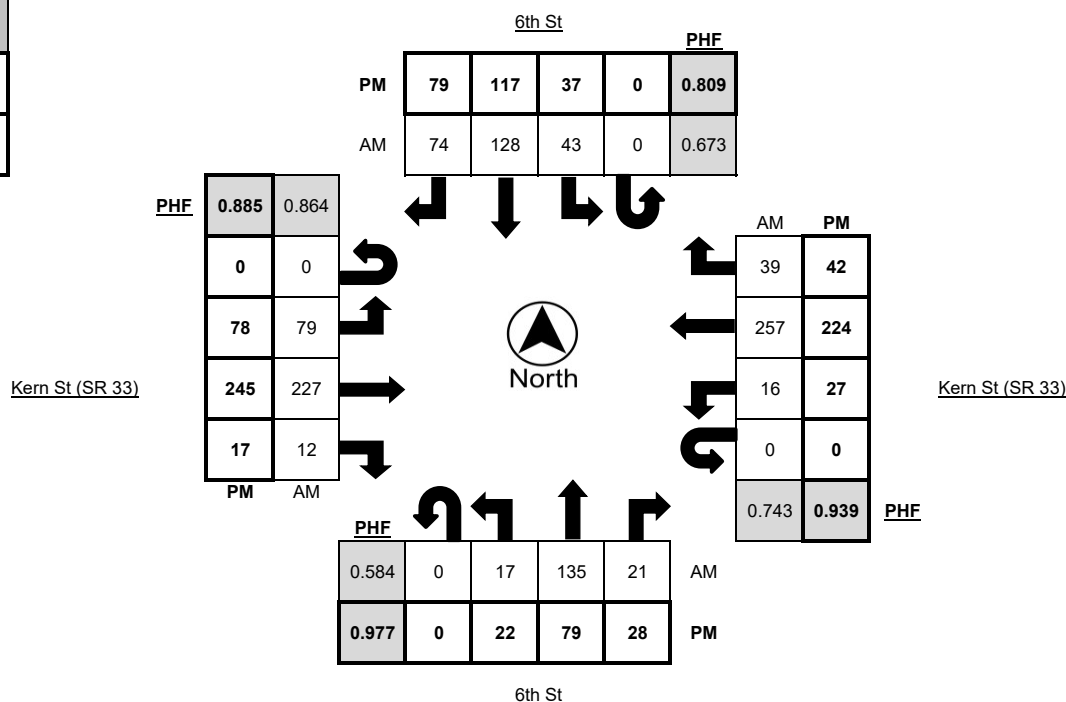
**WEATHER** Clear

|                   | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
| Time              | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 7:00 AM - 7:15 AM | 0          | 1    | 18   | 1     | 0      | 0          | 3    | 8    | 6     | 0      | 0         | 9    | 45   | 0     | 2      | 0         | 1    | 29   | 5     | 2      |
| 7:15 AM - 7:30 AM | 0          | 5    | 36   | 4     | 0      | 0          | 11   | 18   | 17    | 0      | 0         | 18   | 52   | 1     | 3      | 0         | 4    | 57   | 12    | 1      |
| 7:30 AM - 7:45 AM | 0          | 6    | 59   | 9     | 0      | 0          | 9    | 55   | 27    | 0      | 0         | 23   | 60   | 6     | 4      | 0         | 3    | 87   | 15    | 5      |
| 7:45 AM - 8:00 AM | 0          | 2    | 27   | 4     | 2      | 0          | 12   | 34   | 18    | 2      | 0         | 23   | 68   | 1     | 2      | 0         | 7    | 69   | 9     | 1      |
| 8:00 AM - 8:15 AM | 0          | 4    | 13   | 4     | 1      | 0          | 11   | 21   | 12    | 1      | 0         | 15   | 47   | 4     | 6      | 0         | 2    | 44   | 3     | 5      |
| 8:15 AM - 8:30 AM | 0          | 4    | 9    | 3     | 0      | 0          | 2    | 14   | 4     | 0      | 0         | 7    | 50   | 4     | 3      | 0         | 2    | 40   | 3     | 7      |
| 8:30 AM - 8:45 AM | 0          | 3    | 9    | 3     | 0      | 0          | 7    | 9    | 9     | 0      | 0         | 7    | 35   | 1     | 3      | 0         | 2    | 31   | 7     | 0      |
| 8:45 AM - 9:00 AM | 0          | 5    | 8    | 2     | 0      | 0          | 11   | 11   | 10    | 0      | 0         | 11   | 40   | 3     | 2      | 0         | 4    | 41   | 5     | 1      |
| TOTAL             | 0          | 30   | 179  | 30    | 3      | 0          | 66   | 170  | 103   | 3      | 0         | 113  | 397  | 20    | 25     | 0         | 25   | 398  | 59    | 22     |

|                   | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
| Time              | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 4:00 PM - 4:15 PM | 0          | 8    | 19   | 5     | 0      | 0          | 13   | 35   | 14    | 1      | 0         | 16   | 72   | 5     | 4      | 0         | 11   | 66   | 14    | 4      |
| 4:15 PM - 4:30 PM | 0          | 5    | 8    | 7     | 1      | 0          | 19   | 25   | 16    | 0      | 0         | 11   | 58   | 1     | 1      | 0         | 4    | 55   | 11    | 1      |
| 4:30 PM - 4:45 PM | 0          | 6    | 20   | 11    | 1      | 0          | 13   | 20   | 19    | 0      | 0         | 22   | 57   | 2     | 1      | 0         | 1    | 54   | 10    | 1      |
| 4:45 PM - 5:00 PM | 0          | 8    | 15   | 4     | 1      | 0          | 7    | 21   | 17    | 0      | 0         | 21   | 69   | 6     | 3      | 0         | 4    | 56   | 5     | 0      |
| 5:00 PM - 5:15 PM | 0          | 9    | 17   | 5     | 0      | 0          | 8    | 16   | 23    | 0      | 0         | 26   | 58   | 6     | 1      | 0         | 5    | 53   | 13    | 0      |
| 5:15 PM - 5:30 PM | 0          | 5    | 22   | 5     | 2      | 0          | 12   | 26   | 22    | 0      | 0         | 17   | 54   | 2     | 3      | 0         | 9    | 57   | 9     | 1      |
| 5:30 PM - 5:45 PM | 0          | 5    | 18   | 10    | 1      | 0          | 11   | 44   | 17    | 1      | 0         | 21   | 72   | 3     | 2      | 0         | 5    | 61   | 12    | 2      |
| 5:45 PM - 6:00 PM | 0          | 3    | 22   | 8     | 0      | 0          | 6    | 31   | 17    | 0      | 0         | 14   | 61   | 6     | 1      | 0         | 8    | 53   | 8     | 1      |
| TOTAL             | 0          | 49   | 141  | 55    | 6      | 0          | 89   | 218  | 145   | 2      | 0         | 148  | 501  | 31    | 16     | 0         | 47   | 455  | 82    | 10     |

|                   | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
| PEAK HOUR         | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 7:15 AM - 8:15 AM | 0          | 17   | 135  | 21    | 3      | 0          | 43   | 128  | 74    | 3      | 0         | 79   | 227  | 12    | 15     | 0         | 16   | 257  | 39    | 12     |
| 5:00 PM - 6:00 PM | 0          | 22   | 79   | 28    | 3      | 0          | 37   | 117  | 79    | 1      | 0         | 78   | 245  | 17    | 7      | 0         | 27   | 224  | 42    | 4      |

|    |       |        |
|----|-------|--------|
|    | PHF   | Trucks |
| AM | 0.730 | 3.1%   |
| PM | 0.892 | 1.5%   |







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

# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**LOCATION** Kern St @ 6th St

**LATITUDE** 35.1431

**COUNTY** Kern

**LONGITUDE** -119.4596

**COLLECTION DATE** Tuesday, March 15, 2022

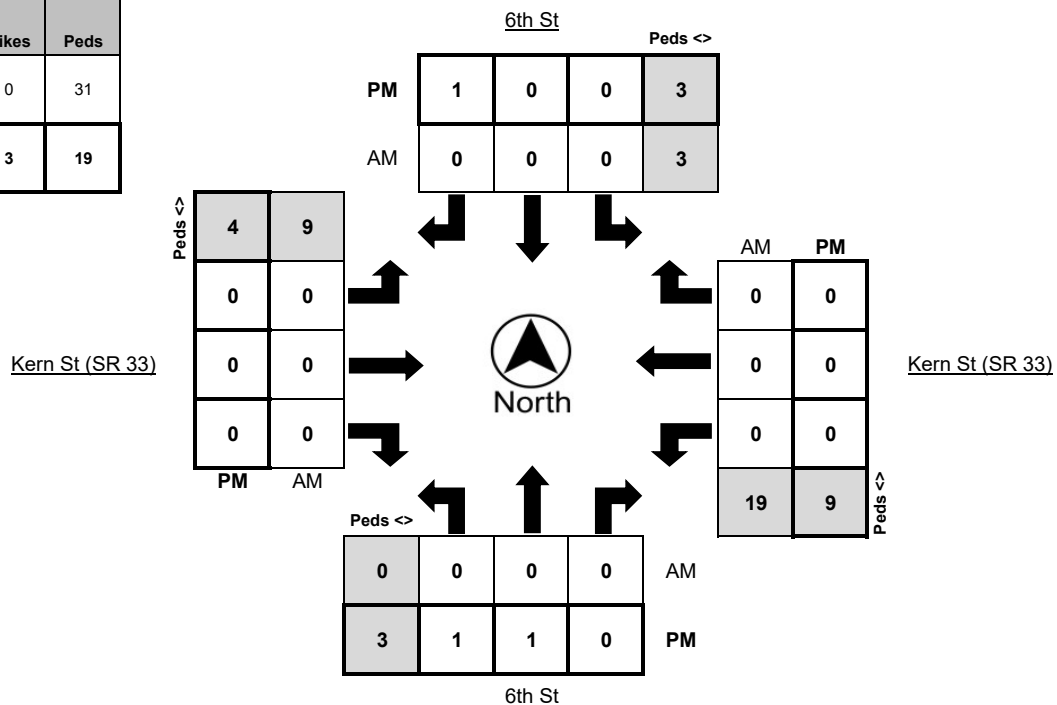
**WEATHER** Clear

| Time              | Northbound Bikes |          |          | N.Leg Peds | Southbound Bikes |          |          | S.Leg Peds | Eastbound Bikes |          |          | E.Leg Peds | Westbound Bikes |          |          | W.Leg Peds |
|-------------------|------------------|----------|----------|------------|------------------|----------|----------|------------|-----------------|----------|----------|------------|-----------------|----------|----------|------------|
|                   | Left             | Thru     | Right    |            | Left             | Thru     | Right    |            | Left            | Thru     | Right    |            | Left            | Thru     | Right    |            |
| 7:00 AM - 7:15 AM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 7          | 0               | 0        | 0        | 0          |
| 7:15 AM - 7:30 AM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 14         | 0               | 0        | 0        | 8          |
| 7:30 AM - 7:45 AM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 2          | 0               | 0        | 0        | 0          |
| 7:45 AM - 8:00 AM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 3          | 0               | 0        | 0        | 0          |
| 8:00 AM - 8:15 AM | 0                | 0        | 0        | 2          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 1          |
| 8:15 AM - 8:30 AM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 0          |
| 8:30 AM - 8:45 AM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 0          |
| 8:45 AM - 9:00 AM | 0                | 0        | 0        | 1          | 0                | 1        | 0        | 1          | 0               | 0        | 0        | 2          | 0               | 0        | 0        | 0          |
| <b>TOTAL</b>      | <b>0</b>         | <b>0</b> | <b>0</b> | <b>5</b>   | <b>0</b>         | <b>1</b> | <b>0</b> | <b>2</b>   | <b>0</b>        | <b>0</b> | <b>0</b> | <b>29</b>  | <b>0</b>        | <b>0</b> | <b>0</b> | <b>9</b>   |

| Time              | Northbound Bikes |          |          | N.Leg Peds | Southbound Bikes |          |          | S.Leg Peds | Eastbound Bikes |          |          | E.Leg Peds | Westbound Bikes |          |          | W.Leg Peds |
|-------------------|------------------|----------|----------|------------|------------------|----------|----------|------------|-----------------|----------|----------|------------|-----------------|----------|----------|------------|
|                   | Left             | Thru     | Right    |            | Left             | Thru     | Right    |            | Left            | Thru     | Right    |            | Left            | Thru     | Right    |            |
| 4:00 PM - 4:15 PM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 3          | 0               | 0        | 0        | 2          |
| 4:15 PM - 4:30 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 0          |
| 4:30 PM - 4:45 PM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 0          |
| 4:45 PM - 5:00 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 2          | 0               | 0        | 0        | 0          |
| 5:00 PM - 5:15 PM | 0                | 0        | 0        | 2          | 0                | 0        | 1        | 2          | 0               | 0        | 0        | 6          | 0               | 0        | 0        | 1          |
| 5:15 PM - 5:30 PM | 0                | 1        | 0        | 1          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 2          | 0               | 0        | 0        | 0          |
| 5:30 PM - 5:45 PM | 1                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 2          |
| 5:45 PM - 6:00 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 1          |
| <b>TOTAL</b>      | <b>1</b>         | <b>1</b> | <b>0</b> | <b>5</b>   | <b>0</b>         | <b>0</b> | <b>1</b> | <b>4</b>   | <b>0</b>        | <b>0</b> | <b>0</b> | <b>15</b>  | <b>0</b>        | <b>0</b> | <b>0</b> | <b>6</b>   |

| PEAK HOUR         | Northbound Bikes |      |       | N.Leg Peds | Southbound Bikes |      |       | S.Leg Peds | Eastbound Bikes |      |       | E.Leg Peds | Westbound Bikes |      |       | W.Leg Peds |
|-------------------|------------------|------|-------|------------|------------------|------|-------|------------|-----------------|------|-------|------------|-----------------|------|-------|------------|
|                   | Left             | Thru | Right |            | Left             | Thru | Right |            | Left            | Thru | Right |            | Left            | Thru | Right |            |
| 7:15 AM - 8:15 AM | 0                | 0    | 0     | 3          | 0                | 0    | 0     | 0          | 0               | 0    | 0     | 19         | 0               | 0    | 0     | 9          |
| 5:00 PM - 6:00 PM | 1                | 1    | 0     | 3          | 0                | 0    | 1     | 3          | 0               | 0    | 0     | 9          | 0               | 0    | 0     | 4          |

|               | Bikes | Peds |
|---------------|-------|------|
| AM Peak Total | 0     | 31   |
| PM Peak Total | 3     | 19   |





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

# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
5620 Friars Rd  
San Diego, CA 92110

LOCATION Kern St @ 4th St

LATITUDE 35.1422

COUNTY Kern

LONGITUDE -119.4567

COLLECTION DATE Tuesday, March 15, 2022

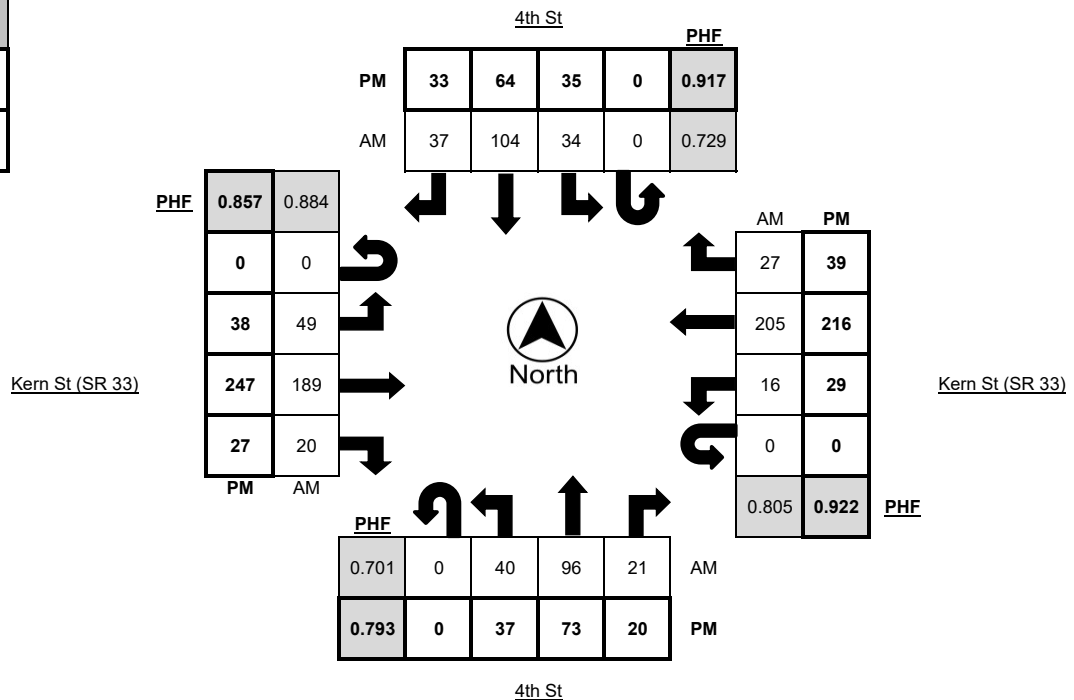
WEATHER Clear

| Time              | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
|                   | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 7:00 AM - 7:15 AM | 0          | 1    | 10   | 2     | 1      | 0          | 3    | 6    | 7     | 0      | 0         | 5    | 36   | 2     | 3      | 0         | 3    | 30   | 3     | 2      |
| 7:15 AM - 7:30 AM | 0          | 6    | 22   | 3     | 1      | 0          | 5    | 20   | 8     | 0      | 0         | 14   | 41   | 4     | 4      | 0         | 3    | 54   | 2     | 1      |
| 7:30 AM - 7:45 AM | 0          | 17   | 32   | 7     | 1      | 0          | 11   | 38   | 11    | 3      | 0         | 11   | 57   | 3     | 2      | 0         | 7    | 60   | 10    | 4      |
| 7:45 AM - 8:00 AM | 0          | 9    | 29   | 8     | 1      | 0          | 10   | 33   | 14    | 0      | 0         | 15   | 50   | 8     | 3      | 0         | 3    | 49   | 13    | 1      |
| 8:00 AM - 8:15 AM | 0          | 8    | 13   | 3     | 0      | 0          | 8    | 13   | 4     | 0      | 0         | 9    | 41   | 5     | 7      | 0         | 3    | 42   | 2     | 6      |
| 8:15 AM - 8:30 AM | 0          | 4    | 9    | 2     | 1      | 0          | 8    | 8    | 7     | 3      | 1         | 5    | 46   | 5     | 2      | 0         | 2    | 35   | 2     | 7      |
| 8:30 AM - 8:45 AM | 0          | 1    | 9    | 4     | 2      | 0          | 5    | 4    | 3     | 1      | 0         | 2    | 32   | 7     | 4      | 0         | 3    | 40   | 1     | 0      |
| 8:45 AM - 9:00 AM | 0          | 3    | 6    | 2     | 0      | 0          | 2    | 14   | 7     | 1      | 0         | 13   | 38   | 2     | 1      | 0         | 5    | 34   | 6     | 2      |
| TOTAL             | 0          | 49   | 130  | 31    | 7      | 0          | 52   | 136  | 61    | 8      | 1         | 74   | 341  | 36    | 26     | 0         | 29   | 344  | 39    | 23     |

| Time              | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
|                   | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 4:00 PM - 4:15 PM | 0          | 16   | 17   | 8     | 0      | 0          | 5    | 22   | 7     | 0      | 0         | 12   | 69   | 10    | 5      | 0         | 4    | 61   | 12    | 4      |
| 4:15 PM - 4:30 PM | 0          | 6    | 25   | 5     | 1      | 0          | 7    | 14   | 9     | 0      | 0         | 5    | 61   | 9     | 1      | 0         | 8    | 54   | 10    | 1      |
| 4:30 PM - 4:45 PM | 0          | 9    | 18   | 5     | 0      | 0          | 13   | 14   | 5     | 0      | 0         | 10   | 56   | 5     | 1      | 0         | 8    | 54   | 7     | 1      |
| 4:45 PM - 5:00 PM | 0          | 6    | 13   | 2     | 0      | 0          | 10   | 14   | 12    | 0      | 0         | 11   | 61   | 3     | 2      | 0         | 9    | 47   | 10    | 0      |
| 5:00 PM - 5:15 PM | 0          | 8    | 24   | 5     | 0      | 0          | 3    | 17   | 13    | 0      | 0         | 10   | 51   | 5     | 1      | 0         | 8    | 41   | 7     | 1      |
| 5:15 PM - 5:30 PM | 1          | 12   | 12   | 7     | 0      | 0          | 6    | 13   | 11    | 0      | 0         | 9    | 53   | 5     | 3      | 0         | 7    | 54   | 8     | 0      |
| 5:30 PM - 5:45 PM | 1          | 13   | 24   | 7     | 0      | 0          | 6    | 18   | 8     | 1      | 0         | 9    | 62   | 7     | 3      | 0         | 10   | 56   | 8     | 3      |
| 5:45 PM - 6:00 PM | 0          | 7    | 21   | 7     | 0      | 0          | 4    | 20   | 10    | 0      | 0         | 9    | 63   | 2     | 1      | 0         | 0    | 46   | 9     | 1      |
| TOTAL             | 2          | 77   | 154  | 46    | 1      | 0          | 54   | 132  | 75    | 1      | 0         | 75   | 476  | 46    | 17     | 0         | 54   | 413  | 71    | 11     |

| PEAK HOUR         | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
|                   | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 7:15 AM - 8:15 AM | 0          | 40   | 96   | 21    | 3      | 0          | 34   | 104  | 37    | 3      | 0         | 49   | 189  | 20    | 16     | 0         | 16   | 205  | 27    | 12     |
| 4:00 PM - 5:00 PM | 0          | 37   | 73   | 20    | 1      | 0          | 35   | 64   | 33    | 0      | 0         | 38   | 247  | 27    | 9      | 0         | 29   | 216  | 39    | 6      |

|    | PHF   | Trucks |
|----|-------|--------|
| AM | 0.794 | 4.1%   |
| PM | 0.883 | 1.9%   |





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# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**LOCATION** Kern St @ 4th St

**LATITUDE** 35.1422

**COUNTY** Kern

**LONGITUDE** -119.4567

**COLLECTION DATE** Tuesday, March 15, 2022

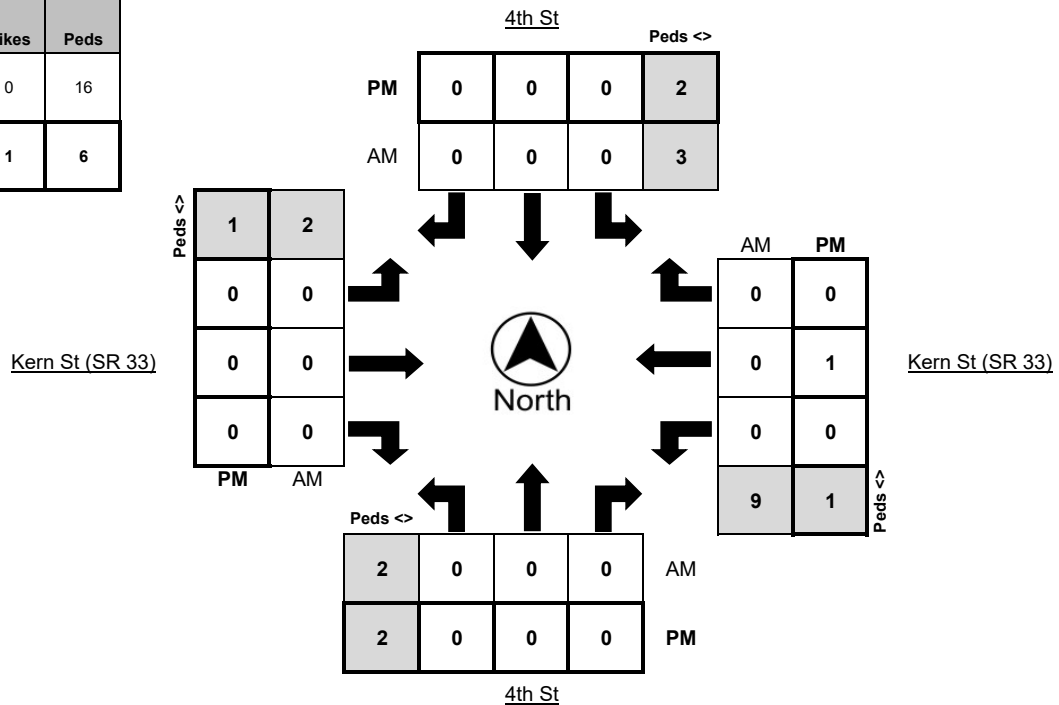
**WEATHER** Clear

| Time              | Northbound Bikes |          |          | N.Leg Peds | Southbound Bikes |          |          | S.Leg Peds | Eastbound Bikes |          |          | E.Leg Peds | Westbound Bikes |          |          | W.Leg Peds |
|-------------------|------------------|----------|----------|------------|------------------|----------|----------|------------|-----------------|----------|----------|------------|-----------------|----------|----------|------------|
|                   | Left             | Thru     | Right    |            | Left             | Thru     | Right    |            | Left            | Thru     | Right    |            | Left            | Thru     | Right    |            |
| 7:00 AM - 7:15 AM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 1          |
| 7:15 AM - 7:30 AM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 2          | 0               | 0        | 0        | 2          | 0               | 0        | 0        | 1          |
| 7:30 AM - 7:45 AM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 6          | 0               | 0        | 0        | 0          |
| 7:45 AM - 8:00 AM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 0          |
| 8:00 AM - 8:15 AM | 0                | 0        | 0        | 1          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 1          |
| 8:15 AM - 8:30 AM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 0          |
| 8:30 AM - 8:45 AM | 0                | 0        | 0        | 2          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 0          |
| 8:45 AM - 9:00 AM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 3          | 0               | 0        | 0        | 0          |
| <b>TOTAL</b>      | <b>0</b>         | <b>0</b> | <b>0</b> | <b>5</b>   | <b>0</b>         | <b>0</b> | <b>0</b> | <b>4</b>   | <b>0</b>        | <b>0</b> | <b>0</b> | <b>13</b>  | <b>0</b>        | <b>0</b> | <b>0</b> | <b>3</b>   |

| Time              | Northbound Bikes |          |          | N.Leg Peds | Southbound Bikes |          |          | S.Leg Peds | Eastbound Bikes |          |          | E.Leg Peds | Westbound Bikes |          |          | W.Leg Peds |
|-------------------|------------------|----------|----------|------------|------------------|----------|----------|------------|-----------------|----------|----------|------------|-----------------|----------|----------|------------|
|                   | Left             | Thru     | Right    |            | Left             | Thru     | Right    |            | Left            | Thru     | Right    |            | Left            | Thru     | Right    |            |
| 4:00 PM - 4:15 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 0          |
| 4:15 PM - 4:30 PM | 0                | 0        | 0        | 2          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 0          | 0               | 1        | 0        | 1          |
| 4:30 PM - 4:45 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 0          |
| 4:45 PM - 5:00 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 0          |
| 5:00 PM - 5:15 PM | 0                | 0        | 1        | 1          | 0                | 0        | 0        | 3          | 0               | 0        | 0        | 2          | 0               | 0        | 0        | 2          |
| 5:15 PM - 5:30 PM | 0                | 1        | 0        | 1          | 0                | 0        | 0        | 0          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 0          |
| 5:30 PM - 5:45 PM | 0                | 0        | 0        | 0          | 0                | 0        | 0        | 1          | 0               | 0        | 0        | 0          | 0               | 0        | 0        | 0          |
| 5:45 PM - 6:00 PM | 0                | 0        | 0        | 3          | 0                | 0        | 0        | 2          | 0               | 0        | 0        | 1          | 0               | 0        | 0        | 0          |
| <b>TOTAL</b>      | <b>0</b>         | <b>1</b> | <b>1</b> | <b>7</b>   | <b>0</b>         | <b>0</b> | <b>0</b> | <b>8</b>   | <b>0</b>        | <b>0</b> | <b>0</b> | <b>5</b>   | <b>0</b>        | <b>1</b> | <b>0</b> | <b>3</b>   |

| PEAK HOUR         | Northbound Bikes |      |       | N.Leg Peds | Southbound Bikes |      |       | S.Leg Peds | Eastbound Bikes |      |       | E.Leg Peds | Westbound Bikes |      |       | W.Leg Peds |
|-------------------|------------------|------|-------|------------|------------------|------|-------|------------|-----------------|------|-------|------------|-----------------|------|-------|------------|
|                   | Left             | Thru | Right |            | Left             | Thru | Right |            | Left            | Thru | Right |            | Left            | Thru | Right |            |
| 7:15 AM - 8:15 AM | 0                | 0    | 0     | 3          | 0                | 0    | 0     | 2          | 0               | 0    | 0     | 9          | 0               | 0    | 0     | 2          |
| 4:00 PM - 5:00 PM | 0                | 0    | 0     | 2          | 0                | 0    | 0     | 2          | 0               | 0    | 0     | 1          | 0               | 1    | 0     | 1          |

|               | Bikes | Peds |
|---------------|-------|------|
| AM Peak Total | 0     | 16   |
| PM Peak Total | 1     | 6    |





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# Turning Movement Report

Prepared For:

Rick Engineering Company  
5620 Friars Rd  
San Diego, CA 92110

LOCATION Kern St @ 1st

LATITUDE 35.1407

COUNTY Kern

LONGITUDE -119.4519

COLLECTION DATE Tuesday, March 15, 2022

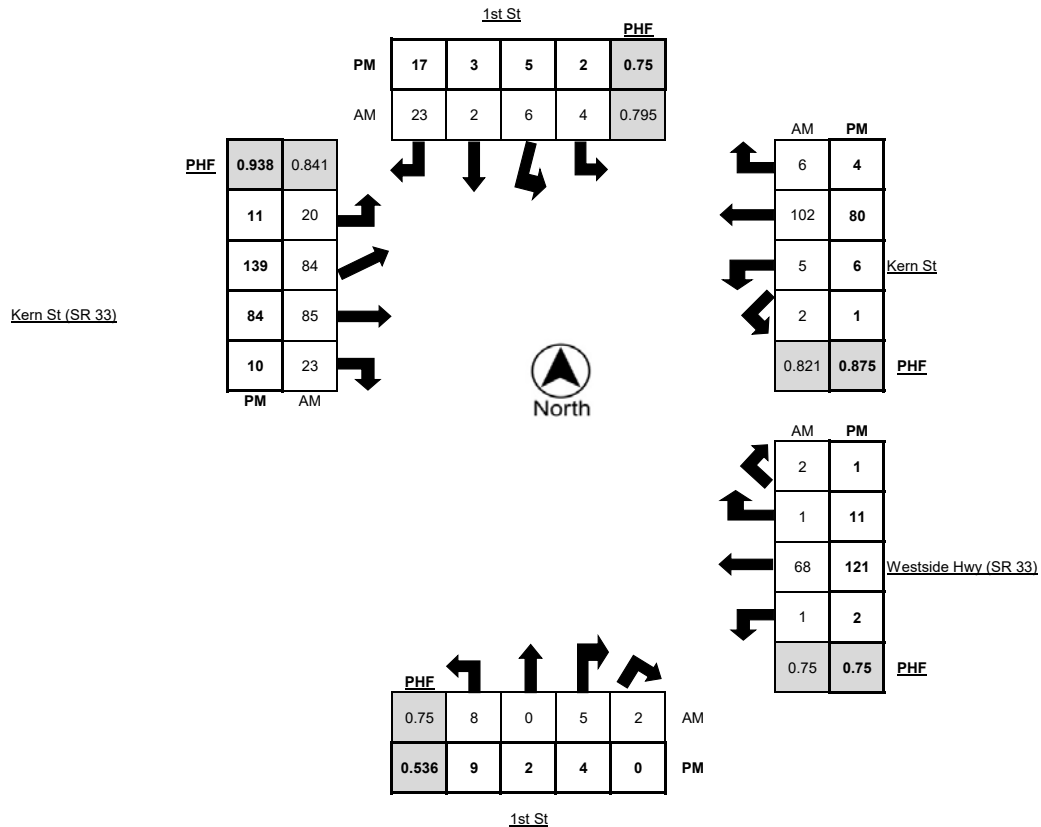
WEATHER Clear

| Time              | Northbound |      |        |      |        | Southbound |      |      |       |        | Eastbound |        |      |       |        | Westbound (SR33) |      |       |        |        | Westbound (Kern St) |       |      |       |        |
|-------------------|------------|------|--------|------|--------|------------|------|------|-------|--------|-----------|--------|------|-------|--------|------------------|------|-------|--------|--------|---------------------|-------|------|-------|--------|
|                   | Left       | Thru | R-Kern | R-33 | Trucks | L-Kern     | L-33 | Thru | Right | Trucks | L-1st     | L-Kern | Thru | Right | Trucks | Left             | Thru | R-1st | R-Kern | Trucks | L-33                | L-1st | Thru | Right | Trucks |
| 7:00 AM - 7:15 AM | 0          | 0    | 0      | 0    | 0      | 0          | 4    | 0    | 3     | 0      | 1         | 12     | 17   | 0     | 2      | 0                | 15   | 0     | 0      | 1      | 0                   | 0     | 15   | 1     | 1      |
| 7:15 AM - 7:30 AM | 1          | 0    | 2      | 2    | 0      | 0          | 2    | 0    | 7     | 0      | 4         | 15     | 18   | 5     | 3      | 0                | 19   | 0     | 0      | 2      | 0                   | 2     | 24   | 2     | 1      |
| 7:30 AM - 7:45 AM | 3          | 0    | 1      | 0    | 0      | 0          | 0    | 0    | 7     | 0      | 10        | 24     | 25   | 4     | 2      | 1                | 18   | 1     | 0      | 2      | 0                   | 0     | 33   | 2     | 2      |
| 7:45 AM - 8:00 AM | 1          | 0    | 1      | 0    | 0      | 4          | 2    | 1    | 4     | 0      | 1         | 26     | 24   | 7     | 1      | 0                | 9    | 0     | 0      | 0      | 0                   | 3     | 30   | 0     | 0      |
| 8:00 AM - 8:15 AM | 3          | 0    | 1      | 0    | 0      | 0          | 2    | 1    | 5     | 1      | 5         | 19     | 18   | 7     | 3      | 0                | 22   | 0     | 2      | 1      | 0                   | 2     | 15   | 2     | 1      |
| 8:15 AM - 8:30 AM | 4          | 1    | 1      | 0    | 0      | 0          | 0    | 0    | 4     | 0      | 1         | 16     | 34   | 2     | 3      | 0                | 19   | 0     | 0      | 6      | 0                   | 0     | 10   | 1     | 0      |
| 8:30 AM - 8:45 AM | 3          | 0    | 1      | 1    | 0      | 1          | 2    | 2    | 3     | 0      | 2         | 10     | 22   | 3     | 6      | 1                | 21   | 2     | 0      | 0      | 0                   | 0     | 17   | 0     | 0      |
| 8:45 AM - 9:00 AM | 2          | 0    | 1      | 1    | 0      | 0          | 4    | 0    | 3     | 0      | 3         | 21     | 13   | 4     | 1      | 1                | 12   | 1     | 0      | 2      | 1                   | 0     | 11   | 1     | 1      |
| TOTAL             | 17         | 1    | 8      | 4    | 0      | 5          | 16   | 4    | 36    | 1      | 27        | 143    | 171  | 32    | 21     | 3                | 135  | 4     | 2      | 14     | 1                   | 7     | 155  | 9     | 6      |

| Time              | Northbound |      |        |      |        | Southbound |      |      |       |        | Eastbound |        |      |       |        | Westbound (SR33) |      |       |        |        | Westbound (Kern St) |       |      |       |        |
|-------------------|------------|------|--------|------|--------|------------|------|------|-------|--------|-----------|--------|------|-------|--------|------------------|------|-------|--------|--------|---------------------|-------|------|-------|--------|
|                   | Left       | Thru | R-Kern | R-33 | Trucks | L-Kern     | L-33 | Thru | Right | Trucks | L-1st     | L-Kern | Thru | Right | Trucks | Left             | Thru | R-1st | R-Kern | Trucks | L-33                | L-1st | Thru | Right | Trucks |
| 4:00 PM - 4:15 PM | 2          | 0    | 1      | 0    | 0      | 0          | 0    | 1    | 3     | 0      | 1         | 36     | 22   | 5     | 1      | 0                | 40   | 4     | 1      | 4      | 0                   | 0     | 18   | 0     | 0      |
| 4:15 PM - 4:30 PM | 4          | 2    | 1      | 0    | 0      | 1          | 1    | 0    | 4     | 0      | 2         | 34     | 27   | 2     | 3      | 2                | 27   | 2     | 0      | 1      | 0                   | 1     | 25   | 0     | 0      |
| 4:30 PM - 4:45 PM | 2          | 0    | 0      | 0    | 0      | 0          | 3    | 1    | 5     | 0      | 6         | 30     | 16   | 1     | 2      | 0                | 29   | 2     | 0      | 1      | 0                   | 0     | 17   | 2     | 0      |
| 4:45 PM - 5:00 PM | 1          | 0    | 2      | 0    | 0      | 1          | 1    | 1    | 5     | 0      | 2         | 39     | 19   | 2     | 1      | 0                | 25   | 3     | 0      | 0      | 0                   | 1     | 20   | 2     | 1      |
| 5:00 PM - 5:15 PM | 1          | 1    | 3      | 0    | 0      | 1          | 2    | 1    | 5     | 1      | 5         | 30     | 20   | 4     | 1      | 0                | 22   | 2     | 0      | 0      | 0                   | 2     | 26   | 1     | 0      |
| 5:15 PM - 5:30 PM | 3          | 1    | 1      | 0    | 0      | 3          | 1    | 0    | 6     | 1      | 5         | 28     | 15   | 2     | 3      | 0                | 20   | 1     | 0      | 0      | 0                   | 3     | 21   | 0     | 0      |
| 5:30 PM - 5:45 PM | 2          | 1    | 0      | 0    | 0      | 0          | 0    | 0    | 5     | 0      | 2         | 29     | 29   | 4     | 3      | 0                | 23   | 1     | 0      | 2      | 0                   | 1     | 28   | 1     | 1      |
| 5:45 PM - 6:00 PM | 0          | 0    | 0      | 0    | 0      | 0          | 1    | 1    | 7     | 0      | 5         | 34     | 24   | 4     | 1      | 0                | 24   | 2     | 0      | 1      | 0                   | 1     | 17   | 1     | 0      |
| TOTAL             | 15         | 5    | 8      | 0    | 0      | 6          | 9    | 5    | 40    | 2      | 28        | 260    | 172  | 24    | 15     | 2                | 210  | 17    | 1      | 9      | 0                   | 9     | 172  | 7     | 2      |

| PEAK HOUR         | Northbound |      |        |      |        | Southbound |      |      |       |        | Eastbound |        |      |       |        | Westbound (SR33) |      |       |        |        | Westbound (Kern St) |       |      |       |        |
|-------------------|------------|------|--------|------|--------|------------|------|------|-------|--------|-----------|--------|------|-------|--------|------------------|------|-------|--------|--------|---------------------|-------|------|-------|--------|
|                   | Left       | Thru | R-Kern | R-33 | Trucks | L-Kern     | L-33 | Thru | Right | Trucks | L-1st     | L-Kern | Thru | Right | Trucks | Left             | Thru | R-1st | R-Kern | Trucks | L-33                | L-1st | Thru | Right | Trucks |
| 7:15 AM - 8:15 AM | 8          | 0    | 5      | 2    | 0      | 4          | 6    | 2    | 23    | 1      | 20        | 84     | 85   | 23    | 9      | 1                | 68   | 1     | 2      | 5      | 0                   | 7     | 102  | 6     | 4      |
| 4:00 PM - 5:00 PM | 9          | 2    | 4      | 0    | 0      | 2          | 5    | 3    | 17    | 0      | 11        | 139    | 84   | 10    | 7      | 2                | 121  | 11    | 1      | 6      | 0                   | 2     | 80   | 4     | 1      |

|    | PHF   | Trucks |
|----|-------|--------|
| AM | 0.870 | 4.2%   |
| PM | 0.939 | 2.8%   |





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# Turning Movement Report

Prepared For:

Rick Engineering Company  
5620 Friars Rd  
San Diego, CA 92110

LOCATION Kern St @ 1st

LATITUDE 35.1407

COUNTY Kern

LONGITUDE -119.4519

COLLECTION DATE Tuesday, March 15, 2022

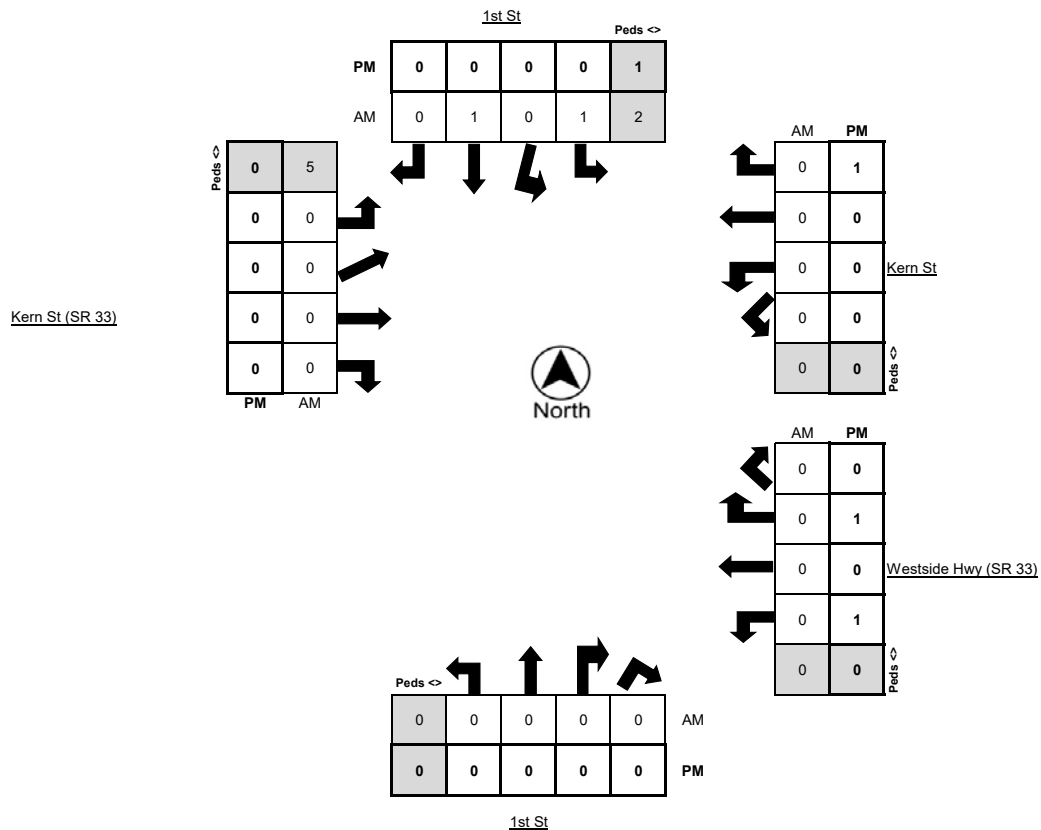
WEATHER Clear

| Time              | Northbound Bicycles |      |         |         | Southbound Bicycles |        |      |       | Eastbound Bicycles |        |      |       | Westbound SR33 Bicycles |      |         |         | Westbound Kern Bicycles |        |      |       | Pedestrians in each Crosswalk |       |       |         |        |
|-------------------|---------------------|------|---------|---------|---------------------|--------|------|-------|--------------------|--------|------|-------|-------------------------|------|---------|---------|-------------------------|--------|------|-------|-------------------------------|-------|-------|---------|--------|
|                   | Left                | Thru | Right-1 | Right-2 | Left-1              | Left-2 | Thru | Right | Left-1             | Left-2 | Thru | Right | Left                    | Thru | Right-1 | Right-2 | Left-1                  | Left-2 | Thru | Right | S-Leg                         | N-Leg | W-Leg | E33-Leg | EK-Leg |
| 7:00 AM - 7:15 AM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 7:15 AM - 7:30 AM | 0                   | 0    | 0       | 0       | 1                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 7:30 AM - 7:45 AM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 1     | 2     | 0       | 0      |
| 7:45 AM - 8:00 AM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 8:00 AM - 8:15 AM | 0                   | 0    | 0       | 0       | 0                   | 0      | 1    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 1     | 3     | 0       | 0      |
| 8:15 AM - 8:30 AM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 8:30 AM - 8:45 AM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 8:45 AM - 9:00 AM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 1     | 0                             | 0     | 0     | 0       | 0      |
| TOTAL             | 0                   | 0    | 0       | 0       | 1                   | 0      | 1    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 1     | 0                             | 2     | 5     | 0       | 0      |

| Time              | Northbound Bicycles |      |         |         | Southbound Bicycles |        |      |       | Eastbound Bicycles |        |      |       | Westbound SR33 Bicycles |      |         |         | Westbound Kern Bicycles |        |      |       | Pedestrians in each Crosswalk |       |       |         |        |
|-------------------|---------------------|------|---------|---------|---------------------|--------|------|-------|--------------------|--------|------|-------|-------------------------|------|---------|---------|-------------------------|--------|------|-------|-------------------------------|-------|-------|---------|--------|
|                   | Left                | Thru | Right-1 | Right-2 | Left-1              | Left-2 | Thru | Right | Left-1             | Left-2 | Thru | Right | Left                    | Thru | Right-1 | Right-2 | Left-1                  | Left-2 | Thru | Right | S-Leg                         | N-Leg | W-Leg | E33-Leg | EK-Leg |
| 4:00 PM - 4:15 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 1                       | 0    | 0       | 0       | 0                       | 0      | 0    | 1     | 0                             | 0     | 0     | 0       | 0      |
| 4:15 PM - 4:30 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 1       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 4:30 PM - 4:45 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 1     | 0     | 0       | 0      |
| 4:45 PM - 5:00 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 5:00 PM - 5:15 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 5:15 PM - 5:30 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 1      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 0     | 0     | 0       | 0      |
| 5:30 PM - 5:45 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 2     | 0     | 2       | 2      |
| 5:45 PM - 6:00 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 1     | 2     | 0       | 0      |
| TOTAL             | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 1      | 0    | 0     | 1                       | 0    | 1       | 0       | 0                       | 0      | 0    | 1     | 0                             | 4     | 2     | 2       | 2      |

| PEAK HOUR         | Northbound Bicycles |      |         |         | Southbound Bicycles |        |      |       | Eastbound Bicycles |        |      |       | Westbound SR33 Bicycles |      |         |         | Westbound Kern Bicycles |        |      |       | Pedestrians in each Crosswalk |       |       |         |        |
|-------------------|---------------------|------|---------|---------|---------------------|--------|------|-------|--------------------|--------|------|-------|-------------------------|------|---------|---------|-------------------------|--------|------|-------|-------------------------------|-------|-------|---------|--------|
|                   | Left                | Thru | Right-1 | Right-2 | Left-1              | Left-2 | Thru | Right | Left-1             | Left-2 | Thru | Right | Left                    | Thru | Right-1 | Right-2 | Left-1                  | Left-2 | Thru | Right | S-Leg                         | N-Leg | W-Leg | E33-Leg | EK-Leg |
| 7:15 AM - 8:15 AM | 0                   | 0    | 0       | 0       | 1                   | 0      | 1    | 0     | 0                  | 0      | 0    | 0     | 0                       | 0    | 0       | 0       | 0                       | 0      | 0    | 0     | 0                             | 2     | 5     | 0       | 0      |
| 4:00 PM - 5:00 PM | 0                   | 0    | 0       | 0       | 0                   | 0      | 0    | 0     | 0                  | 0      | 0    | 0     | 1                       | 0    | 1       | 0       | 0                       | 0      | 0    | 1     | 0                             | 1     | 0     | 0       | 0      |

|               | Bikes | Peds |
|---------------|-------|------|
| AM Peak Total | 2     | 7    |
| PM Peak Total | 3     | 1    |





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

# Turning Movement Report

Prepared For:

Rick Engineering Company  
5620 Friars Rd  
San Diego, CA 92110

LOCATION Center St @ West Side Hwy

LATITUDE 35.1387

COUNTY Kern

LONGITUDE -119.4489

COLLECTION DATE Tuesday, March 15, 2022

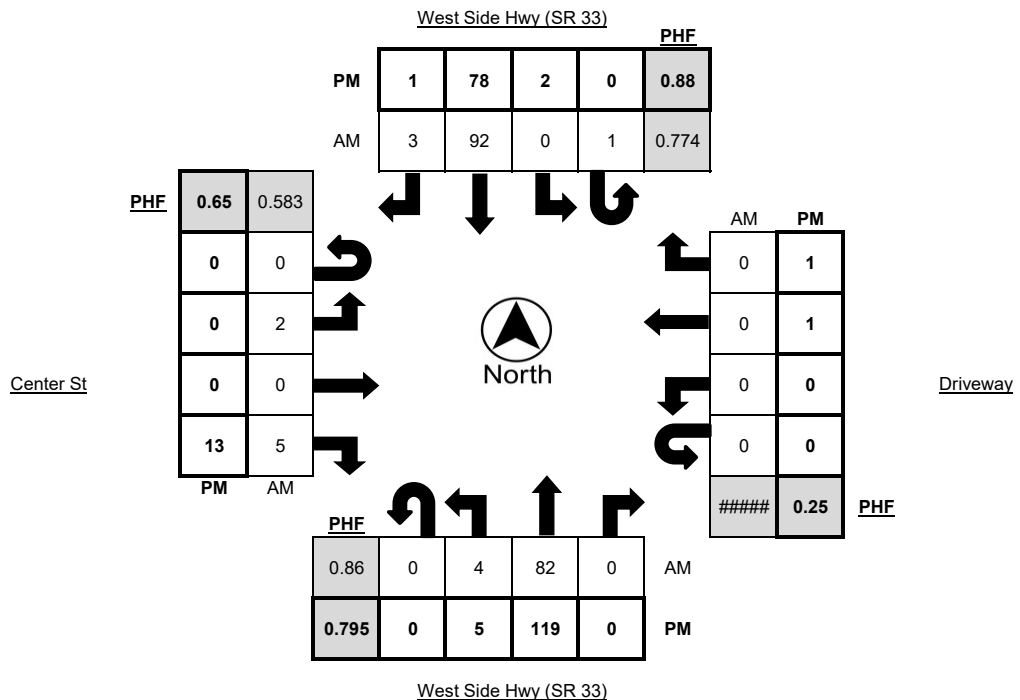
WEATHER Clear

| Time              | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
|                   | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 7:00 AM - 7:15 AM | 0          | 2    | 14   | 0     | 1      | 0          | 0    | 18   | 0     | 1      | 0         | 0    | 0    | 1     | 0      | 0         | 0    | 0    | 0     | 0      |
| 7:15 AM - 7:30 AM | 0          | 2    | 19   | 0     | 2      | 0          | 0    | 25   | 0     | 2      | 0         | 1    | 0    | 1     | 0      | 0         | 0    | 0    | 0     | 0      |
| 7:30 AM - 7:45 AM | 0          | 2    | 18   | 0     | 3      | 0          | 0    | 24   | 0     | 1      | 0         | 1    | 0    | 3     | 0      | 0         | 0    | 0    | 0     | 0      |
| 7:45 AM - 8:00 AM | 0          | 2    | 8    | 0     | 1      | 0          | 0    | 22   | 0     | 0      | 0         | 0    | 0    | 1     | 0      | 0         | 0    | 0    | 0     | 0      |
| 8:00 AM - 8:15 AM | 0          | 1    | 23   | 0     | 1      | 1          | 0    | 20   | 2     | 4      | 0         | 0    | 0    | 1     | 0      | 0         | 0    | 0    | 0     | 0      |
| 8:15 AM - 8:30 AM | 0          | 1    | 21   | 0     | 6      | 0          | 0    | 31   | 0     | 2      | 0         | 1    | 0    | 0     | 0      | 0         | 0    | 0    | 0     | 0      |
| 8:30 AM - 8:45 AM | 0          | 1    | 24   | 0     | 0      | 0          | 0    | 22   | 0     | 5      | 0         | 1    | 0    | 1     | 0      | 0         | 0    | 0    | 0     | 0      |
| 8:45 AM - 9:00 AM | 0          | 1    | 14   | 0     | 2      | 0          | 0    | 19   | 1     | 1      | 0         | 0    | 0    | 3     | 0      | 0         | 0    | 0    | 0     | 0      |
| TOTAL             | 0          | 12   | 141  | 0     | 16     | 1          | 0    | 181  | 3     | 16     | 0         | 4    | 0    | 11    | 0      | 0         | 0    | 0    | 0     | 0      |

| Time              | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
|                   | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 4:00 PM - 4:15 PM | 0          | 3    | 36   | 0     | 3      | 0          | 2    | 20   | 1     | 3      | 0         | 0    | 0    | 3     | 0      | 0         | 0    | 1    | 1     | 0      |
| 4:15 PM - 4:30 PM | 0          | 1    | 26   | 0     | 1      | 0          | 0    | 23   | 0     | 1      | 0         | 0    | 0    | 2     | 0      | 0         | 0    | 0    | 0     | 0      |
| 4:30 PM - 4:45 PM | 0          | 0    | 31   | 0     | 1      | 0          | 0    | 16   | 0     | 1      | 0         | 0    | 0    | 5     | 0      | 0         | 0    | 0    | 0     | 0      |
| 4:45 PM - 5:00 PM | 0          | 1    | 26   | 0     | 0      | 0          | 0    | 19   | 0     | 1      | 0         | 0    | 0    | 3     | 0      | 0         | 0    | 0    | 0     | 0      |
| 5:00 PM - 5:15 PM | 0          | 3    | 21   | 0     | 0      | 0          | 0    | 16   | 0     | 1      | 0         | 1    | 0    | 2     | 0      | 0         | 0    | 0    | 0     | 0      |
| 5:15 PM - 5:30 PM | 0          | 3    | 15   | 0     | 0      | 0          | 0    | 16   | 0     | 3      | 0         | 1    | 0    | 4     | 1      | 0         | 0    | 0    | 0     | 0      |
| 5:30 PM - 5:45 PM | 0          | 2    | 21   | 0     | 2      | 0          | 0    | 26   | 0     | 1      | 0         | 0    | 0    | 3     | 0      | 0         | 0    | 0    | 0     | 0      |
| 5:45 PM - 6:00 PM | 0          | 5    | 25   | 0     | 1      | 0          | 0    | 21   | 0     | 0      | 0         | 0    | 0    | 2     | 0      | 0         | 0    | 0    | 0     | 0      |
| TOTAL             | 0          | 18   | 201  | 0     | 8      | 0          | 2    | 157  | 1     | 11     | 0         | 2    | 0    | 24    | 1      | 0         | 0    | 1    | 1     | 0      |

| PEAK HOUR         | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
|                   | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 8:00 AM - 9:00 AM | 0          | 4    | 82   | 0     | 9      | 1          | 0    | 92   | 3     | 12     | 0         | 2    | 0    | 5     | 0      | 0         | 0    | 0    | 0     | 0      |
| 4:00 PM - 5:00 PM | 0          | 5    | 119  | 0     | 5      | 0          | 2    | 78   | 1     | 6      | 0         | 0    | 0    | 13    | 0      | 0         | 0    | 1    | 1     | 0      |

|    | PHF   | Trucks |
|----|-------|--------|
| AM | 0.875 | 11.1%  |
| PM | 0.821 | 5.0%   |







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

# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**LOCATION** Center St @ West Side Hwy

**LATITUDE** 35.1387

**COUNTY** Kern

**LONGITUDE** -119.4489

**COLLECTION DATE** Tuesday, March 15, 2022

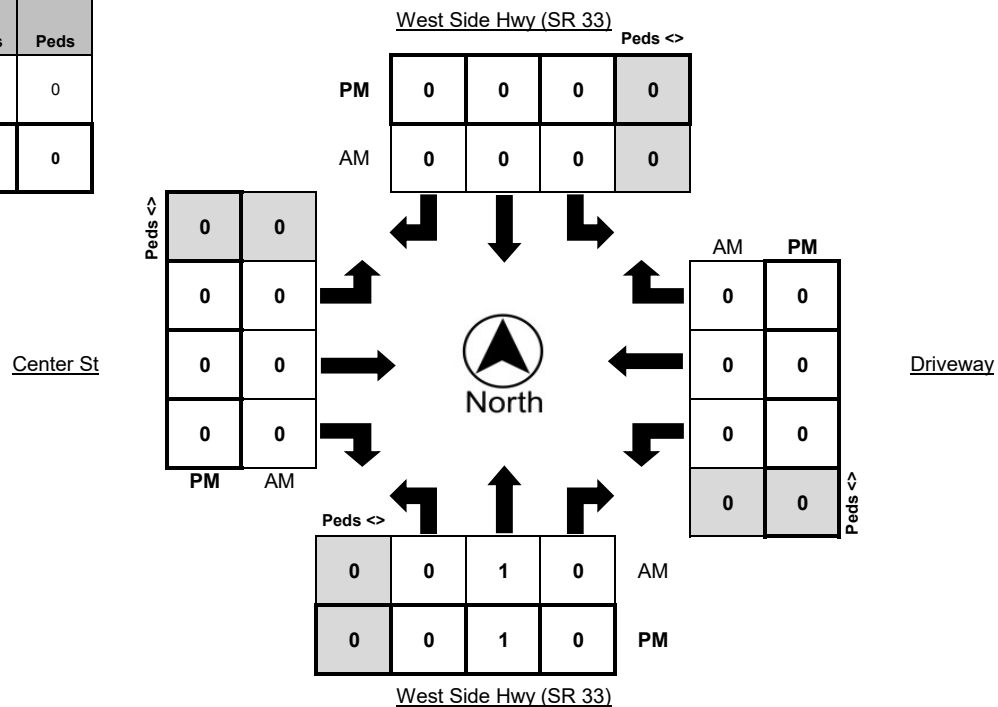
**WEATHER** Clear

| Time              | Northbound Bikes |          |          | N.Leg<br>Peds | Southbound Bikes |          |          | S.Leg<br>Peds | Eastbound Bikes |          |          | E.Leg<br>Peds | Westbound Bikes |          |          | W.Leg<br>Peds |
|-------------------|------------------|----------|----------|---------------|------------------|----------|----------|---------------|-----------------|----------|----------|---------------|-----------------|----------|----------|---------------|
|                   | Left             | Thru     | Right    |               | Left             | Thru     | Right    |               | Left            | Thru     | Right    |               | Left            | Thru     | Right    |               |
| 7:00 AM - 7:15 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 7:15 AM - 7:30 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 7:30 AM - 7:45 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 7:45 AM - 8:00 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 8:00 AM - 8:15 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 8:15 AM - 8:30 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 8:30 AM - 8:45 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 8:45 AM - 9:00 AM | 0                | 1        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| <b>TOTAL</b>      | <b>0</b>         | <b>1</b> | <b>0</b> | <b>0</b>      | <b>0</b>         | <b>0</b> | <b>0</b> | <b>0</b>      | <b>0</b>        | <b>0</b> | <b>0</b> | <b>0</b>      | <b>0</b>        | <b>0</b> | <b>0</b> | <b>0</b>      |

| Time              | Northbound Bikes |          |          | N.Leg<br>Peds | Southbound Bikes |          |          | S.Leg<br>Peds | Eastbound Bikes |          |          | E.Leg<br>Peds | Westbound Bikes |          |          | W.Leg<br>Peds |
|-------------------|------------------|----------|----------|---------------|------------------|----------|----------|---------------|-----------------|----------|----------|---------------|-----------------|----------|----------|---------------|
|                   | Left             | Thru     | Right    |               | Left             | Thru     | Right    |               | Left            | Thru     | Right    |               | Left            | Thru     | Right    |               |
| 4:00 PM - 4:15 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 4:15 PM - 4:30 PM | 0                | 1        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 4:30 PM - 4:45 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 4:45 PM - 5:00 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 5:00 PM - 5:15 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 1             | 0               | 0        | 0        | 0             |
| 5:15 PM - 5:30 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 5:30 PM - 5:45 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 2             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 5:45 PM - 6:00 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| <b>TOTAL</b>      | <b>0</b>         | <b>1</b> | <b>0</b> | <b>0</b>      | <b>0</b>         | <b>0</b> | <b>0</b> | <b>2</b>      | <b>0</b>        | <b>0</b> | <b>0</b> | <b>1</b>      | <b>0</b>        | <b>0</b> | <b>0</b> | <b>0</b>      |

| PEAK HOUR         | Northbound Bikes |      |       | N.Leg<br>Peds | Southbound Bikes |      |       | S.Leg<br>Peds | Eastbound Bikes |      |       | E.Leg<br>Peds | Westbound Bikes |      |       | W.Leg<br>Peds |
|-------------------|------------------|------|-------|---------------|------------------|------|-------|---------------|-----------------|------|-------|---------------|-----------------|------|-------|---------------|
|                   | Left             | Thru | Right |               | Left             | Thru | Right |               | Left            | Thru | Right |               | Left            | Thru | Right |               |
| 8:00 AM - 9:00 AM | 0                | 1    | 0     | 0             | 0                | 0    | 0     | 0             | 0               | 0    | 0     | 0             | 0               | 0    | 0     | 0             |
| 4:00 PM - 5:00 PM | 0                | 1    | 0     | 0             | 0                | 0    | 0     | 0             | 0               | 0    | 0     | 0             | 0               | 0    | 0     | 0             |

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



# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
5620 Friars Rd  
San Diego, CA 92110

**LOCATION** 10th St @ Center St

LATITUDE 35.1429

COUNTY Kern

**LONGITUDE** -119.4651

**COLLECTION DATE** Tuesday, March 15, 2022

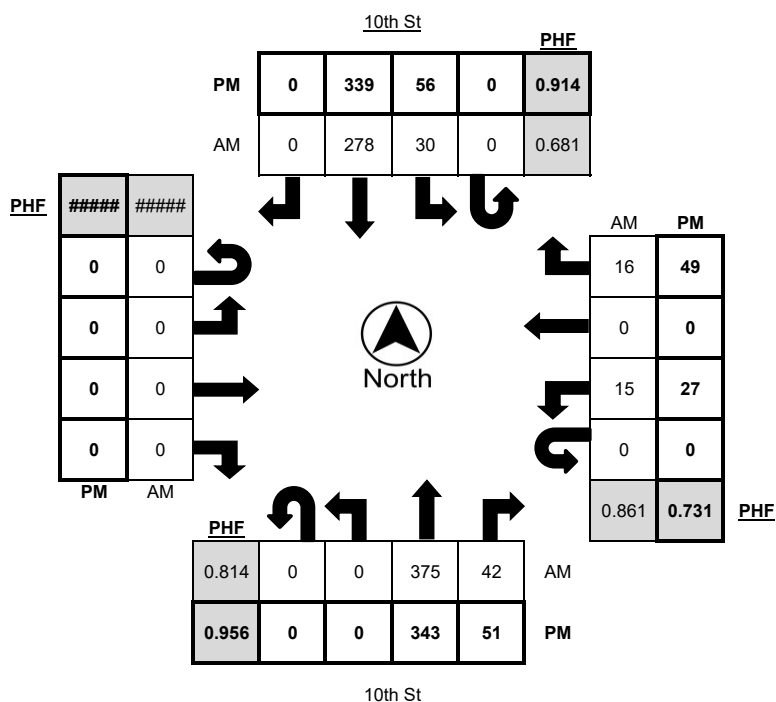
**WEATHER** Clear

|                   | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
| Time              | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 7:00 AM - 7:15 AM | 0          | 0    | 70   | 6     | 2      | 0          | 6    | 39   | 0     | 4      | 0         | 0    | 0    | 0     | 0      | 0         | 1    | 0    | 4     | 0      |
| 7:15 AM - 7:30 AM | 0          | 0    | 108  | 7     | 2      | 0          | 1    | 48   | 0     | 3      | 0         | 0    | 0    | 0     | 0      | 0         | 7    | 0    | 2     | 1      |
| 7:30 AM - 7:45 AM | 0          | 0    | 116  | 12    | 10     | 0          | 10   | 103  | 0     | 2      | 0         | 0    | 0    | 0     | 0      | 0         | 3    | 0    | 6     | 0      |
| 7:45 AM - 8:00 AM | 0          | 0    | 86   | 10    | 0      | 0          | 10   | 77   | 0     | 0      | 0         | 0    | 0    | 0     | 0      | 0         | 3    | 0    | 5     | 0      |
| 8:00 AM - 8:15 AM | 0          | 0    | 65   | 13    | 2      | 0          | 9    | 50   | 0     | 2      | 0         | 0    | 0    | 0     | 0      | 0         | 2    | 0    | 3     | 0      |
| 8:15 AM - 8:30 AM | 0          | 0    | 58   | 7     | 7      | 0          | 2    | 45   | 0     | 3      | 0         | 0    | 0    | 0     | 0      | 0         | 4    | 0    | 5     | 0      |
| 8:30 AM - 8:45 AM | 0          | 0    | 51   | 4     | 0      | 0          | 5    | 32   | 0     | 2      | 0         | 0    | 0    | 0     | 0      | 0         | 3    | 0    | 4     | 1      |
| 8:45 AM - 9:00 AM | 0          | 0    | 43   | 6     | 0      | 0          | 6    | 29   | 0     | 0      | 0         | 0    | 0    | 0     | 0      | 0         | 5    | 0    | 10    | 1      |
| TOTAL             | 0          | 0    | 597  | 65    | 23     | 0          | 49   | 423  | 0     | 16     | 0         | 0    | 0    | 0     | 0      | 0         | 28   | 0    | 39    | 3      |

|                   | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
| Time              | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 4:00 PM - 4:15 PM | 0          | 0    | 70   | 12    | 1      | 0          | 18   | 71   | 0     | 0      | 0         | 0    | 0    | 0     | 0      | 0         | 9    | 0    | 15    | 0      |
| 4:15 PM - 4:30 PM | 0          | 0    | 74   | 14    | 2      | 0          | 11   | 79   | 0     | 1      | 0         | 0    | 0    | 0     | 0      | 0         | 6    | 0    | 14    | 0      |
| 4:30 PM - 4:45 PM | 0          | 0    | 79   | 10    | 1      | 0          | 10   | 91   | 0     | 2      | 0         | 0    | 0    | 0     | 0      | 0         | 6    | 0    | 13    | 0      |
| 4:45 PM - 5:00 PM | 0          | 0    | 92   | 11    | 0      | 0          | 11   | 76   | 0     | 0      | 0         | 0    | 0    | 0     | 0      | 0         | 8    | 0    | 10    | 0      |
| 5:00 PM - 5:15 PM | 0          | 0    | 89   | 13    | 2      | 0          | 19   | 89   | 0     | 2      | 0         | 0    | 0    | 0     | 0      | 0         | 11   | 0    | 15    | 0      |
| 5:15 PM - 5:30 PM | 0          | 0    | 83   | 17    | 1      | 0          | 16   | 83   | 0     | 1      | 0         | 0    | 0    | 0     | 0      | 0         | 2    | 0    | 11    | 0      |
| 5:30 PM - 5:45 PM | 0          | 0    | 68   | 9     | 0      | 0          | 18   | 68   | 0     | 0      | 0         | 0    | 0    | 0     | 0      | 0         | 7    | 0    | 6     | 0      |
| 5:45 PM - 6:00 PM | 0          | 0    | 73   | 17    | 1      | 0          | 19   | 69   | 0     | 0      | 0         | 0    | 0    | 0     | 0      | 0         | 6    | 0    | 12    | 1      |
| TOTAL             | 0          | 0    | 628  | 103   | 8      | 0          | 122  | 626  | 0     | 6      | 0         | 0    | 0    | 0     | 0      | 0         | 55   | 0    | 96    | 1      |

|                   | Northbound |      |      |       |        | Southbound |      |      |       |        | Eastbound |      |      |       |        | Westbound |      |      |       |        |
|-------------------|------------|------|------|-------|--------|------------|------|------|-------|--------|-----------|------|------|-------|--------|-----------|------|------|-------|--------|
| PEAK HOUR         | U-Turn     | Left | Thru | Right | Trucks | U-Turn     | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks | U-Turn    | Left | Thru | Right | Trucks |
| 7:15 AM - 8:15 AM | 0          | 0    | 375  | 42    | 14     | 0          | 30   | 278  | 0     | 7      | 0         | 0    | 0    | 0     | 0      | 0         | 15   | 0    | 16    | 1      |
| 4:30 PM - 5:30 PM | 0          | 0    | 343  | 51    | 4      | 0          | 56   | 339  | 0     | 5      | 0         | 0    | 0    | 0     | 0      | 0         | 27   | 0    | 49    | 0      |

|    |       |        |
|----|-------|--------|
|    | PHF   | Trucks |
| AM | 0.756 | 2.9%   |
| PM | 0.916 | 1.0%   |





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# Turning Movement Report

Prepared For:

**Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**LOCATION** Center St @ West Side Hwy

**LATITUDE** 35.1387

**COUNTY** Kern

**LONGITUDE** -119.4489

**COLLECTION DATE** Tuesday, March 15, 2022

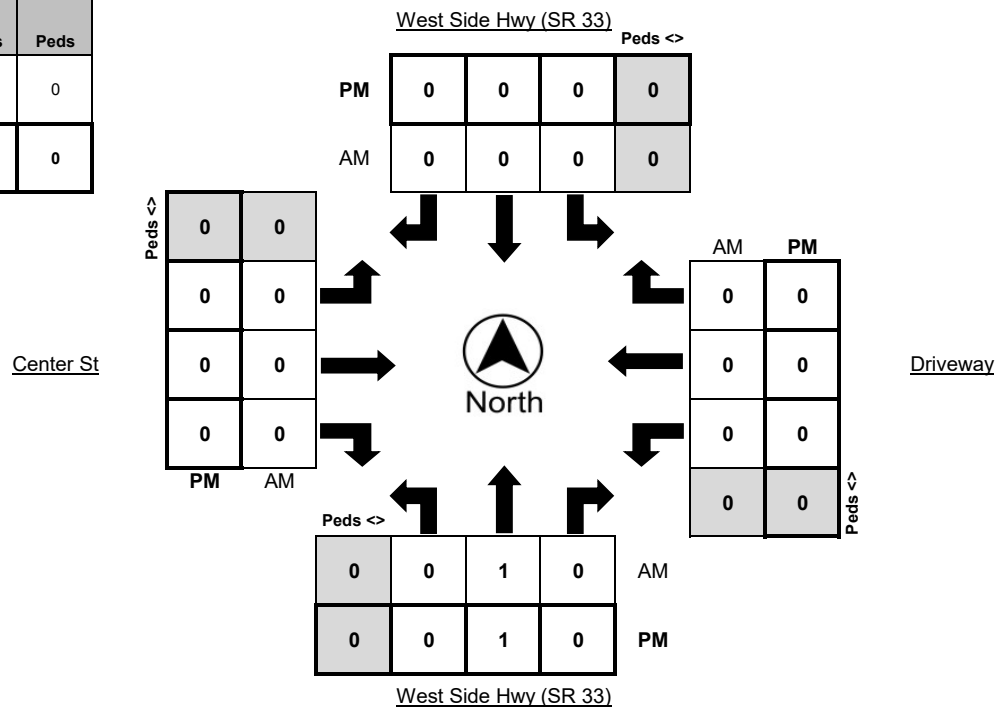
**WEATHER** Clear

| Time              | Northbound Bikes |          |          | N.Leg<br>Peds | Southbound Bikes |          |          | S.Leg<br>Peds | Eastbound Bikes |          |          | E.Leg<br>Peds | Westbound Bikes |          |          | W.Leg<br>Peds |
|-------------------|------------------|----------|----------|---------------|------------------|----------|----------|---------------|-----------------|----------|----------|---------------|-----------------|----------|----------|---------------|
|                   | Left             | Thru     | Right    |               | Left             | Thru     | Right    |               | Left            | Thru     | Right    |               | Left            | Thru     | Right    |               |
| 7:00 AM - 7:15 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 7:15 AM - 7:30 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 7:30 AM - 7:45 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 7:45 AM - 8:00 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 8:00 AM - 8:15 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 8:15 AM - 8:30 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 8:30 AM - 8:45 AM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 8:45 AM - 9:00 AM | 0                | 1        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| <b>TOTAL</b>      | <b>0</b>         | <b>1</b> | <b>0</b> | <b>0</b>      | <b>0</b>         | <b>0</b> | <b>0</b> | <b>0</b>      | <b>0</b>        | <b>0</b> | <b>0</b> | <b>0</b>      | <b>0</b>        | <b>0</b> | <b>0</b> | <b>0</b>      |

| Time              | Northbound Bikes |          |          | N.Leg<br>Peds | Southbound Bikes |          |          | S.Leg<br>Peds | Eastbound Bikes |          |          | E.Leg<br>Peds | Westbound Bikes |          |          | W.Leg<br>Peds |
|-------------------|------------------|----------|----------|---------------|------------------|----------|----------|---------------|-----------------|----------|----------|---------------|-----------------|----------|----------|---------------|
|                   | Left             | Thru     | Right    |               | Left             | Thru     | Right    |               | Left            | Thru     | Right    |               | Left            | Thru     | Right    |               |
| 4:00 PM - 4:15 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 4:15 PM - 4:30 PM | 0                | 1        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 4:30 PM - 4:45 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 4:45 PM - 5:00 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 5:00 PM - 5:15 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 1             | 0               | 0        | 0        | 0             |
| 5:15 PM - 5:30 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 5:30 PM - 5:45 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 2             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| 5:45 PM - 6:00 PM | 0                | 0        | 0        | 0             | 0                | 0        | 0        | 0             | 0               | 0        | 0        | 0             | 0               | 0        | 0        | 0             |
| <b>TOTAL</b>      | <b>0</b>         | <b>1</b> | <b>0</b> | <b>0</b>      | <b>0</b>         | <b>0</b> | <b>0</b> | <b>2</b>      | <b>0</b>        | <b>0</b> | <b>0</b> | <b>1</b>      | <b>0</b>        | <b>0</b> | <b>0</b> | <b>0</b>      |

| PEAK HOUR         | Northbound Bikes |      |       | N.Leg<br>Peds | Southbound Bikes |      |       | S.Leg<br>Peds | Eastbound Bikes |      |       | E.Leg<br>Peds | Westbound Bikes |      |       | W.Leg<br>Peds |
|-------------------|------------------|------|-------|---------------|------------------|------|-------|---------------|-----------------|------|-------|---------------|-----------------|------|-------|---------------|
|                   | Left             | Thru | Right |               | Left             | Thru | Right |               | Left            | Thru | Right |               | Left            | Thru | Right |               |
| 8:00 AM - 9:00 AM | 0                | 1    | 0     | 0             | 0                | 0    | 0     | 0             | 0               | 0    | 0     | 0             | 0               | 0    | 0     | 0             |
| 4:00 PM - 5:00 PM | 0                | 1    | 0     | 0             | 0                | 0    | 0     | 0             | 0               | 0    | 0     | 0             | 0               | 0    | 0     | 0             |

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





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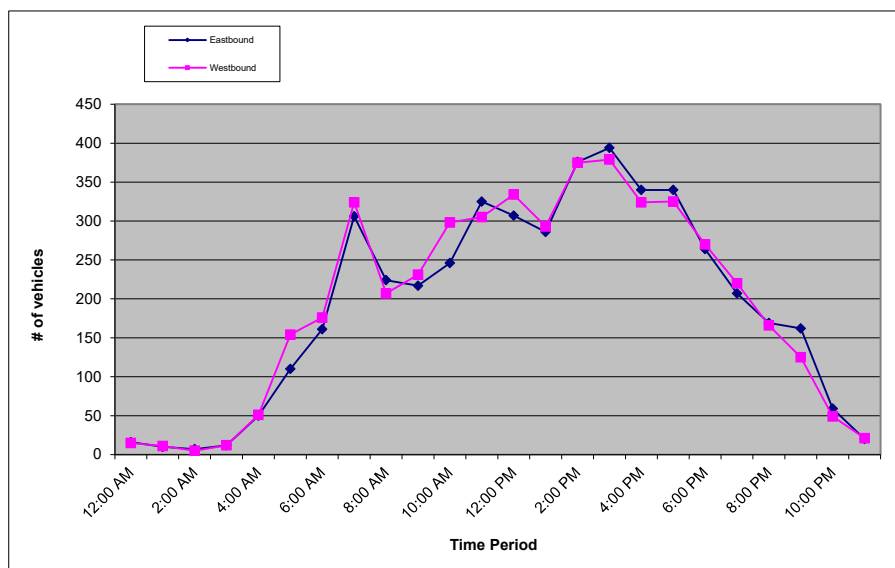
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** Kern St (SR33) **LATITUDE** 35.14327294  
**SEGMENT** btwn 10th St / 6th St **LONGITUDE** -119.4601627  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 4

|          | Eastbound |     |     |     |       | Westbound |     |     |     |       | Hourly |
|----------|-----------|-----|-----|-----|-------|-----------|-----|-----|-----|-------|--------|
| Hour     | 1st       | 2nd | 3rd | 4th | Total | 1st       | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 6         | 3   | 3   | 4   | 16    | 5         | 1   | 6   | 3   | 15    | 31     |
| 1:00 AM  | 2         | 2   | 2   | 4   | 10    | 2         | 4   | 3   | 2   | 11    | 21     |
| 2:00 AM  | 2         | 0   | 4   | 1   | 7     | 1         | 1   | 3   | 0   | 5     | 12     |
| 3:00 AM  | 2         | 4   | 4   | 2   | 12    | 2         | 4   | 3   | 3   | 12    | 24     |
| 4:00 AM  | 11        | 15  | 12  | 12  | 50    | 9         | 14  | 12  | 16  | 51    | 101    |
| 5:00 AM  | 22        | 24  | 37  | 27  | 110   | 26        | 34  | 51  | 43  | 154   | 264    |
| 6:00 AM  | 37        | 41  | 36  | 47  | 161   | 49        | 38  | 43  | 46  | 176   | 337    |
| 7:00 AM  | 54        | 71  | 89  | 92  | 306   | 36        | 79  | 120 | 89  | 324   | 630    |
| 8:00 AM  | 66        | 61  | 43  | 54  | 224   | 60        | 48  | 43  | 56  | 207   | 431    |
| 9:00 AM  | 55        | 50  | 56  | 56  | 217   | 53        | 61  | 58  | 59  | 231   | 448    |
| 10:00 AM | 61        | 58  | 55  | 72  | 246   | 72        | 64  | 67  | 95  | 298   | 544    |
| 11:00 AM | 96        | 83  | 78  | 68  | 325   | 74        | 74  | 82  | 75  | 305   | 630    |
| 12:00 PM | 84        | 83  | 71  | 69  | 307   | 80        | 92  | 86  | 76  | 334   | 641    |
| 1:00 PM  | 83        | 74  | 65  | 64  | 286   | 72        | 69  | 69  | 83  | 293   | 579    |
| 2:00 PM  | 84        | 102 | 87  | 103 | 376   | 92        | 85  | 105 | 93  | 375   | 751    |
| 3:00 PM  | 105       | 88  | 102 | 99  | 394   | 104       | 92  | 102 | 81  | 379   | 773    |
| 4:00 PM  | 93        | 70  | 81  | 96  | 340   | 88        | 76  | 79  | 81  | 324   | 664    |
| 5:00 PM  | 90        | 73  | 96  | 81  | 340   | 85        | 84  | 83  | 73  | 325   | 665    |
| 6:00 PM  | 74        | 61  | 67  | 62  | 264   | 83        | 72  | 54  | 61  | 270   | 534    |
| 7:00 PM  | 61        | 51  | 57  | 38  | 207   | 58        | 51  | 56  | 55  | 220   | 427    |
| 8:00 PM  | 54        | 34  | 50  | 31  | 169   | 44        | 37  | 43  | 42  | 166   | 335    |
| 9:00 PM  | 47        | 48  | 35  | 32  | 162   | 38        | 31  | 29  | 27  | 125   | 287    |
| 10:00 PM | 27        | 13  | 9   | 10  | 59    | 15        | 15  | 10  | 9   | 49    | 108    |
| 11:00 PM | 8         | 4   | 3   | 5   | 20    | 9         | 3   | 3   | 6   | 21    | 41     |
| Total    | 49.7%     |     |     |     | 4608  | 50.3%     |     |     |     | 4670  |        |
|          | 9278      |     |     |     |       |           |     |     |     |       |        |

**AM%** **37.4%** **AM Peak 666** **7:15 am to 8:15 am** **AM P.H.F.** **0.80**  
**PM%** **62.6%** **PM Peak 789** **2:45 pm to 3:45 pm** **PM P.H.F.** **0.94**





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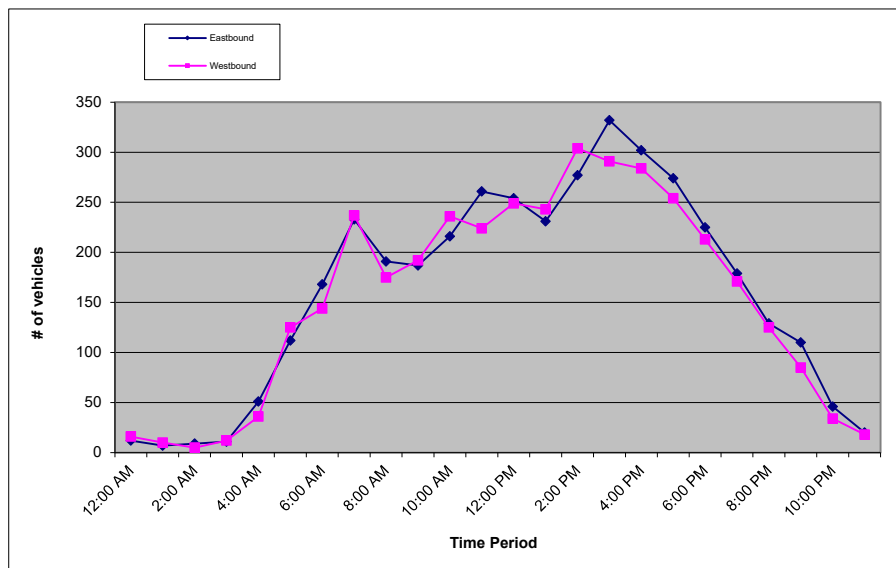
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** Kern St (SR33) **LATITUDE** 35.14207405  
**SEGMENT** btwn 6th St / 1st St **LONGITUDE** -119.4563608  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 4

|          | Eastbound |     |     |     |       | Westbound |     |     |     |       | Hourly |
|----------|-----------|-----|-----|-----|-------|-----------|-----|-----|-----|-------|--------|
| Hour     | 1st       | 2nd | 3rd | 4th | Total | 1st       | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 2         | 4   | 4   | 2   | 12    | 5         | 2   | 6   | 3   | 16    | 28     |
| 1:00 AM  | 0         | 1   | 4   | 2   | 7     | 2         | 6   | 2   | 0   | 10    | 17     |
| 2:00 AM  | 2         | 2   | 4   | 1   | 9     | 1         | 1   | 3   | 0   | 5     | 14     |
| 3:00 AM  | 1         | 3   | 5   | 2   | 11    | 2         | 3   | 3   | 4   | 12    | 23     |
| 4:00 AM  | 9         | 12  | 12  | 18  | 51    | 7         | 12  | 7   | 10  | 36    | 87     |
| 5:00 AM  | 16        | 22  | 37  | 37  | 112   | 24        | 25  | 35  | 41  | 125   | 237    |
| 6:00 AM  | 40        | 50  | 37  | 41  | 168   | 35        | 36  | 31  | 42  | 144   | 312    |
| 7:00 AM  | 41        | 49  | 75  | 68  | 233   | 36        | 59  | 77  | 65  | 237   | 470    |
| 8:00 AM  | 52        | 56  | 41  | 42  | 191   | 47        | 39  | 44  | 45  | 175   | 366    |
| 9:00 AM  | 47        | 44  | 49  | 47  | 187   | 41        | 47  | 56  | 48  | 192   | 379    |
| 10:00 AM | 56        | 50  | 48  | 62  | 216   | 46        | 53  | 57  | 80  | 236   | 452    |
| 11:00 AM | 72        | 64  | 62  | 63  | 261   | 62        | 51  | 55  | 56  | 224   | 485    |
| 12:00 PM | 58        | 78  | 54  | 64  | 254   | 59        | 63  | 71  | 56  | 249   | 503    |
| 1:00 PM  | 67        | 68  | 44  | 52  | 231   | 72        | 51  | 50  | 70  | 243   | 474    |
| 2:00 PM  | 75        | 81  | 60  | 61  | 277   | 70        | 66  | 81  | 87  | 304   | 581    |
| 3:00 PM  | 80        | 67  | 96  | 89  | 332   | 82        | 52  | 79  | 78  | 291   | 623    |
| 4:00 PM  | 82        | 73  | 74  | 73  | 302   | 77        | 72  | 69  | 66  | 284   | 586    |
| 5:00 PM  | 59        | 66  | 75  | 74  | 274   | 56        | 69  | 74  | 55  | 254   | 528    |
| 6:00 PM  | 62        | 54  | 56  | 53  | 225   | 53        | 67  | 44  | 49  | 213   | 438    |
| 7:00 PM  | 41        | 50  | 51  | 37  | 179   | 44        | 52  | 43  | 32  | 171   | 350    |
| 8:00 PM  | 42        | 29  | 29  | 29  | 129   | 31        | 28  | 40  | 26  | 125   | 254    |
| 9:00 PM  | 35        | 35  | 22  | 18  | 110   | 28        | 25  | 18  | 14  | 85    | 195    |
| 10:00 PM | 16        | 12  | 10  | 8   | 46    | 12        | 11  | 5   | 6   | 34    | 80     |
| 11:00 PM | 8         | 5   | 3   | 4   | 20    | 6         | 4   | 4   | 4   | 18    | 38     |
| Total    | 51.0%     |     |     |     | 3837  | 49.0%     |     |     |     | 3683  |        |
|          | 7520      |     |     |     |       |           |     |     |     |       |        |

**AM%** **38.2%** **AM Peak 508** **10:45 am to 11:45 am** **AM P.H.F.** **0.89**  
**PM%** **61.8%** **PM Peak 646** **3:30 pm to 4:30 pm** **PM P.H.F.** **0.92**





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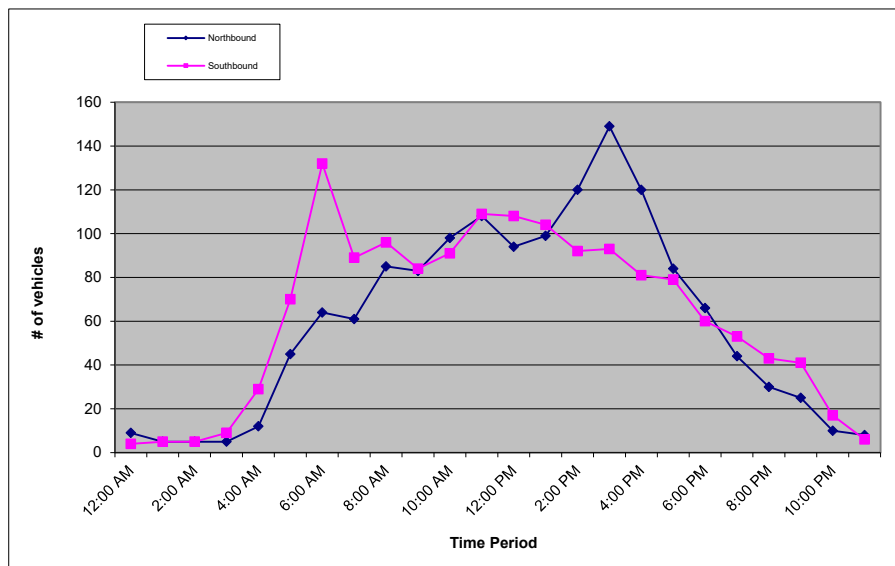
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** Westside Hwy (SR 33) **LATITUDE** 35.139115  
**SEGMENT** btwn 1st St / Center St **LONGITUDE** -119.4491566  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 2

|          | Northbound |     |     |     |       | Southbound |     |     |     |       | Hourly |
|----------|------------|-----|-----|-----|-------|------------|-----|-----|-----|-------|--------|
| Hour     | 1st        | 2nd | 3rd | 4th | Total | 1st        | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 2          | 3   | 2   | 2   | 9     | 1          | 1   | 1   | 1   | 4     | 13     |
| 1:00 AM  | 2          | 2   | 1   | 0   | 5     | 2          | 1   | 0   | 2   | 5     | 10     |
| 2:00 AM  | 2          | 0   | 3   | 0   | 5     | 0          | 0   | 3   | 2   | 5     | 10     |
| 3:00 AM  | 1          | 2   | 1   | 1   | 5     | 1          | 2   | 4   | 2   | 9     | 14     |
| 4:00 AM  | 3          | 5   | 1   | 3   | 12    | 5          | 8   | 8   | 8   | 29    | 41     |
| 5:00 AM  | 6          | 6   | 21  | 12  | 45    | 5          | 16  | 24  | 25  | 70    | 115    |
| 6:00 AM  | 15         | 19  | 12  | 18  | 64    | 33         | 41  | 34  | 24  | 132   | 196    |
| 7:00 AM  | 14         | 20  | 19  | 8   | 61    | 18         | 25  | 24  | 22  | 89    | 150    |
| 8:00 AM  | 24         | 22  | 25  | 14  | 85    | 23         | 31  | 22  | 20  | 96    | 181    |
| 9:00 AM  | 19         | 20  | 23  | 21  | 83    | 24         | 18  | 23  | 19  | 84    | 167    |
| 10:00 AM | 18         | 24  | 24  | 32  | 98    | 25         | 21  | 22  | 23  | 91    | 189    |
| 11:00 AM | 20         | 28  | 34  | 26  | 108   | 33         | 26  | 21  | 29  | 109   | 217    |
| 12:00 PM | 30         | 22  | 24  | 18  | 94    | 21         | 37  | 24  | 26  | 108   | 202    |
| 1:00 PM  | 27         | 22  | 20  | 30  | 99    | 27         | 29  | 23  | 25  | 104   | 203    |
| 2:00 PM  | 22         | 30  | 31  | 37  | 120   | 23         | 24  | 23  | 22  | 92    | 212    |
| 3:00 PM  | 33         | 24  | 45  | 47  | 149   | 21         | 23  | 25  | 24  | 93    | 242    |
| 4:00 PM  | 37         | 26  | 31  | 26  | 120   | 23         | 23  | 16  | 19  | 81    | 201    |
| 5:00 PM  | 22         | 16  | 21  | 25  | 84    | 16         | 16  | 26  | 21  | 79    | 163    |
| 6:00 PM  | 21         | 22  | 11  | 12  | 66    | 17         | 11  | 19  | 13  | 60    | 126    |
| 7:00 PM  | 11         | 14  | 10  | 9   | 44    | 16         | 17  | 9   | 11  | 53    | 97     |
| 8:00 PM  | 9          | 6   | 9   | 6   | 30    | 15         | 8   | 9   | 11  | 43    | 73     |
| 9:00 PM  | 7          | 11  | 5   | 2   | 25    | 12         | 10  | 12  | 7   | 41    | 66     |
| 10:00 PM | 4          | 2   | 2   | 2   | 10    | 8          | 4   | 2   | 3   | 17    | 27     |
| 11:00 PM | 2          | 3   | 0   | 3   | 8     | 0          | 4   | 1   | 1   | 6     | 14     |
| Total    | 48.8%      |     |     |     | 1429  | 51.2%      |     |     |     | 1500  |        |
|          | 2929       |     |     |     |       |            |     |     |     |       |        |

**AM%** **44.5%** **AM Peak 217** **11:00 am to 12:00 pm** **AM P.H.F.** **0.99**  
**PM%** **55.5%** **PM Peak 250** **3:30 pm to 4:30 pm** **PM P.H.F.** **0.88**







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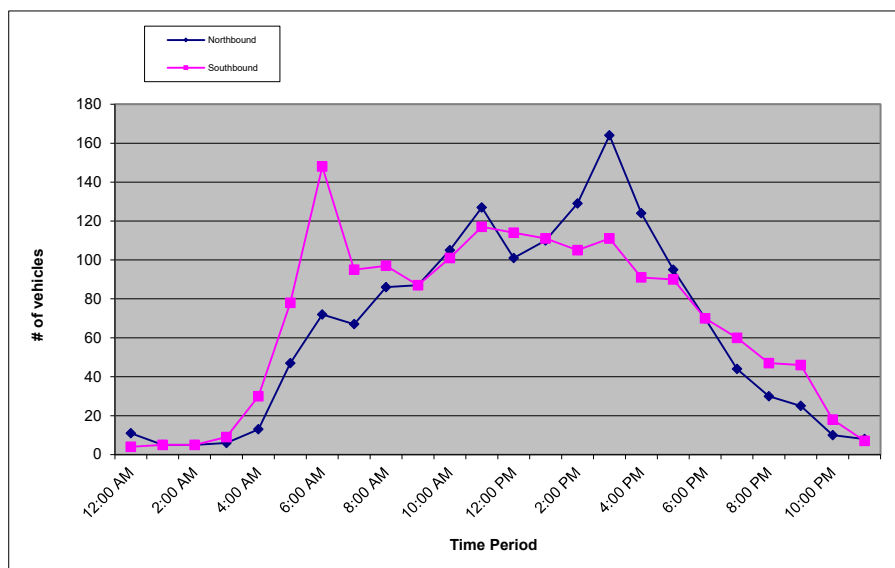
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** Westside Hwy (SR 33) **LATITUDE** 35.13842693  
**SEGMENT** btwn Center St / Main St **LONGITUDE** -119.4487852  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 2

|          | Northbound |     |     |     |       | Southbound |     |     |     |       | Hourly |
|----------|------------|-----|-----|-----|-------|------------|-----|-----|-----|-------|--------|
| Hour     | 1st        | 2nd | 3rd | 4th | Total | 1st        | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 3          | 3   | 2   | 3   | 11    | 1          | 1   | 1   | 1   | 4     | 15     |
| 1:00 AM  | 2          | 2   | 1   | 0   | 5     | 2          | 1   | 0   | 2   | 5     | 10     |
| 2:00 AM  | 2          | 0   | 3   | 0   | 5     | 0          | 0   | 3   | 2   | 5     | 10     |
| 3:00 AM  | 1          | 2   | 1   | 2   | 6     | 1          | 2   | 4   | 2   | 9     | 15     |
| 4:00 AM  | 3          | 6   | 1   | 3   | 13    | 5          | 8   | 8   | 9   | 30    | 43     |
| 5:00 AM  | 6          | 6   | 23  | 12  | 47    | 5          | 17  | 26  | 30  | 78    | 125    |
| 6:00 AM  | 17         | 21  | 13  | 21  | 72    | 36         | 46  | 37  | 29  | 148   | 220    |
| 7:00 AM  | 16         | 21  | 20  | 10  | 67    | 19         | 26  | 27  | 23  | 95    | 162    |
| 8:00 AM  | 24         | 22  | 25  | 15  | 86    | 21         | 31  | 23  | 22  | 97    | 183    |
| 9:00 AM  | 19         | 20  | 23  | 25  | 87    | 23         | 19  | 25  | 20  | 87    | 174    |
| 10:00 AM | 18         | 28  | 26  | 33  | 105   | 27         | 20  | 26  | 28  | 101   | 206    |
| 11:00 AM | 27         | 32  | 37  | 31  | 127   | 31         | 26  | 28  | 32  | 117   | 244    |
| 12:00 PM | 31         | 24  | 25  | 21  | 101   | 24         | 38  | 26  | 26  | 114   | 215    |
| 1:00 PM  | 31         | 26  | 23  | 30  | 110   | 28         | 30  | 27  | 26  | 111   | 221    |
| 2:00 PM  | 27         | 27  | 35  | 40  | 129   | 25         | 27  | 25  | 28  | 105   | 234    |
| 3:00 PM  | 37         | 27  | 49  | 51  | 164   | 26         | 28  | 30  | 27  | 111   | 275    |
| 4:00 PM  | 39         | 27  | 31  | 27  | 124   | 23         | 25  | 21  | 22  | 91    | 215    |
| 5:00 PM  | 24         | 18  | 23  | 30  | 95    | 18         | 20  | 29  | 23  | 90    | 185    |
| 6:00 PM  | 23         | 25  | 10  | 12  | 70    | 20         | 15  | 20  | 15  | 70    | 140    |
| 7:00 PM  | 10         | 14  | 11  | 9   | 44    | 19         | 17  | 13  | 11  | 60    | 104    |
| 8:00 PM  | 9          | 6   | 9   | 6   | 30    | 16         | 9   | 10  | 12  | 47    | 77     |
| 9:00 PM  | 7          | 11  | 5   | 2   | 25    | 13         | 12  | 13  | 8   | 46    | 71     |
| 10:00 PM | 4          | 2   | 2   | 2   | 10    | 8          | 4   | 3   | 3   | 18    | 28     |
| 11:00 PM | 2          | 3   | 0   | 3   | 8     | 1          | 4   | 1   | 1   | 7     | 15     |
| Total    | 48.4%      |     |     |     | 1541  | 51.6%      |     |     |     | 1646  |        |
|          | 3187       |     |     |     |       |            |     |     |     |       |        |

**AM%** **44.1%** **AM Peak 244** **11:00 am to 12:00 pm** **AM P.H.F.** **0.94**  
**PM%** **55.9%** **PM Peak 275** **3:00 pm to 4:00 pm** **PM P.H.F.** **0.87**





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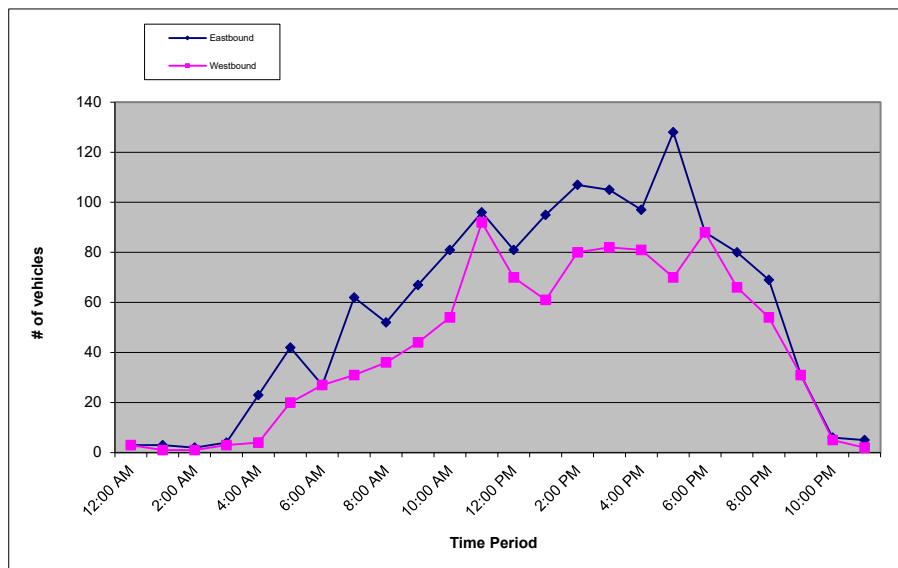
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** Center St **LATITUDE** 35.14275569  
**SEGMENT** btwn 10th St / 6th St **LONGITUDE** -119.4648361  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 2

|          | Eastbound |     |     |     |       | Westbound |     |     |     |       | Hourly |
|----------|-----------|-----|-----|-----|-------|-----------|-----|-----|-----|-------|--------|
| Hour     | 1st       | 2nd | 3rd | 4th | Total | 1st       | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 0         | 0   | 1   | 2   | 3     | 1         | 1   | 1   | 0   | 3     | 6      |
| 1:00 AM  | 0         | 0   | 3   | 0   | 3     | 0         | 0   | 1   | 0   | 1     | 4      |
| 2:00 AM  | 0         | 0   | 0   | 2   | 2     | 0         | 0   | 1   | 0   | 1     | 3      |
| 3:00 AM  | 0         | 1   | 1   | 2   | 4     | 0         | 0   | 1   | 2   | 3     | 7      |
| 4:00 AM  | 4         | 6   | 8   | 5   | 23    | 0         | 1   | 2   | 1   | 4     | 27     |
| 5:00 AM  | 13        | 15  | 6   | 8   | 42    | 4         | 4   | 6   | 6   | 20    | 62     |
| 6:00 AM  | 8         | 6   | 6   | 7   | 27    | 7         | 5   | 4   | 11  | 27    | 54     |
| 7:00 AM  | 12        | 8   | 22  | 20  | 62    | 5         | 9   | 9   | 8   | 31    | 93     |
| 8:00 AM  | 22        | 9   | 9   | 12  | 52    | 5         | 9   | 7   | 15  | 36    | 88     |
| 9:00 AM  | 16        | 22  | 12  | 17  | 67    | 5         | 14  | 14  | 11  | 44    | 111    |
| 10:00 AM | 23        | 18  | 26  | 14  | 81    | 8         | 13  | 13  | 20  | 54    | 135    |
| 11:00 AM | 24        | 29  | 20  | 23  | 96    | 17        | 27  | 28  | 20  | 92    | 188    |
| 12:00 PM | 23        | 23  | 19  | 16  | 81    | 15        | 18  | 18  | 19  | 70    | 151    |
| 1:00 PM  | 25        | 20  | 20  | 30  | 95    | 22        | 18  | 6   | 15  | 61    | 156    |
| 2:00 PM  | 20        | 27  | 27  | 33  | 107   | 20        | 20  | 24  | 16  | 80    | 187    |
| 3:00 PM  | 28        | 21  | 29  | 27  | 105   | 20        | 15  | 25  | 22  | 82    | 187    |
| 4:00 PM  | 30        | 25  | 20  | 22  | 97    | 24        | 20  | 19  | 18  | 81    | 178    |
| 5:00 PM  | 32        | 33  | 27  | 36  | 128   | 26        | 13  | 13  | 18  | 70    | 198    |
| 6:00 PM  | 27        | 17  | 20  | 24  | 88    | 28        | 25  | 17  | 18  | 88    | 176    |
| 7:00 PM  | 26        | 19  | 12  | 23  | 80    | 20        | 17  | 16  | 13  | 66    | 146    |
| 8:00 PM  | 26        | 18  | 10  | 15  | 69    | 16        | 14  | 14  | 10  | 54    | 123    |
| 9:00 PM  | 11        | 6   | 8   | 6   | 31    | 4         | 12  | 5   | 10  | 31    | 62     |
| 10:00 PM | 4         | 1   | 0   | 1   | 6     | 2         | 3   | 0   | 0   | 5     | 11     |
| 11:00 PM | 2         | 1   | 2   | 0   | 5     | 0         | 1   | 0   | 1   | 2     | 7      |
| Total    | 57.4%     |     |     |     | 1354  | 42.6%     |     |     |     | 1006  |        |
|          | 2360      |     |     |     |       |           |     |     |     |       |        |

**AM%** **33.0%** **AM Peak 188** **11:00 am to 12:00 pm** **AM P.H.F.** **0.84**  
**PM%** **67.0%** **PM Peak 198** **5:00 pm to 6:00 pm** **PM P.H.F.** **0.85**





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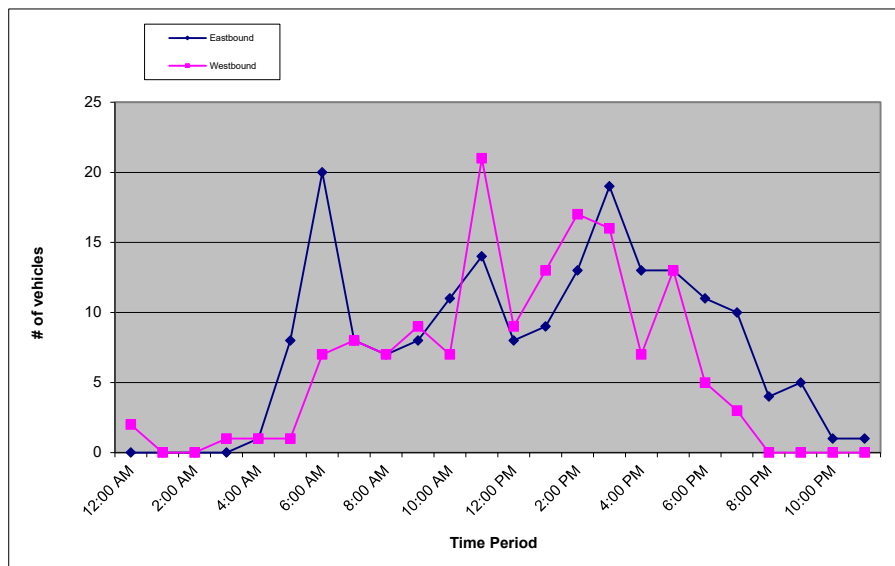
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** Center St **LATITUDE** 35.1386581  
**SEGMENT** btwn 6th St / SR 33 **LONGITUDE** -119.4493748  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 2

|          | Eastbound |     |     |     |       | Westbound |     |     |     |       | Hourly |
|----------|-----------|-----|-----|-----|-------|-----------|-----|-----|-----|-------|--------|
| Hour     | 1st       | 2nd | 3rd | 4th | Total | 1st       | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 0         | 0   | 0   | 0   | 0     | 1         | 0   | 0   | 1   | 2     | 2      |
| 1:00 AM  | 0         | 0   | 0   | 0   | 0     | 0         | 0   | 0   | 0   | 0     | 0      |
| 2:00 AM  | 0         | 0   | 0   | 0   | 0     | 0         | 0   | 0   | 0   | 0     | 0      |
| 3:00 AM  | 0         | 0   | 0   | 0   | 0     | 0         | 0   | 0   | 1   | 1     | 1      |
| 4:00 AM  | 0         | 0   | 0   | 1   | 1     | 0         | 1   | 0   | 0   | 1     | 2      |
| 5:00 AM  | 0         | 1   | 2   | 5   | 8     | 0         | 0   | 1   | 0   | 1     | 9      |
| 6:00 AM  | 3         | 6   | 5   | 6   | 20    | 0         | 1   | 3   | 3   | 7     | 27     |
| 7:00 AM  | 1         | 2   | 4   | 1   | 8     | 2         | 2   | 2   | 2   | 8     | 16     |
| 8:00 AM  | 1         | 1   | 2   | 3   | 7     | 3         | 1   | 1   | 2   | 7     | 14     |
| 9:00 AM  | 1         | 2   | 3   | 2   | 8     | 2         | 1   | 1   | 5   | 9     | 17     |
| 10:00 AM | 3         | 0   | 4   | 4   | 11    | 1         | 3   | 1   | 2   | 7     | 18     |
| 11:00 AM | 2         | 2   | 6   | 4   | 14    | 7         | 4   | 4   | 6   | 21    | 35     |
| 12:00 PM | 4         | 2   | 2   | 0   | 8     | 2         | 3   | 1   | 3   | 9     | 17     |
| 1:00 PM  | 1         | 3   | 4   | 1   | 9     | 4         | 6   | 3   | 0   | 13    | 22     |
| 2:00 PM  | 3         | 3   | 2   | 5   | 13    | 6         | 2   | 5   | 4   | 17    | 30     |
| 3:00 PM  | 4         | 5   | 5   | 5   | 19    | 4         | 3   | 4   | 5   | 16    | 35     |
| 4:00 PM  | 3         | 2   | 5   | 3   | 13    | 5         | 1   | 0   | 1   | 7     | 20     |
| 5:00 PM  | 3         | 5   | 3   | 2   | 13    | 3         | 3   | 2   | 5   | 13    | 26     |
| 6:00 PM  | 3         | 4   | 2   | 2   | 11    | 2         | 3   | 0   | 0   | 5     | 16     |
| 7:00 PM  | 4         | 0   | 4   | 2   | 10    | 0         | 0   | 1   | 2   | 3     | 13     |
| 8:00 PM  | 1         | 1   | 1   | 1   | 4     | 0         | 0   | 0   | 0   | 0     | 4      |
| 9:00 PM  | 1         | 2   | 1   | 1   | 5     | 0         | 0   | 0   | 0   | 0     | 5      |
| 10:00 PM | 0         | 0   | 1   | 0   | 1     | 0         | 0   | 0   | 0   | 0     | 1      |
| 11:00 PM | 1         | 0   | 0   | 0   | 1     | 0         | 0   | 0   | 0   | 0     | 1      |
| Total    | 55.6%     |     |     |     | 184   | 44.4%     |     |     |     | 147   |        |
|          | 331       |     |     |     |       |           |     |     |     |       |        |

**AM%** 42.6% **AM Peak** 35 **11:00 am to 12:00 pm** **AM P.H.F.** 0.88  
**PM%** 57.4% **PM Peak** 35 **3:15 pm to 4:15 pm** **PM P.H.F.** 0.88





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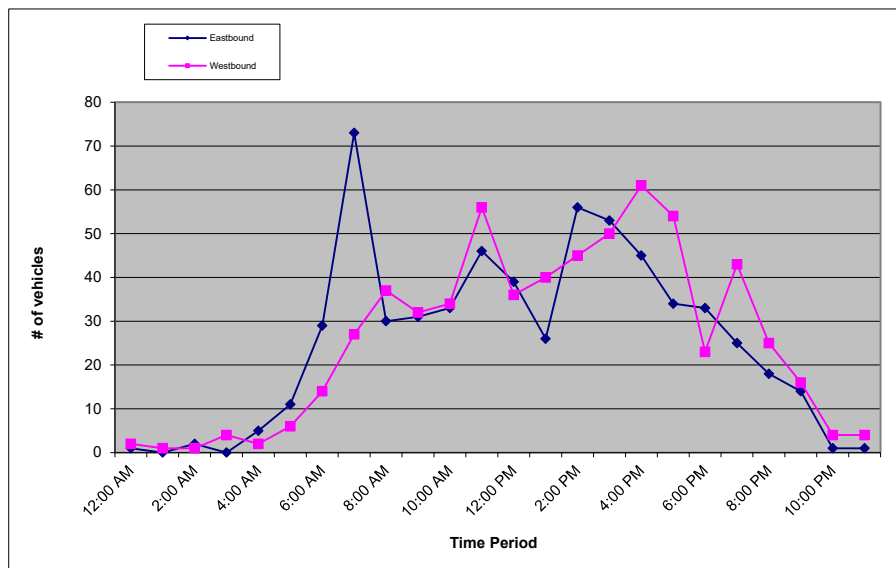
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** Main St **LATITUDE** 35.14063427  
**SEGMENT** btwn 10th St / 6th St **LONGITUDE** -119.4612194  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 2

|          | Eastbound |     |     |     |       | Westbound |     |     |     |       | Hourly |
|----------|-----------|-----|-----|-----|-------|-----------|-----|-----|-----|-------|--------|
| Hour     | 1st       | 2nd | 3rd | 4th | Total | 1st       | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 1         | 0   | 0   | 0   | 1     | 1         | 1   | 0   | 0   | 2     | 3      |
| 1:00 AM  | 0         | 0   | 0   | 0   | 0     | 0         | 0   | 0   | 1   | 1     | 1      |
| 2:00 AM  | 0         | 0   | 1   | 1   | 2     | 1         | 0   | 0   | 0   | 1     | 3      |
| 3:00 AM  | 0         | 0   | 0   | 0   | 0     | 0         | 1   | 3   | 0   | 4     | 4      |
| 4:00 AM  | 1         | 1   | 0   | 3   | 5     | 0         | 0   | 1   | 1   | 2     | 7      |
| 5:00 AM  | 2         | 1   | 3   | 5   | 11    | 0         | 3   | 1   | 2   | 6     | 17     |
| 6:00 AM  | 4         | 8   | 5   | 12  | 29    | 2         | 2   | 4   | 6   | 14    | 43     |
| 7:00 AM  | 12        | 17  | 26  | 18  | 73    | 9         | 3   | 8   | 7   | 27    | 100    |
| 8:00 AM  | 6         | 7   | 9   | 8   | 30    | 15        | 11  | 6   | 5   | 37    | 67     |
| 9:00 AM  | 6         | 7   | 7   | 11  | 31    | 4         | 9   | 11  | 8   | 32    | 63     |
| 10:00 AM | 14        | 2   | 7   | 10  | 33    | 6         | 6   | 14  | 8   | 34    | 67     |
| 11:00 AM | 9         | 7   | 12  | 18  | 46    | 10        | 20  | 8   | 18  | 56    | 102    |
| 12:00 PM | 12        | 8   | 12  | 7   | 39    | 13        | 9   | 5   | 9   | 36    | 75     |
| 1:00 PM  | 6         | 6   | 6   | 8   | 26    | 12        | 9   | 10  | 9   | 40    | 66     |
| 2:00 PM  | 17        | 13  | 16  | 10  | 56    | 6         | 12  | 17  | 10  | 45    | 101    |
| 3:00 PM  | 15        | 16  | 12  | 10  | 53    | 12        | 12  | 11  | 15  | 50    | 103    |
| 4:00 PM  | 11        | 16  | 7   | 11  | 45    | 17        | 8   | 17  | 19  | 61    | 106    |
| 5:00 PM  | 6         | 13  | 7   | 8   | 34    | 19        | 16  | 7   | 12  | 54    | 88     |
| 6:00 PM  | 10        | 5   | 8   | 10  | 33    | 5         | 8   | 3   | 7   | 23    | 56     |
| 7:00 PM  | 10        | 3   | 5   | 7   | 25    | 14        | 11  | 7   | 11  | 43    | 68     |
| 8:00 PM  | 7         | 3   | 5   | 3   | 18    | 6         | 9   | 6   | 4   | 25    | 43     |
| 9:00 PM  | 9         | 2   | 1   | 2   | 14    | 6         | 4   | 3   | 3   | 16    | 30     |
| 10:00 PM | 0         | 0   | 1   | 0   | 1     | 2         | 0   | 0   | 2   | 4     | 5      |
| 11:00 PM | 0         | 0   | 1   | 0   | 1     | 0         | 2   | 0   | 2   | 4     | 5      |
| Total    | 49.6%     |     |     |     | 606   | 50.4%     |     |     |     | 617   |        |
|          | 1223      |     |     |     |       |           |     |     |     |       |        |

**AM%** **39.0%** **AM Peak 102** **11:00 am to 12:00 pm** **AM P.H.F.** **0.71**  
**PM%** **61.0%** **PM Peak 108** **4:30 pm to 5:30 pm** **PM P.H.F.** **0.90**





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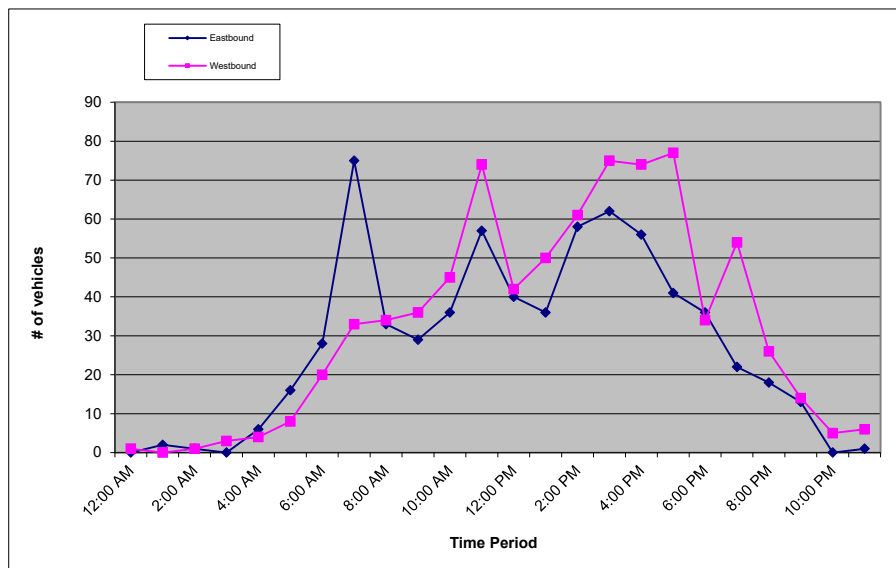
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
5620 Friars Rd  
San Diego, CA 92110

**STREET** Main St **LATITUDE** 35.14043638  
**SEGMENT** btwn 6th St / SR 33 **LONGITUDE** -119.4605772  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 2

|          | Eastbound |     |     |     |       | Westbound |     |     |     |       | Hourly |
|----------|-----------|-----|-----|-----|-------|-----------|-----|-----|-----|-------|--------|
| Hour     | 1st       | 2nd | 3rd | 4th | Total | 1st       | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 0         | 0   | 0   | 0   | 0     | 0         | 1   | 0   | 0   | 1     | 1      |
| 1:00 AM  | 1         | 0   | 1   | 0   | 2     | 0         | 0   | 0   | 0   | 0     | 2      |
| 2:00 AM  | 0         | 0   | 1   | 0   | 1     | 0         | 0   | 0   | 1   | 1     | 2      |
| 3:00 AM  | 0         | 0   | 0   | 0   | 0     | 0         | 0   | 2   | 1   | 3     | 3      |
| 4:00 AM  | 1         | 1   | 1   | 3   | 6     | 0         | 1   | 1   | 2   | 4     | 10     |
| 5:00 AM  | 3         | 2   | 6   | 5   | 16    | 0         | 2   | 3   | 3   | 8     | 24     |
| 6:00 AM  | 6         | 7   | 3   | 12  | 28    | 2         | 5   | 5   | 8   | 20    | 48     |
| 7:00 AM  | 13        | 17  | 26  | 19  | 75    | 10        | 5   | 10  | 8   | 33    | 108    |
| 8:00 AM  | 9         | 11  | 6   | 7   | 33    | 13        | 8   | 7   | 6   | 34    | 67     |
| 9:00 AM  | 5         | 6   | 8   | 10  | 29    | 7         | 7   | 12  | 10  | 36    | 65     |
| 10:00 AM | 13        | 7   | 7   | 9   | 36    | 10        | 8   | 12  | 15  | 45    | 81     |
| 11:00 AM | 11        | 10  | 17  | 19  | 57    | 15        | 22  | 11  | 26  | 74    | 131    |
| 12:00 PM | 12        | 8   | 10  | 10  | 40    | 17        | 13  | 7   | 5   | 42    | 82     |
| 1:00 PM  | 8         | 6   | 7   | 15  | 36    | 11        | 13  | 11  | 15  | 50    | 86     |
| 2:00 PM  | 10        | 18  | 19  | 11  | 58    | 9         | 17  | 24  | 11  | 61    | 119    |
| 3:00 PM  | 15        | 14  | 19  | 14  | 62    | 15        | 19  | 16  | 25  | 75    | 137    |
| 4:00 PM  | 15        | 18  | 9   | 14  | 56    | 23        | 11  | 24  | 16  | 74    | 130    |
| 5:00 PM  | 6         | 14  | 10  | 11  | 41    | 26        | 19  | 11  | 21  | 77    | 118    |
| 6:00 PM  | 16        | 6   | 7   | 7   | 36    | 13        | 6   | 7   | 8   | 34    | 70     |
| 7:00 PM  | 7         | 2   | 7   | 6   | 22    | 19        | 8   | 12  | 15  | 54    | 76     |
| 8:00 PM  | 8         | 2   | 5   | 3   | 18    | 6         | 10  | 4   | 6   | 26    | 44     |
| 9:00 PM  | 7         | 4   | 0   | 2   | 13    | 4         | 4   | 4   | 2   | 14    | 27     |
| 10:00 PM | 0         | 0   | 0   | 0   | 0     | 1         | 1   | 1   | 2   | 5     | 5      |
| 11:00 PM | 0         | 0   | 1   | 0   | 1     | 1         | 2   | 0   | 3   | 6     | 7      |
| Total    | 46.2%     |     |     |     | 666   | 53.8%     |     |     |     | 777   |        |
|          | 1443      |     |     |     |       |           |     |     |     |       |        |

**AM%** **37.6%** **AM Peak 131** **11:00 am to 12:00 pm** **AM P.H.F. 0.73**  
**PM%** **62.4%** **PM Peak 145** **3:15 pm to 4:15 pm** **PM P.H.F. 0.93**





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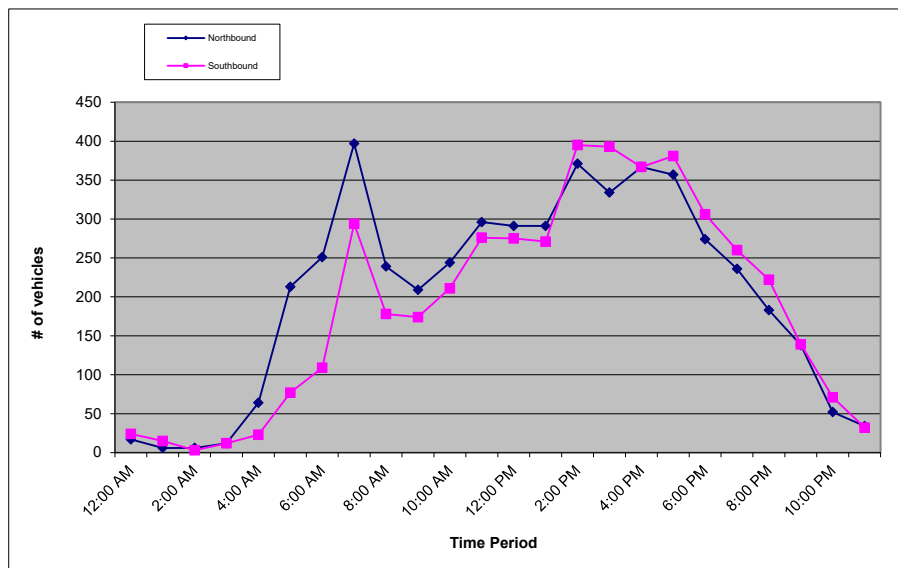
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** 10th St **LATITUDE** 35.14316411  
**SEGMENT** btwn SR 33 / Center St **LONGITUDE** -119.4651725  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 4

|          | Northbound |     |     |     |       | Southbound |     |     |     |       | Hourly |
|----------|------------|-----|-----|-----|-------|------------|-----|-----|-----|-------|--------|
| Hour     | 1st        | 2nd | 3rd | 4th | Total | 1st        | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 6          | 5   | 2   | 4   | 17    | 11         | 7   | 5   | 1   | 24    | 41     |
| 1:00 AM  | 3          | 0   | 3   | 0   | 6     | 3          | 5   | 3   | 4   | 15    | 21     |
| 2:00 AM  | 1          | 3   | 2   | 0   | 6     | 1          | 0   | 1   | 1   | 3     | 9      |
| 3:00 AM  | 2          | 2   | 4   | 4   | 12    | 0          | 5   | 5   | 2   | 12    | 24     |
| 4:00 AM  | 9          | 10  | 19  | 26  | 64    | 0          | 4   | 7   | 12  | 23    | 87     |
| 5:00 AM  | 46         | 50  | 67  | 50  | 213   | 13         | 12  | 23  | 29  | 77    | 290    |
| 6:00 AM  | 76         | 55  | 56  | 64  | 251   | 20         | 30  | 26  | 33  | 109   | 360    |
| 7:00 AM  | 74         | 110 | 122 | 91  | 397   | 45         | 49  | 113 | 87  | 294   | 691    |
| 8:00 AM  | 68         | 63  | 55  | 53  | 239   | 59         | 47  | 37  | 35  | 178   | 417    |
| 9:00 AM  | 46         | 53  | 46  | 64  | 209   | 36         | 57  | 38  | 43  | 174   | 383    |
| 10:00 AM | 51         | 47  | 62  | 84  | 244   | 54         | 45  | 43  | 69  | 211   | 455    |
| 11:00 AM | 71         | 70  | 78  | 77  | 296   | 86         | 65  | 61  | 64  | 276   | 572    |
| 12:00 PM | 77         | 86  | 53  | 75  | 291   | 67         | 77  | 69  | 62  | 275   | 566    |
| 1:00 PM  | 76         | 73  | 63  | 79  | 291   | 78         | 57  | 76  | 60  | 271   | 562    |
| 2:00 PM  | 91         | 94  | 88  | 98  | 371   | 82         | 117 | 104 | 92  | 395   | 766    |
| 3:00 PM  | 80         | 84  | 71  | 99  | 334   | 103        | 100 | 99  | 91  | 393   | 727    |
| 4:00 PM  | 85         | 88  | 92  | 102 | 367   | 89         | 90  | 101 | 87  | 367   | 734    |
| 5:00 PM  | 104        | 94  | 74  | 85  | 357   | 108        | 99  | 86  | 88  | 381   | 738    |
| 6:00 PM  | 77         | 68  | 60  | 69  | 274   | 85         | 84  | 62  | 75  | 306   | 580    |
| 7:00 PM  | 70         | 57  | 48  | 61  | 236   | 78         | 63  | 51  | 68  | 260   | 496    |
| 8:00 PM  | 54         | 55  | 42  | 32  | 183   | 61         | 66  | 48  | 47  | 222   | 405    |
| 9:00 PM  | 24         | 53  | 38  | 23  | 138   | 44         | 30  | 28  | 37  | 139   | 277    |
| 10:00 PM | 19         | 16  | 8   | 9   | 52    | 29         | 21  | 12  | 9   | 71    | 123    |
| 11:00 PM | 10         | 9   | 7   | 8   | 34    | 15         | 8   | 3   | 6   | 32    | 66     |
| Total    | 52.0%      |     |     |     | 4882  | 48.0%      |     |     |     | 4508  |        |
|          | 9390       |     |     |     |       |            |     |     |     |       |        |

**AM%** 35.7% **AM Peak** 699 **7:15 am to 8:15 am** **AM P.H.F.** 0.74  
**PM%** 64.3% **PM Peak** 776 **2:15 pm to 3:15 pm** **PM P.H.F.** 0.92





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

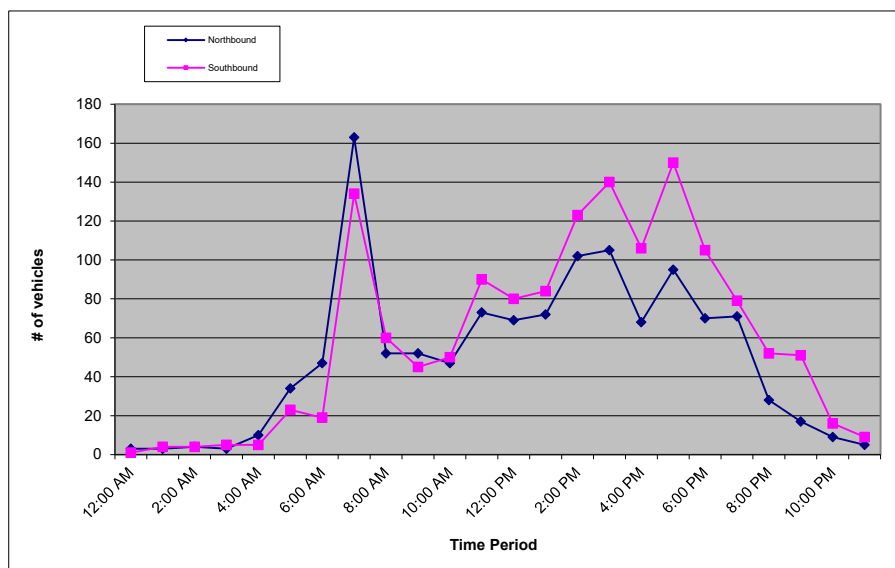
# 24 Hour Count Report

Prepared For: **Rick Engineering Company**  
 5620 Friars Rd  
 San Diego, CA 92110

**STREET** 6th St **LATITUDE** 35.14079557  
**SEGMENT** btwn SR 33 / Center St **LONGITUDE** -119.4607701  
**COLLECTION DATE** Tuesday, March 15, 2022 **WEATHER** Clear  
**NUMBER OF LANES** 4

|          | Northbound |     |     |     |       | Southbound |     |     |     |       | Hourly |
|----------|------------|-----|-----|-----|-------|------------|-----|-----|-----|-------|--------|
| Hour     | 1st        | 2nd | 3rd | 4th | Total | 1st        | 2nd | 3rd | 4th | Total | Totals |
| 12:00 AM | 0          | 1   | 1   | 1   | 3     | 1          | 0   | 0   | 0   | 1     | 4      |
| 1:00 AM  | 0          | 2   | 1   | 0   | 3     | 2          | 1   | 0   | 1   | 4     | 7      |
| 2:00 AM  | 0          | 1   | 0   | 3   | 4     | 2          | 1   | 1   | 0   | 4     | 8      |
| 3:00 AM  | 0          | 1   | 1   | 1   | 3     | 2          | 0   | 2   | 1   | 5     | 8      |
| 4:00 AM  | 4          | 0   | 2   | 4   | 10    | 0          | 1   | 1   | 3   | 5     | 15     |
| 5:00 AM  | 4          | 6   | 8   | 16  | 34    | 4          | 6   | 8   | 5   | 23    | 57     |
| 6:00 AM  | 15         | 4   | 6   | 22  | 47    | 8          | 5   | 1   | 5   | 19    | 66     |
| 7:00 AM  | 21         | 44  | 67  | 31  | 163   | 11         | 23  | 63  | 37  | 134   | 297    |
| 8:00 AM  | 15         | 15  | 12  | 10  | 52    | 28         | 17  | 8   | 7   | 60    | 112    |
| 9:00 AM  | 14         | 12  | 11  | 15  | 52    | 12         | 7   | 12  | 14  | 45    | 97     |
| 10:00 AM | 15         | 12  | 5   | 15  | 47    | 13         | 12  | 13  | 12  | 50    | 97     |
| 11:00 AM | 18         | 20  | 20  | 15  | 73    | 20         | 16  | 30  | 24  | 90    | 163    |
| 12:00 PM | 16         | 17  | 19  | 17  | 69    | 24         | 13  | 21  | 22  | 80    | 149    |
| 1:00 PM  | 15         | 19  | 14  | 24  | 72    | 25         | 15  | 21  | 23  | 84    | 156    |
| 2:00 PM  | 31         | 27  | 19  | 25  | 102   | 34         | 39  | 28  | 22  | 123   | 225    |
| 3:00 PM  | 31         | 25  | 25  | 24  | 105   | 35         | 41  | 31  | 33  | 140   | 245    |
| 4:00 PM  | 15         | 13  | 23  | 17  | 68    | 33         | 25  | 25  | 23  | 106   | 174    |
| 5:00 PM  | 22         | 21  | 25  | 27  | 95    | 34         | 31  | 46  | 39  | 150   | 245    |
| 6:00 PM  | 11         | 25  | 16  | 18  | 70    | 27         | 23  | 29  | 26  | 105   | 175    |
| 7:00 PM  | 19         | 11  | 22  | 19  | 71    | 20         | 18  | 23  | 18  | 79    | 150    |
| 8:00 PM  | 6          | 13  | 5   | 4   | 28    | 20         | 9   | 14  | 9   | 52    | 80     |
| 9:00 PM  | 6          | 5   | 4   | 2   | 17    | 15         | 18  | 8   | 10  | 51    | 68     |
| 10:00 PM | 1          | 3   | 3   | 2   | 9     | 5          | 3   | 3   | 5   | 16    | 25     |
| 11:00 PM | 2          | 1   | 0   | 2   | 5     | 5          | 3   | 1   | 0   | 9     | 14     |
| Total    | 45.6%      |     |     |     | 1202  | 54.4%      |     |     |     | 1435  |        |
|          | 2637       |     |     |     |       |            |     |     |     |       |        |

**AM%** **35.3%** **AM Peak 308** **7:15 am to 8:15 am** **AM P.H.F.** **0.59**  
**PM%** **64.7%** **PM Peak 245** **3:00 pm to 4:00 pm** **PM P.H.F.** **0.93**


























## **APPENDIX B**

### **EXISTING CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

# HCM 6th Signalized Intersection Summary

## 1: 10th Street & Kern St/Highway 33

Existing AM  
04/07/2022

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |   |  |  |  |
| Traffic Volume (veh/h)       | 123   | 230   | 54  | 75  | 199   | 58  | 67  | 181   | 129   | 57  | 174   | 91  |
| Future Volume (veh/h)        | 123   | 230   | 54  | 75  | 199   | 58  | 67  | 181   | 129   | 57  | 174   | 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  |   | 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         | 160   | 299   | 70  | 97  | 258   | 75  | 87  | 235   | 168   | 74  | 226   | 118   |
| Peak Hour Factor             | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 201   | 659   | 152   | 171   | 580   | 165   | 165   | 484   | 332   | 154   | 833   | 370   |
| Arrive On Green              | 0.11  | 0.23  | 0.23  | 0.10  | 0.21  | 0.21  | 0.09  | 0.24  | 0.24  | 0.09  | 0.23  | 0.23  |
| Sat Flow, veh/h              | 1781  | 2866  | 661   | 1781  | 2720  | 772   | 1781  | 2013  | 1380  | 1781  | 3554  | 1579  |
| Grp Volume(v), veh/h         | 160   | 184   | 185   | 97  | 166   | 167   | 87  | 206   | 197   | 74  | 226   | 118   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777  | 1750  | 1781  | 1777  | 1715  | 1781  | 1777  | 1616  | 1781  | 1777  | 1579  |
| Q Serve(g_s), s              | 6.2   | 6.3   | 6.5   | 3.7   | 5.8   | 6.0   | 3.3   | 7.1   | 7.5   | 2.8   | 3.7   | 4.4   |
| Cycle Q Clear(g_c), s        | 6.2   | 6.3   | 6.5   | 3.7   | 5.8   | 6.0   | 3.3   | 7.1   | 7.5   | 2.8   | 3.7   | 4.4   |
| Prop In Lane                 | 1.00  |   | 0.38  | 1.00  |   | 0.45  | 1.00  |   | 0.85  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h       | 201   | 409   | 403   | 171   | 379   | 366   | 165   | 427   | 388   | 154   | 833   | 370   |
| V/C Ratio(X)                 | 0.80  | 0.45  | 0.46  | 0.57  | 0.44  | 0.46  | 0.53  | 0.48  | 0.51  | 0.48  | 0.27  | 0.32  |
| Avail Cap(c_a), veh/h        | 477   | 1047  | 1032  | 284   | 854   | 825   | 259   | 827   | 752   | 234   | 1603  | 712   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 30.7  | 23.4  | 23.5  | 30.6  | 24.2  | 24.3  | 30.7  | 23.1  | 23.3  | 30.9  | 22.2  | 22.5  |
| Incr Delay (d2), s/veh       | 2.7   | 3.5   | 3.8   | 1.1   | 2.2   | 2.4   | 1.0   | 3.9   | 4.7   | 0.9   | 0.8   | 2.3   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 2.7   | 2.9   | 2.9   | 1.6   | 2.5   | 2.5   | 1.4   | 3.2   | 3.2   | 1.2   | 1.5   | 1.8   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 33.4  | 27.0  | 27.3  | 31.7  | 26.4  | 26.7  | 31.7  | 27.0  | 28.0  | 31.7  | 23.0  | 24.7  |
| LnGrp LOS                    | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   |
| Approach Vol, veh/h          |   | 529   |   |   | 430   |   |   | 490   |   |   | 418   |   |
| Approach Delay, s/veh        |   | 29.0  |   |   | 27.7  |   |   | 28.2  |   |   | 25.0  |   |
| Approach LOS                 |   | C   |   |   | C   |   |   | C   |   |   | C   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 12.5  | 23.1  | 12.3  | 23.0  | 13.7  | 21.9  | 11.8  | 23.5  |   |   |   |   |
| Change Period (Y+Rc), s      | * 5.7   | 6.8   | * 5.7   | 6.4   | * 5.7   | 6.8   | * 5.7   | 6.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | * 11  | 41.8  | * 10  | 32.0  | * 19  | 34.1  | * 9.3   | 33.0  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 5.7   | 8.5   | 5.3   | 6.4   | 8.2   | 8.0   | 4.8   | 9.5   |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 6.8   | 0.0   | 5.4   | 0.1   | 4.2   | 0.0   | 6.6   |   |   |   |   |

### Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 27.6 |
| HCM 6th LOS        | C    |

### Notes

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

HCM 6th AWSC  
2: 6th Street & Kern St/Highway 33

Existing AM  
04/07/2022

Intersection

Intersection Delay, s/veh15.6

Intersection LOS C

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔↔   |      |      | ↔↔   |      |      | ↔↔   |      |      | ↔↔   |      |
| Traffic Vol, veh/h  | 79   | 227  | 12   | 16   | 257  | 39   | 17   | 135  | 21   | 43   | 128  | 74   |
| Future Vol, veh/h   | 79   | 227  | 12   | 16   | 257  | 39   | 17   | 135  | 21   | 43   | 128  | 74   |
| 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 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 108  | 311  | 16   | 22   | 352  | 53   | 23   | 185  | 29   | 59   | 175  | 101  |
| Number of Lanes     | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 2    | 0    |

| Approach                      | EB   | WB   | NB   | SB   |
|-------------------------------|------|------|------|------|
| Opposing Approach             | WB   | EB   | SB   | NB   |
| Opposing Lanes                | 2    | 2    | 2    | 2    |
| Conflicting Approach Left SB  |      | NB   | EB   | WB   |
| Conflicting Lanes Left        | 2    | 2    | 2    | 2    |
| Conflicting Approach Right NB |      | SB   | WB   | EB   |
| Conflicting Lanes Right       | 2    | 2    | 2    | 2    |
| HCM Control Delay             | 17.4 | 15.8 | 13.5 | 14.7 |
| HCM LOS                       | C    | C    | B    | B    |

| Lane                   | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 20%   | 0%    | 41%   | 0%    | 11%   | 0%    | 40%   | 0%    |
| Vol Thru, %            | 80%   | 76%   | 59%   | 90%   | 89%   | 77%   | 60%   | 46%   |
| Vol Right, %           | 0%    | 24%   | 0%    | 10%   | 0%    | 23%   | 0%    | 54%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 85    | 89    | 193   | 126   | 145   | 168   | 107   | 138   |
| LT Vol                 | 17    | 0     | 79    | 0     | 16    | 0     | 43    | 0     |
| Through Vol            | 68    | 68    | 114   | 114   | 129   | 129   | 64    | 64    |
| RT Vol                 | 0     | 21    | 0     | 12    | 0     | 39    | 0     | 74    |
| Lane Flow Rate         | 116   | 121   | 264   | 172   | 198   | 229   | 147   | 189   |
| Geometry Grp           | 7     | 7     | 7     | 7     | 7     | 7     | 7     | 7     |
| Degree of Util (X)     | 0.26  | 0.263 | 0.557 | 0.35  | 0.412 | 0.463 | 0.325 | 0.388 |
| Departure Headway (Hd) | 8.092 | 7.817 | 7.606 | 7.327 | 7.491 | 7.267 | 7.975 | 7.382 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 443   | 458   | 475   | 490   | 479   | 496   | 450   | 486   |
| Service Time           | 5.856 | 5.581 | 5.366 | 5.086 | 5.25  | 5.025 | 5.733 | 5.139 |
| HCM Lane V/C Ratio     | 0.262 | 0.264 | 0.556 | 0.351 | 0.413 | 0.462 | 0.327 | 0.389 |
| HCM Control Delay      | 13.7  | 13.4  | 19.6  | 14    | 15.4  | 16.2  | 14.6  | 14.8  |
| HCM Lane LOS           | B     | B     | C     | B     | C     | C     | B     | B     |
| HCM 95th-tile Q        | 1     | 1     | 3.3   | 1.6   | 2     | 2.4   | 1.4   | 1.8   |

HCM 6th AWSC  
3: 4th Street & Kern St/Highway 33

Existing AM  
04/07/2022

Intersection

Intersection Delay, s/veh 12

Intersection LOS B

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔↔   |      |      | ↔↔   |      |      | ↔    |      |      | ↔↔   |      |
| Traffic Vol, veh/h  | 49   | 189  | 20   | 16   | 205  | 27   | 40   | 96   | 21   | 34   | 104  | 37   |
| Future Vol, veh/h   | 49   | 189  | 20   | 16   | 205  | 27   | 40   | 96   | 21   | 34   | 104  | 37   |
| Peak Hour Factor    | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 62   | 239  | 25   | 20   | 259  | 34   | 51   | 122  | 27   | 43   | 132  | 47   |
| Number of Lanes     | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |



| Approach                      | EB   | WB   | NB   | SB   |
|-------------------------------|------|------|------|------|
| Opposing Approach             | WB   | EB   | SB   | NB   |
| Opposing Lanes                | 2    | 2    | 1    | 1    |
| Conflicting Approach Left SB  |      | NB   | EB   | WB   |
| Conflicting Lanes Left        | 1    | 1    | 2    | 2    |
| Conflicting Approach Right NB |      | SB   | WB   | EB   |
| Conflicting Lanes Right       | 1    | 1    | 2    | 2    |
| HCM Control Delay             | 11.9 | 11.5 | 12.3 | 12.6 |
| HCM LOS                       | B    | B    | B    | B    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 25%   | 34%   | 0%    | 14%   | 0%    | 19%   |
| Vol Thru, %            | 61%   | 66%   | 83%   | 86%   | 79%   | 59%   |
| Vol Right, %           | 13%   | 0%    | 17%   | 0%    | 21%   | 21%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 157   | 144   | 115   | 119   | 130   | 175   |
| LT Vol                 | 40    | 49    | 0     | 16    | 0     | 34    |
| Through Vol            | 96    | 95    | 95    | 103   | 103   | 104   |
| RT Vol                 | 21    | 0     | 20    | 0     | 27    | 37    |
| Lane Flow Rate         | 199   | 182   | 145   | 150   | 164   | 222   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 0.336 | 0.328 | 0.25  | 0.268 | 0.283 | 0.368 |
| Departure Headway (Hd) | 6.091 | 6.505 | 6.206 | 6.424 | 6.207 | 5.985 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 586   | 550   | 575   | 557   | 575   | 598   |
| Service Time           | 4.171 | 4.276 | 3.978 | 4.197 | 3.979 | 4.063 |
| HCM Lane V/C Ratio     | 0.34  | 0.331 | 0.252 | 0.269 | 0.285 | 0.371 |
| HCM Control Delay      | 12.3  | 12.5  | 11.1  | 11.6  | 11.4  | 12.6  |
| HCM Lane LOS           | B     | B     | B     | B     | B     | B     |
| HCM 95th-tile Q        | 1.5   | 1.4   | 1     | 1.1   | 1.2   | 1.7   |

**Intersection Level Of Service Report**  
**Intersection 4: Kern Street (SR-33) / 1st Street**

|                  |                 |                           |       |
|------------------|-----------------|---------------------------|-------|
| Control Type:    | Two-way stop    | Delay (sec / veh):        | 13.9  |
| Analysis Method: | HCM 6th Edition | Level Of Service:         | B     |
| Analysis Period: | 15 minutes      | Volume to Capacity (v/c): | 0.021 |

**Intersection Setup**

| Name                         | 1st Street  |        |        |        | 1st Street  |        |        |        | Kern Street (SR-33)   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Northbound  |        |        |        | Southbound  |        |        |        | Eastbound   |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |  |        |        |        |
| Turning Movement             | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | 1st Street |        |        |        | 1st Street |        |        |        | Kern Street (SR-33) |        |        |        |
|---|------------|--------|--------|--------|------------|--------|--------|--------|---------------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 8          | 0      | 5      | 2      | 4          | 6      | 2      | 23     | 20                  | 84     | 85     | 23     |
| Base Volume Adjustment Factor           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00       | 2.00   | 0.00   | 2.00   | 0.00       | 2.00   | 2.00   | 2.00   | 2.00                | 0.00   | 2.00   | 2.00   |
| Growth Factor                           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 8          | 0      | 5      | 2      | 4          | 6      | 2      | 23     | 20                  | 84     | 85     | 23     |
| Peak Hour Factor                        | 0.8700     | 0.8700 | 0.8700 | 0.8700 | 0.8700     | 0.8700 | 0.8700 | 0.8700 | 0.8700              | 0.8700 | 0.8700 | 0.8700 |
| Other Adjustment Factor                 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 2          | 0      | 1      | 1      | 1          | 2      | 1      | 7      | 6                   | 24     | 24     | 7      |
| Total Analysis Volume [veh/h]           | 9          | 0      | 6      | 2      | 5          | 7      | 2      | 26     | 23                  | 97     | 98     | 26     |
| Pedestrian Volume [ped/h]               | 0          |        |        |        | 0          |        |        |        | 0                   |        |        |        |



**Intersection Settings**

| Priority Scheme                    | Stop | Stop | Free |
|------------------------------------|------|------|------|
| Flared Lane                        | No   | No   |      |
| Storage Area [veh]                 | 0    | 0    | 0    |
| Two-Stage Gap Acceptance           | No   | No   |      |
| Number of Storage Spaces in Median | 0    | 0    | 0    |

**Movement, Approach, & Intersection Results**

|                                       |       |       |       |      |       |       |       |      |      |      |      |      |
|---------------------------------------|-------|-------|-------|------|-------|-------|-------|------|------|------|------|------|
| V/C, Movement V/C Ratio               | 0.02  | 0.00  | 0.01  | 0.00 | 0.01  | 0.01  | 0.00  | 0.03 | 0.02 | 0.06 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh]       | 13.87 | 14.79 | 12.82 | 8.92 | 12.17 | 12.22 | 13.01 | 8.79 | 7.57 | 7.55 | 0.00 | 0.00 |
| Movement LOS                          | B     | B     | B     | A    | B     | B     | B     | A    | A    | A    | A    | A    |
| 95th-Percentile Queue Length [veh/ln] | 0.11  | 0.11  | 0.11  | 0.11 | 0.17  | 0.17  | 0.17  | 0.17 | 0.25 | 0.25 | 0.13 | 0.00 |
| 95th-Percentile Queue Length [ft/ln]  | 2.80  | 2.80  | 2.80  | 2.80 | 4.18  | 4.18  | 4.18  | 4.18 | 6.37 | 6.37 | 3.19 | 0.00 |
| d_A, Approach Delay [s/veh]           | 12.92 |       |       |      | 10.02 |       |       |      | 3.71 |      |      |      |
| Approach LOS                          | B     |       |       |      | B     |       |       |      | A    |      |      |      |
| d_I, Intersection Delay [s/veh]       | 5.44  |       |       |      |       |       |       |      |      |      |      |      |
| Intersection LOS                      | B     |       |       |      |       |       |       |      |      |      |      |      |

**Intersection Setup**

| Name                         | Kern Street (SR-33)   |        |        |        | E Kern Street   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Westbound   |        |        |        | Southwestbound  |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |
| Turning Movement             | Left  | Thru   | Right  | Right2 | Left  | Thru   | Right  | Right2 |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | Kern Street (SR-33) |        |        |        | E Kern Street |        |        |        |
|---|---------------------|--------|--------|--------|---------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 1                   | 68     | 1      | 2      | 2             | 5      | 102    | 6      |
| Base Volume Adjustment Factor           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00                | 2.00   | 2.00   | 0.00   | 0.00          | 0.00   | 0.00   | 0.00   |
| Growth Factor                           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 1                   | 68     | 1      | 2      | 2             | 5      | 102    | 6      |
| Peak Hour Factor                        | 0.8700              | 0.8700 | 0.8700 | 0.8700 | 0.8700        | 0.8700 | 0.8700 | 0.8700 |
| Other Adjustment Factor                 | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 0                   | 20     | 0      | 1      | 1             | 1      | 29     | 2      |
| Total Analysis Volume [veh/h]           | 1                   | 78     | 1      | 2      | 2             | 6      | 117    | 7      |
| Pedestrian Volume [ped/h]               | 0                   |        |        |        | 0             |        |        |        |



**Intersection Settings**

|                                    |      |      |
|------------------------------------|------|------|
| Priority Scheme                    | Free | Stop |
| Flared Lane                        |      |      |
| Storage Area [veh]                 | 0    | 0    |
| Two-Stage Gap Acceptance           |      | No   |
| Number of Storage Spaces in Median | 0    | 0    |

**Movement, Approach, & Intersection Results**

|                                       |      |      |      |      |       |       |      |      |
|---------------------------------------|------|------|------|------|-------|-------|------|------|
| V/C, Movement V/C Ratio               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.01  | 0.13 | 0.01 |
| d_M, Delay for Movement [s/veh]       | 7.47 | 0.00 | 0.00 | 0.00 | 12.76 | 13.41 | 9.36 | 9.36 |
| Movement LOS                          | A    | A    | A    | A    | B     | B     | A    | A    |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.27  | 0.27  | 0.25 | 0.24 |
| 95th-Percentile Queue Length [ft/ln]  | 0.05 | 0.05 | 0.05 | 0.05 | 6.68  | 6.68  | 6.31 | 5.94 |
| d_A, Approach Delay [s/veh]           | 0.09 |      |      |      | 9.60  |       |      |      |
| Approach LOS                          | A    |      |      |      | A     |       |      |      |
| d_I, Intersection Delay [s/veh]       | 5.44 |      |      |      |       |       |      |      |
| Intersection LOS                      | B    |      |      |      |       |       |      |      |

HCM 6th TWSC  
5: Highway 33 & Center Street





Existing AM  
04/07/2022

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 0    | 5    | 0    | 0    | 0    | 4    | 82   | 0    | 0    | 92   | 3    |
| Future Vol, veh/h        | 2    | 0    | 5    | 0    | 0    | 0    | 4    | 82   | 0    | 0    | 92   | 3    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 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         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 0    | 6    | 0    | 0    | 0    | 5    | 93   | 0    | 0    | 105  | 3    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 210    | 210   | 107    | 213   | 211    | 93    | 108    | 0 | 0 | 93    | 0 | 0 |
| Stage 1              | 107    | 107   | -      | 103   | 103    | -     | -      | - | - | -     | - | - |
| Stage 2              | 103    | 103   | -      | 110   | 108    | -     | -      | - | - | -     | - | - |
| 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   | 747    | 687   | 947    | 744   | 686    | 964   | 1483   | - | - | 1501  | - | - |
| Stage 1              | 898    | 807   | -      | 903   | 810    | -     | -      | - | - | -     | - | - |
| Stage 2              | 903    | 810   | -      | 895   | 806    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 745    | 684   | 947    | 737   | 683    | 964   | 1483   | - | - | 1501  | - | - |
| Mov Cap-2 Maneuver   | 745    | 684   | -      | 737   | 683    | -     | -      | - | - | -     | - | - |
| Stage 1              | 894    | 807   | -      | 899   | 807    | -     | -      | - | - | -     | - | - |
| Stage 2              | 899    | 807   | -      | 890   | 806    | -     | -      | - | - | -     | - | - |

| Approach             | EB  |  | WB |  | NB  |  | SB |  |
|----------------------|-----|--|----|--|-----|--|----|--|
| HCM Control Delay, s | 9.1 |  | 0  |  | 0.3 |  | 0  |  |
| HCM LOS              | A   |  | A  |  |     |  |    |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WB Ln1 | SBL | SBT  | SBR |
|-----------------------|-------|-----|-----|-------------|-----|------|-----|
| Capacity (veh/h)      | 1483  | -   | -   | 879         | -   | 1501 | -   |
| HCM Lane V/C Ratio    | 0.003 | -   | -   | 0.009       | -   | -    | -   |
| HCM Control Delay (s) | 7.4   | 0   | -   | 9.1         | 0   | 0    | -   |
| HCM Lane LOS          | A     | A   | -   | A           | A   | A    | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0           | -   | 0    | -   |

| Intersection             |   |      |   |      |   |   |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh         | 0.8   |      |   |      |   |   |
| Movement                 | WBL   | WBR  | NBT   | NBR  | SBL   | SBT   |
| Lane Configurations      |  |      |  |      |  |  |
| Traffic Vol, veh/h       | 15  | 16   | 375   | 42   | 30  | 278   |
| Future Vol, veh/h        | 15  | 16   | 375   | 42   | 30  | 278   |
| Conflicting Peds, #/hr   | 0   | 0    | 0   | 0    | 0   | 0   |
| Sign Control             | Stop  | Stop | Free  | Free | Free  | Free  |
| RT Channelized           | -   | None | -   | None | -   | None  |
| Storage Length           | 0   | -    | -   | -    | 50  | -   |
| Veh in Median Storage, # | 0   | -    | 0   | -    | -   | 0   |
| Grade, %                 | 0   | -    | 0   | -    | -   | 0   |
| Peak Hour Factor         | 76  | 76   | 76  | 76   | 76  | 76  |
| Heavy Vehicles, %        | 2   | 2    | 2   | 2    | 2   | 2   |
| Mvmt Flow                | 20  | 21   | 493   | 55   | 39  | 366   |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 782    | 274    | 0      |
| Stage 1              | 521    | -      | -      |
| Stage 2              | 261    | -      | -      |
| Critical Hdwy        | 6.84   | 6.94   | -      |
| Critical Hdwy Stg 1  | 5.84   | -      | -      |
| Critical Hdwy Stg 2  | 5.84   | -      | -      |
| Follow-up Hdwy       | 3.52   | 3.32   | -      |
| Pot Cap-1 Maneuver   | 331    | 724    | -      |
| Stage 1              | 561    | -      | -      |
| Stage 2              | 759    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 318    | 724    | -      |
| Mov Cap-2 Maneuver   | 430    | -      | -      |
| Stage 1              | 561    | -      | -      |
| Stage 2              | 730    | -      | -      |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 12.2 | 0  | 0.8 |
| HCM LOS              | B    |    |     |






















| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 544   | 1018  |
| HCM Lane V/C Ratio    | -   | -        | 0.075 | 0.039 |
| HCM Control Delay (s) | -   | -        | 12.2  | 8.7   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.2   | 0.1   |

# HCM 6th Signalized Intersection Summary

## 1: 10th Street & Kern St/Highway 33

Existing PM

04/11/2022

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |   |  |  |  |
| Traffic Volume (veh/h)       | 114   | 202   | 93  | 73  | 194   | 40  | 101   | 212   | 81  | 79  | 202   | 147   |
| Future Volume (veh/h)        | 114   | 202   | 93  | 73  | 194   | 40  | 101   | 212   | 81  | 79  | 202   | 147   |
| 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  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.98  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| 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         | 123   | 217   | 100   | 78  | 209   | 43  | 109   | 228   | 87  | 85  | 217   | 158   |
| Peak Hour Factor             | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 184   | 555   | 247   | 158   | 641   | 129   | 178   | 600   | 222   | 164   | 813   | 356   |
| Arrive On Green              | 0.10  | 0.23  | 0.23  | 0.09  | 0.22  | 0.22  | 0.10  | 0.24  | 0.24  | 0.09  | 0.23  | 0.23  |
| Sat Flow, veh/h              | 1781  | 2388  | 1061  | 1781  | 2942  | 593   | 1781  | 2535  | 938   | 1781  | 3554  | 1558  |
| Grp Volume(v), veh/h         | 123   | 159   | 158   | 78  | 125   | 127   | 109   | 158   | 157   | 85  | 217   | 158   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777  | 1671  | 1781  | 1777  | 1758  | 1781  | 1777  | 1696  | 1781  | 1777  | 1558  |
| Q Serve(g_s), s              | 4.7   | 5.3   | 5.6   | 2.9   | 4.1   | 4.3   | 4.1   | 5.2   | 5.5   | 3.2   | 3.5   | 6.1   |
| Cycle Q Clear(g_c), s        | 4.7   | 5.3   | 5.6   | 2.9   | 4.1   | 4.3   | 4.1   | 5.2   | 5.5   | 3.2   | 3.5   | 6.1   |
| Prop In Lane                 | 1.00  |   | 0.63  | 1.00  |   | 0.34  | 1.00  |   | 0.55  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h       | 184   | 413   | 389   | 158   | 387   | 383   | 178   | 421   | 402   | 164   | 813   | 356   |
| V/C Ratio(X)                 | 0.67  | 0.39  | 0.41  | 0.49  | 0.32  | 0.33  | 0.61  | 0.37  | 0.39  | 0.52  | 0.27  | 0.44  |
| Avail Cap(c_a), veh/h        | 400   | 1063  | 1000  | 202   | 866   | 857   | 377   | 833   | 795   | 311   | 1535  | 673   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 30.4  | 22.8  | 22.9  | 30.5  | 23.1  | 23.2  | 30.3  | 22.5  | 22.6  | 30.5  | 22.3  | 23.3  |
| Incr Delay (d2), s/veh       | 1.6   | 2.7   | 3.1   | 0.9   | 1.3   | 1.4   | 1.3   | 2.5   | 2.9   | 0.9   | 0.8   | 4.0   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 2.0   | 2.4   | 2.4   | 1.2   | 1.8   | 1.8   | 1.7   | 2.3   | 2.4   | 1.3   | 1.5   | 2.5   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 31.9  | 25.5  | 26.0  | 31.4  | 24.4  | 24.6  | 31.6  | 25.0  | 25.4  | 31.4  | 23.1  | 27.2  |
| LnGrp LOS                    | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   |
| Approach Vol, veh/h          |   | 440   |   |   | 330   |   |   | 424   |   |   | 460   |   |
| Approach Delay, s/veh        |   | 27.5  |   |   | 26.1  |   |   | 26.9  |   |   | 26.1  |   |
| Approach LOS                 |   | C   |   |   | C   |   |   | C   |   |   | C   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 12.0  | 23.2  | 12.8  | 22.5  | 13.0  | 22.1  | 12.2  | 23.1  |   |   |   |   |
| Change Period (Y+Rc), s      | * 5.7   | 6.8   | * 5.7   | 6.4   | * 5.7   | 6.8   | * 5.7   | 6.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | * 8   | 42.1  | * 15  | 30.4  | * 16  | 34.3  | * 12  | 33.0  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 4.9   | 7.6   | 6.1   | 8.1   | 6.7   | 6.3   | 5.2   | 7.5   |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 5.9   | 0.1   | 5.4   | 0.1   | 3.1   | 0.0   | 5.2   |   |   |   |   |

### Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 26.7 |
| HCM 6th LOS        | C    |

### Notes

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

HCM 6th AWSC  
2: 6th Street & Kern St/Highway 33

Existing PM  
04/11/2022

Intersection

Intersection Delay, s/veh 12

Intersection LOS B

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔↔   |      |      | ↔↔   |      |      | ↔↔   |      |      | ↔↔   |      |
| Traffic Vol, veh/h  | 78   | 245  | 17   | 27   | 224  | 42   | 22   | 79   | 28   | 37   | 117  | 79   |
| Future Vol, veh/h   | 78   | 245  | 17   | 27   | 224  | 42   | 22   | 79   | 28   | 37   | 117  | 79   |
| 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 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 88   | 275  | 19   | 30   | 252  | 47   | 25   | 89   | 31   | 42   | 131  | 89   |
| Number of Lanes     | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 2    | 0    |

| Approach                      | EB   | WB   | NB   | SB   |
|-------------------------------|------|------|------|------|
| Opposing Approach             | WB   | EB   | SB   | NB   |
| Opposing Lanes                | 2    | 2    | 2    | 2    |
| Conflicting Approach Left SB  |      | NB   | EB   | WB   |
| Conflicting Lanes Left        | 2    | 2    | 2    | 2    |
| Conflicting Approach Right NB |      | SB   | WB   | EB   |
| Conflicting Lanes Right       | 2    | 2    | 2    | 2    |
| HCM Control Delay             | 12.8 | 11.8 | 10.8 | 11.6 |
| HCM LOS                       | B    | B    | B    | B    |

| Lane                   | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 36%   | 0%    | 39%   | 0%    | 19%   | 0%    | 39%   | 0%    |
| Vol Thru, %            | 64%   | 59%   | 61%   | 88%   | 81%   | 73%   | 61%   | 43%   |
| Vol Right, %           | 0%    | 41%   | 0%    | 12%   | 0%    | 27%   | 0%    | 57%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 62    | 68    | 201   | 140   | 139   | 154   | 96    | 138   |
| LT Vol                 | 22    | 0     | 78    | 0     | 27    | 0     | 37    | 0     |
| Through Vol            | 40    | 40    | 123   | 123   | 112   | 112   | 59    | 59    |
| RT Vol                 | 0     | 28    | 0     | 17    | 0     | 42    | 0     | 79    |
| Lane Flow Rate         | 69    | 76    | 225   | 157   | 156   | 173   | 107   | 154   |
| Geometry Grp           | 7     | 7     | 7     | 7     | 7     | 7     | 7     | 7     |
| Degree of Util (X)     | 0.138 | 0.142 | 0.409 | 0.272 | 0.283 | 0.299 | 0.208 | 0.274 |
| Departure Headway (Hd) | 7.2   | 6.72  | 6.533 | 6.249 | 6.523 | 6.23  | 6.99  | 6.382 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 495   | 530   | 550   | 572   | 548   | 574   | 511   | 559   |
| Service Time           | 4.983 | 4.504 | 4.301 | 4.017 | 4.295 | 4.002 | 4.764 | 4.157 |
| HCM Lane V/C Ratio     | 0.139 | 0.143 | 0.409 | 0.274 | 0.285 | 0.301 | 0.209 | 0.275 |
| HCM Control Delay      | 11.1  | 10.6  | 13.8  | 11.4  | 11.9  | 11.7  | 11.6  | 11.6  |
| HCM Lane LOS           | B     | B     | B     | B     | B     | B     | B     | B     |
| HCM 95th-tile Q        | 0.5   | 0.5   | 2     | 1.1   | 1.2   | 1.2   | 0.8   | 1.1   |

HCM 6th AWSC  
3: 4th Street & Kern St/Highway 33

Existing PM  
04/11/2022

Intersection

Intersection Delay, s/veh10.9

Intersection LOS B

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔↔   |      |      | ↔↔   |      |      | ↔    |      |      | ↔↔   |      |
| Traffic Vol, veh/h  | 38   | 247  | 27   | 29   | 216  | 39   | 37   | 73   | 20   | 35   | 64   | 33   |
| Future Vol, veh/h   | 38   | 247  | 27   | 29   | 216  | 39   | 37   | 73   | 20   | 35   | 64   | 33   |
| Peak Hour Factor    | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 43   | 281  | 31   | 33   | 245  | 44   | 42   | 83   | 23   | 40   | 73   | 38   |
| Number of Lanes     | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |




| Approach                      | EB   | WB   | NB   | SB   |
|-------------------------------|------|------|------|------|
| Opposing Approach             | WB   | EB   | SB   | NB   |
| Opposing Lanes                | 2    | 2    | 1    | 1    |
| Conflicting Approach Left SB  |      | NB   | EB   | WB   |
| Conflicting Lanes Left        | 1    | 1    | 2    | 2    |
| Conflicting Approach Right NB |      | SB   | WB   | EB   |
| Conflicting Lanes Right       | 1    | 1    | 2    | 2    |
| HCM Control Delay             | 11.1 | 10.7 | 10.8 | 10.8 |
| HCM LOS                       | B    | B    | B    | B    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 28%   | 24%   | 0%    | 21%   | 0%    | 27%   |
| Vol Thru, %            | 56%   | 76%   | 82%   | 79%   | 73%   | 48%   |
| Vol Right, %           | 15%   | 0%    | 18%   | 0%    | 27%   | 25%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 130   | 162   | 151   | 137   | 147   | 132   |
| LT Vol                 | 37    | 38    | 0     | 29    | 0     | 35    |
| Through Vol            | 73    | 124   | 124   | 108   | 108   | 64    |
| RT Vol                 | 20    | 0     | 27    | 0     | 39    | 33    |
| Lane Flow Rate         | 148   | 184   | 171   | 156   | 167   | 150   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 0.242 | 0.306 | 0.273 | 0.261 | 0.266 | 0.243 |
| Departure Headway (Hd) | 5.894 | 5.998 | 5.752 | 6.03  | 5.734 | 5.83  |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 609   | 598   | 624   | 595   | 626   | 615   |
| Service Time           | 3.943 | 3.74  | 3.493 | 3.773 | 3.477 | 3.879 |
| HCM Lane V/C Ratio     | 0.243 | 0.308 | 0.274 | 0.262 | 0.267 | 0.244 |
| HCM Control Delay      | 10.8  | 11.4  | 10.7  | 10.9  | 10.6  | 10.8  |
| HCM Lane LOS           | B     | B     | B     | B     | B     | B     |
| HCM 95th-tile Q        | 0.9   | 1.3   | 1.1   | 1     | 1.1   | 0.9   |

**Intersection Level Of Service Report**  
**Intersection 4: Kern Street (SR-33) / 1st Street**

|                  |                 |                           |       |
|------------------|-----------------|---------------------------|-------|
| Control Type:    | Two-way stop    | Delay (sec / veh):        | 16.0  |
| Analysis Method: | HCM 6th Edition | Level Of Service:         | C     |
| Analysis Period: | 15 minutes      | Volume to Capacity (v/c): | 0.006 |

**Intersection Setup**

| Name                         | 1st Street  |        |        |        | 1st Street  |        |        |        | Kern Street (SR-33)   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Northbound  |        |        |        | Southbound  |        |        |        | Eastbound   |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |  |        |        |        |
| Turning Movement             | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | 1st Street |        |        |        | 1st Street |        |        |        | Kern Street (SR-33) |        |        |        |
|---|------------|--------|--------|--------|------------|--------|--------|--------|---------------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 9          | 2      | 4      | 0      | 2          | 5      | 3      | 17     | 11                  | 139    | 84     | 10     |
| Base Volume Adjustment Factor           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00       | 2.00   | 0.00   | 2.00   | 0.00       | 2.00   | 2.00   | 2.00   | 2.00                | 0.00   | 2.00   | 2.00   |
| Growth Factor                           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 9          | 2      | 4      | 0      | 2          | 5      | 3      | 17     | 11                  | 139    | 84     | 10     |
| Peak Hour Factor                        | 0.9400     | 0.9400 | 0.9400 | 0.9400 | 0.9400     | 0.9400 | 0.9400 | 0.9400 | 0.9400              | 0.9400 | 0.9400 | 0.9400 |
| Other Adjustment Factor                 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 2          | 1      | 1      | 0      | 1          | 1      | 1      | 5      | 3                   | 37     | 22     | 3      |
| Total Analysis Volume [veh/h]           | 10         | 2      | 4      | 0      | 2          | 5      | 3      | 18     | 12                  | 148    | 89     | 11     |
| Pedestrian Volume [ped/h]               | 0          |        |        |        | 0          |        |        |        | 0                   |        |        |        |





**Intersection Settings**

| Priority Scheme                    | Stop | Stop | Free |
|------------------------------------|------|------|------|
| Flared Lane                        | No   | No   |      |
| Storage Area [veh]                 | 0    | 0    | 0    |
| Two-Stage Gap Acceptance           | No   | No   |      |
| Number of Storage Spaces in Median | 0    | 0    | 0    |

**Movement, Approach, & Intersection Results**

|                                       |       |       |       |      |       |       |       |      |      |      |      |      |
|---------------------------------------|-------|-------|-------|------|-------|-------|-------|------|------|------|------|------|
| V/C, Movement V/C Ratio               | 0.03  | 0.01  | 0.01  | 0.00 | 0.00  | 0.01  | 0.01  | 0.02 | 0.01 | 0.10 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh]       | 15.26 | 16.00 | 14.52 | 9.01 | 14.00 | 14.09 | 14.57 | 8.94 | 7.77 | 7.75 | 0.00 | 0.00 |
| Movement LOS                          | C     | C     | B     | A    | B     | B     | B     | A    | A    | A    | A    | A    |
| 95th-Percentile Queue Length [veh/ln] | 0.14  | 0.14  | 0.14  | 0.14 | 0.14  | 0.14  | 0.14  | 0.14 | 0.37 | 0.37 | 0.18 | 0.00 |
| 95th-Percentile Queue Length [ft/ln]  | 3.38  | 3.38  | 3.38  | 3.38 | 3.39  | 3.39  | 3.39  | 3.39 | 9.15 | 9.15 | 4.58 | 0.00 |
| d_A, Approach Delay [s/veh]           | 15.17 |       |       |      | 10.82 |       |       |      | 4.77 |      |      |      |
| Approach LOS                          | C     |       |       |      | B     |       |       |      | A    |      |      |      |
| d_I, Intersection Delay [s/veh]       | 5.05  |       |       |      |       |       |       |      |      |      |      |      |
| Intersection LOS                      | C     |       |       |      |       |       |       |      |      |      |      |      |

**Intersection Setup**

| Name                         | Kern Street (SR-33)   |        |        |        | E Kern Street   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Westbound   |        |        |        | Southwestbound  |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |
| Turning Movement             | Left  | Thru   | Right  | Right2 | Left  | Thru   | Right  | Right2 |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | Kern Street (SR-33) |        |        |        | E Kern Street |        |        |        |
|---|---------------------|--------|--------|--------|---------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 2                   | 121    | 11     | 1      | 1             | 6      | 80     | 4      |
| Base Volume Adjustment Factor           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00                | 2.00   | 2.00   | 0.00   | 0.00          | 0.00   | 0.00   | 0.00   |
| Growth Factor                           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 2                   | 121    | 11     | 1      | 1             | 6      | 80     | 4      |
| Peak Hour Factor                        | 0.9400              | 0.9400 | 0.9400 | 0.9400 | 0.9400        | 0.9400 | 0.9400 | 0.9400 |
| Other Adjustment Factor                 | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 1                   | 32     | 3      | 0      | 0             | 2      | 21     | 1      |
| Total Analysis Volume [veh/h]           | 2                   | 129    | 12     | 1      | 1             | 6      | 85     | 4      |
| Pedestrian Volume [ped/h]               | 0                   |        |        |        | 0             |        |        |        |

**Intersection Settings**

|                                    |      |      |
|------------------------------------|------|------|
| Priority Scheme                    | Free | Stop |
| Flared Lane                        |      |      |
| Storage Area [veh]                 | 0    | 0    |
| Two-Stage Gap Acceptance           |      | No   |
| Number of Storage Spaces in Median | 0    | 0    |





**Movement, Approach, & Intersection Results**

|                                       |      |      |      |      |       |       |      |      |
|---------------------------------------|------|------|------|------|-------|-------|------|------|
| V/C, Movement V/C Ratio               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.02  | 0.10 | 0.00 |
| d_M, Delay for Movement [s/veh]       | 7.42 | 0.00 | 0.00 | 0.00 | 14.51 | 14.71 | 9.51 | 9.55 |
| Movement LOS                          | A    | A    | A    | A    | B     | B     | A    | A    |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.21  | 0.21  | 0.19 | 0.18 |
| 95th-Percentile Queue Length [ft/ln]  | 0.10 | 0.10 | 0.10 | 0.10 | 5.29  | 5.29  | 4.87 | 4.46 |
| d_A, Approach Delay [s/veh]           | 0.10 |      |      |      | 9.89  |       |      |      |
| Approach LOS                          | A    |      |      |      | A     |       |      |      |
| d_I, Intersection Delay [s/veh]       | 5.05 |      |      |      |       |       |      |      |
| Intersection LOS                      | C    |      |      |      |       |       |      |      |

HCM 6th TWSC  
5: Highway 33 & Center Street

Existing PM  
04/11/2022

| Intersection             |        |       |        |            |       |        |       |      |        |       |      |      |
|--------------------------|--------|-------|--------|------------|-------|--------|-------|------|--------|-------|------|------|
| Int Delay, s/veh         | 0.9    |       |        |            |       |        |       |      |        |       |      |      |
| Movement                 | EBL    | EBT   | EBR    | WBL        | WBT   | WBR    | NBL   | NBT  | NBR    | SBL   | SBT  | SBR  |
| Lane Configurations      |        | ↕     |        |            | ↕     |        |       | ↕    |        |       | ↕    |      |
| Traffic Vol, veh/h       | 0      | 0     | 13     | 0          | 1     | 1      | 5     | 119  | 0      | 2     | 78   | 1    |
| Future Vol, veh/h        | 0      | 0     | 13     | 0          | 1     | 1      | 5     | 119  | 0      | 2     | 78   | 1    |
| Conflicting Peds, #/hr   | 0      | 0     | 0      | 0          | 0     | 0      | 0     | 0    | 0      | 0     | 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         | 82     | 82    | 82     | 82         | 82    | 82     | 82    | 82   | 82     | 82    | 82   | 82   |
| Heavy Vehicles, %        | 2      | 2     | 2      | 2          | 2     | 2      | 2     | 2    | 2      | 2     | 2    | 2    |
| Mvmt Flow                | 0      | 0     | 16     | 0          | 1     | 1      | 6     | 145  | 0      | 2     | 95   | 1    |
|                          |        |       |        |            |       |        |       |      |        |       |      |      |
| Major/Minor              | Minor2 |       | Minor1 |            |       | Major1 |       |      | Major2 |       |      |      |
| Conflicting Flow All     | 258    | 257   | 96     | 265        | 257   | 145    | 96    | 0    | 0      | 145   | 0    | 0    |
| Stage 1                  | 100    | 100   | -      | 157        | 157   | -      | -     | -    | -      | -     | -    | -    |
| Stage 2                  | 158    | 157   | -      | 108        | 100   | -      | -     | -    | -      | -     | -    | -    |
| 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       | 695    | 647   | 960    | 688        | 647   | 902    | 1498  | -    | -      | 1437  | -    | -    |
| Stage 1                  | 906    | 812   | -      | 845        | 768   | -      | -     | -    | -      | -     | -    | -    |
| Stage 2                  | 844    | 768   | -      | 897        | 812   | -      | -     | -    | -      | -     | -    | -    |
| Platoon blocked, %       |        |       |        |            |       |        |       | -    | -      |       | -    | -    |
| Mov Cap-1 Maneuver       | 690    | 644   | 960    | 674        | 644   | 902    | 1498  | -    | -      | 1437  | -    | -    |
| Mov Cap-2 Maneuver       | 690    | 644   | -      | 674        | 644   | -      | -     | -    | -      | -     | -    | -    |
| Stage 1                  | 902    | 811   | -      | 842        | 765   | -      | -     | -    | -      | -     | -    | -    |
| Stage 2                  | 838    | 765   | -      | 881        | 811   | -      | -     | -    | -      | -     | -    | -    |
|                          |        |       |        |            |       |        |       |      |        |       |      |      |
|                          |        |       |        |            |       |        |       |      |        |       |      |      |
| Approach                 | EB     |       | WB     |            |       | NB     |       |      | SB     |       |      |      |
| HCM Control Delay, s     | 8.8    |       | 9.8    |            |       | 0.3    |       |      | 0.2    |       |      |      |
| HCM LOS                  | A      |       | A      |            |       |        |       |      |        |       |      |      |
|                          |        |       |        |            |       |        |       |      |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT   | NBR    | EBLn1WBLn1 | SBL   | SBT    | SBR   |      |        |       |      |      |
| Capacity (veh/h)         | 1498   | -     | -      | 960        | 751   | 1437   | -     | -    |        |       |      |      |
| HCM Lane V/C Ratio       | 0.004  | -     | -      | 0.017      | 0.003 | 0.002  | -     | -    |        |       |      |      |
| HCM Control Delay (s)    | 7.4    | 0     | -      | 8.8        | 9.8   | 7.5    | 0     | -    |        |       |      |      |
| HCM Lane LOS             | A      | A     | -      | A          | A     | A      | A     | -    |        |       |      |      |
| HCM 95th %tile Q(veh)    | 0      | -     | -      | 0.1        | 0     | 0      | -     | -    |        |       |      |      |

| Intersection             |   |          |   |       |   |   |
|--------------------------|---|----------|---|-------|---|---|
| Int Delay, s/veh         | 1.6   |          |   |       |   |   |
| Movement                 | WBL   | WBR      | NBT   | NBR   | SBL   | SBT   |
| Lane Configurations      |  |          |  |       |  |  |
| Traffic Vol, veh/h       | 27  | 49       | 343   | 51    | 56  | 339   |
| Future Vol, veh/h        | 27  | 49       | 343   | 51    | 56  | 339   |
| Conflicting Peds, #/hr   | 0   | 1        | 0   | 5     | 0   | 0   |
| Sign Control             | Stop  | Stop     | Free  | Free  | Free  | Free  |
| RT Channelized           | -   | None     | -   | None  | -   | None  |
| Storage Length           | 0   | -        | -   | -     | 50  | -   |
| Veh in Median Storage, # | 0   | -        | 0   | -     | -   | 0   |
| Grade, %                 | 0   | -        | 0   | -     | -   | 0   |
| Peak Hour Factor         | 92  | 92       | 92  | 92    | 92  | 92  |
| Heavy Vehicles, %        | 2   | 2        | 2   | 2     | 2   | 2   |
| Mvmt Flow                | 29  | 53       | 373   | 55    | 61  | 368   |
| Major/Minor              | Minor1  | Major1   | Major2  |       |   |   |
| Conflicting Flow All     | 712   | 220      | 0   | 0     | 433   | 0   |
| Stage 1                  | 406   | -        | -   | -     | -   | -   |
| Stage 2                  | 306   | -        | -   | -     | -   | -   |
| Critical Hdwy            | 6.84  | 6.94     | -   | -     | 4.14  | -   |
| Critical Hdwy Stg 1      | 5.84  | -        | -   | -     | -   | -   |
| Critical Hdwy Stg 2      | 5.84  | -        | -   | -     | -   | -   |
| Follow-up Hdwy           | 3.52  | 3.32     | -   | -     | 2.22  | -   |
| Pot Cap-1 Maneuver       | 367   | 784      | -   | -     | 1123  | -   |
| Stage 1                  | 641   | -        | -   | -     | -   | -   |
| Stage 2                  | 720   | -        | -   | -     | -   | -   |
| Platoon blocked, %       |   |          | -   | -     |   | -   |
| Mov Cap-1 Maneuver       | 345   | 780      | -   | -     | 1118  | -   |
| Mov Cap-2 Maneuver       | 458   | -        | -   | -     | -   | -   |
| Stage 1                  | 638   | -        | -   | -     | -   | -   |
| Stage 2                  | 680   | -        | -   | -     | -   | -   |
| Approach                 | WB  | NB       | SB  |       |   |   |
| HCM Control Delay, s     | 11.6  | 0        | 1.2   |       |   |   |
| HCM LOS                  | B   |          |   |       |   |   |
| Minor Lane/Major Mvmt    | NBT   | NBRWBLn1 | SBL   | SBT   |   |   |
| Capacity (veh/h)         | -   | -        | 624   | 1118  | -   |   |
| HCM Lane V/C Ratio       | -   | -        | 0.132   | 0.054 | -   |   |
| HCM Control Delay (s)    | -   | -        | 11.6  | 8.4   | -   |   |
| HCM Lane LOS             | -   | -        | B   | A     | -   |   |
| HCM 95th %tile Q(veh)    | -   | -        | 0.5   | 0.2   | -   |   |

## **APPENDIX C**

### **ITE TRIP GENERATION RATE SHEETS / NCHRP REPORT 684 INTERNAL CAPTURE WORKSHEETS**

# Land Use: 210

## Single-Family Detached Housing

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### Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

### Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

### Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

### Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077, 1078, 1079



# Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 174

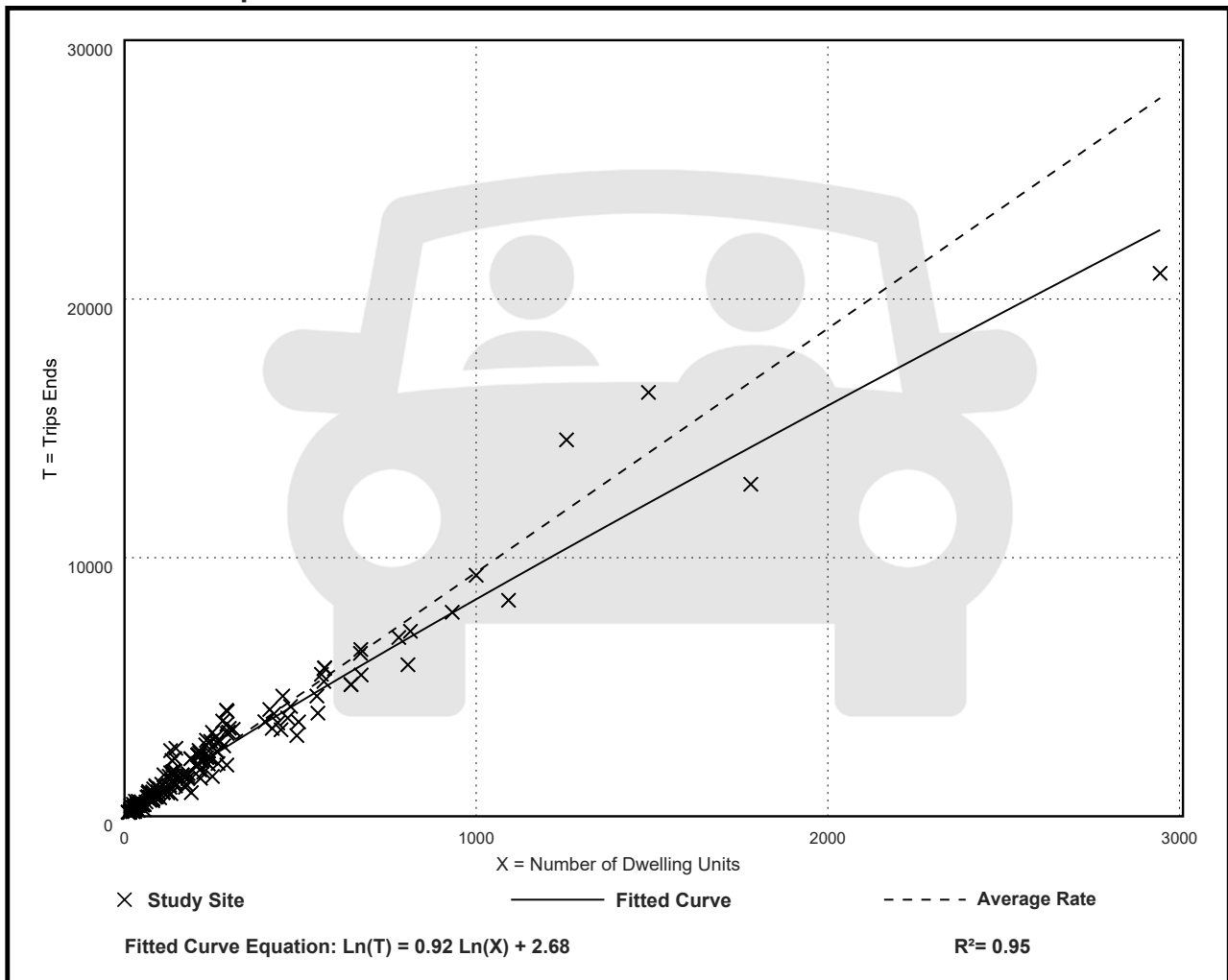
Avg. Num. of Dwelling Units: 246

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 9.43         | 4.45 - 22.61   | 2.13               |

## Data Plot and Equation



# Single-Family Detached Housing (210)

## Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 192

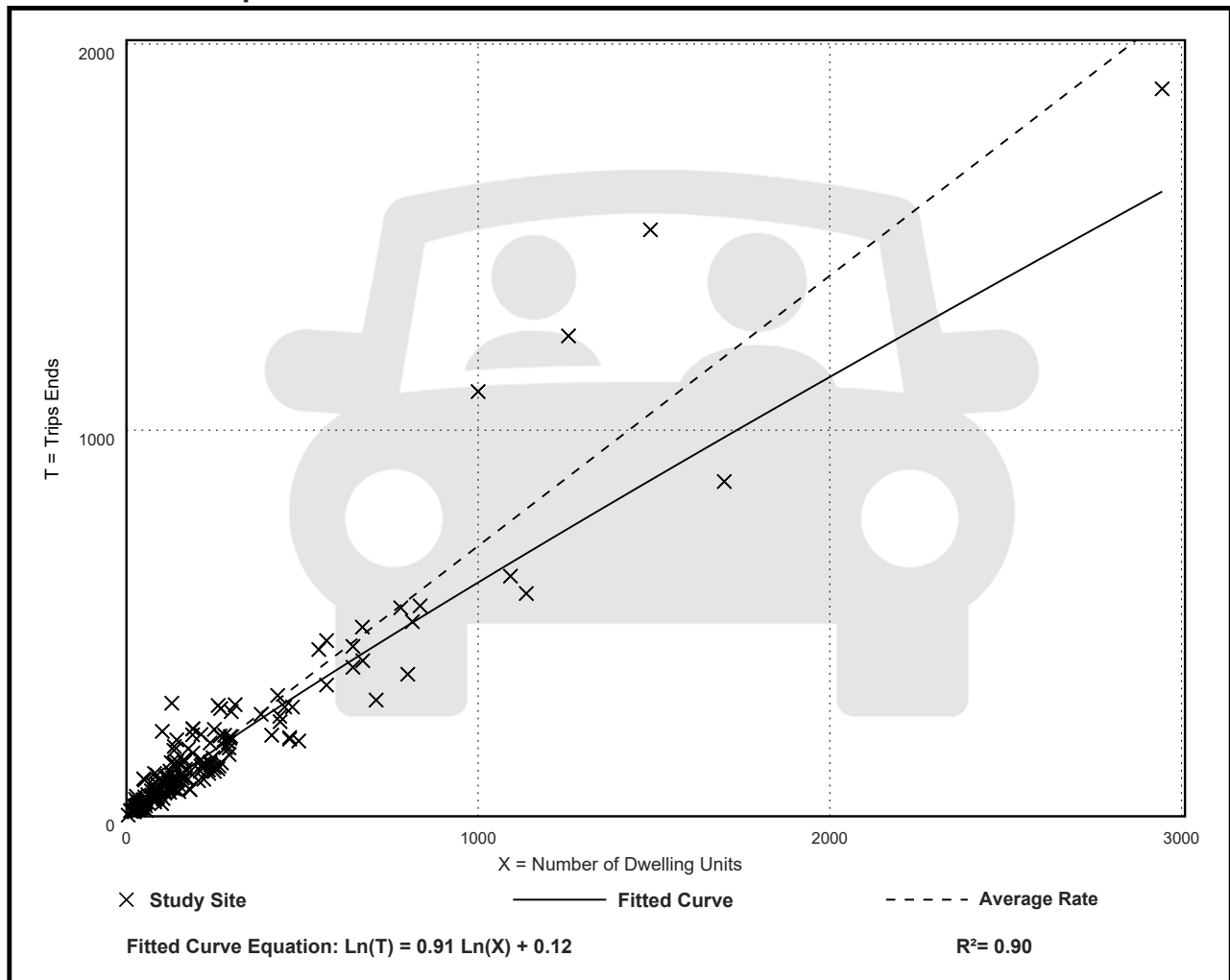
Avg. Num. of Dwelling Units: 226

Directional Distribution: 26% entering, 74% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.70         | 0.27 - 2.27    | 0.24               |

## Data Plot and Equation



# Single-Family Detached Housing (210)

## Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 208

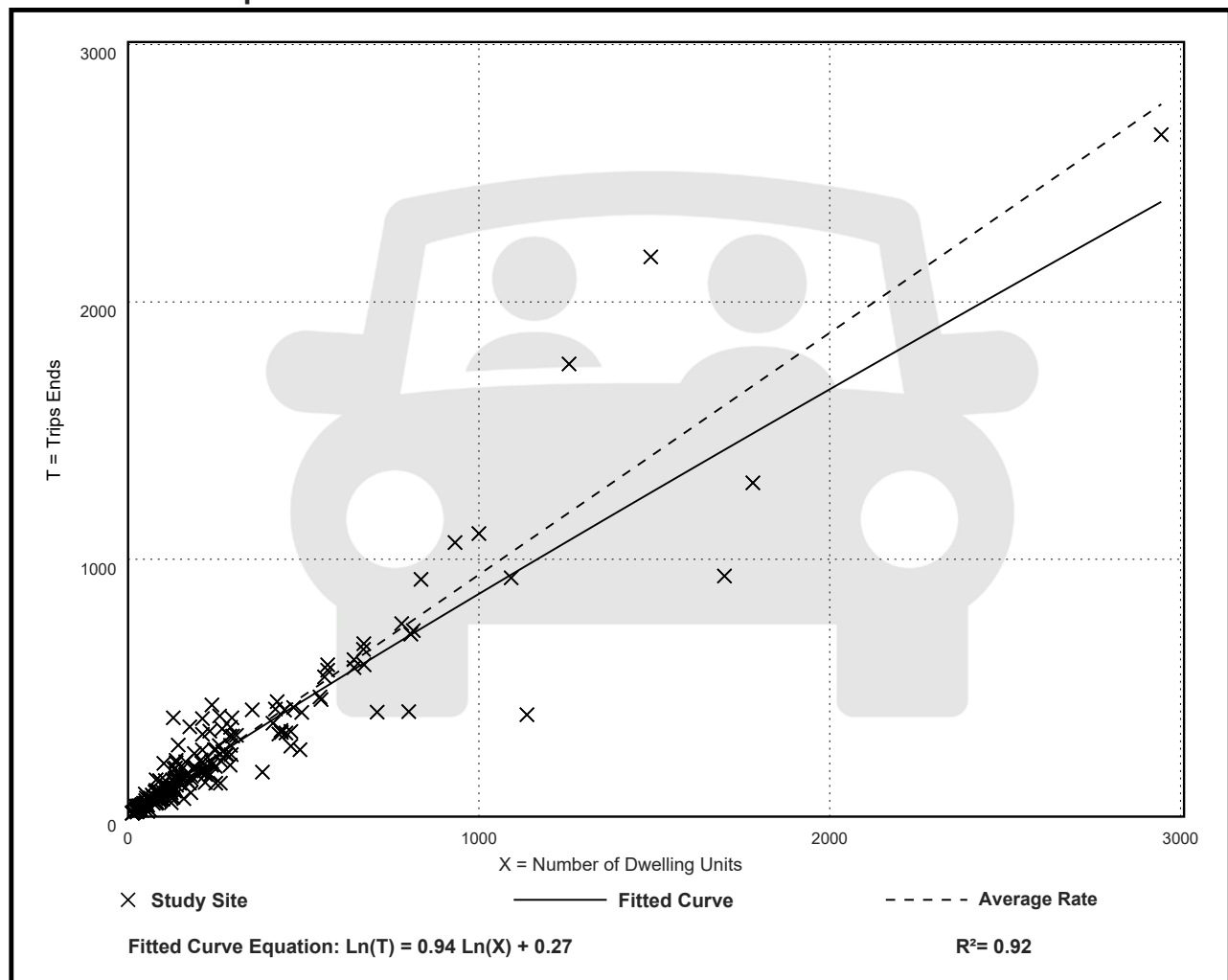
Avg. Num. of Dwelling Units: 248

Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.94         | 0.35 - 2.98    | 0.31               |

## Data Plot and Equation



# Land Use: 215

## Single-Family Attached Housing

---

### Description

Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

### Additional Data

The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance).

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Utah, Virginia, and Wisconsin.

### Source Numbers

168, 204, 211, 237, 305, 306, 319, 321, 357, 390, 418, 525, 571, 583, 638, 735, 868, 869, 870, 896, 912, 959, 1009, 1046, 1056, 1058, 1077

# Single-Family Attached Housing (215)

Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

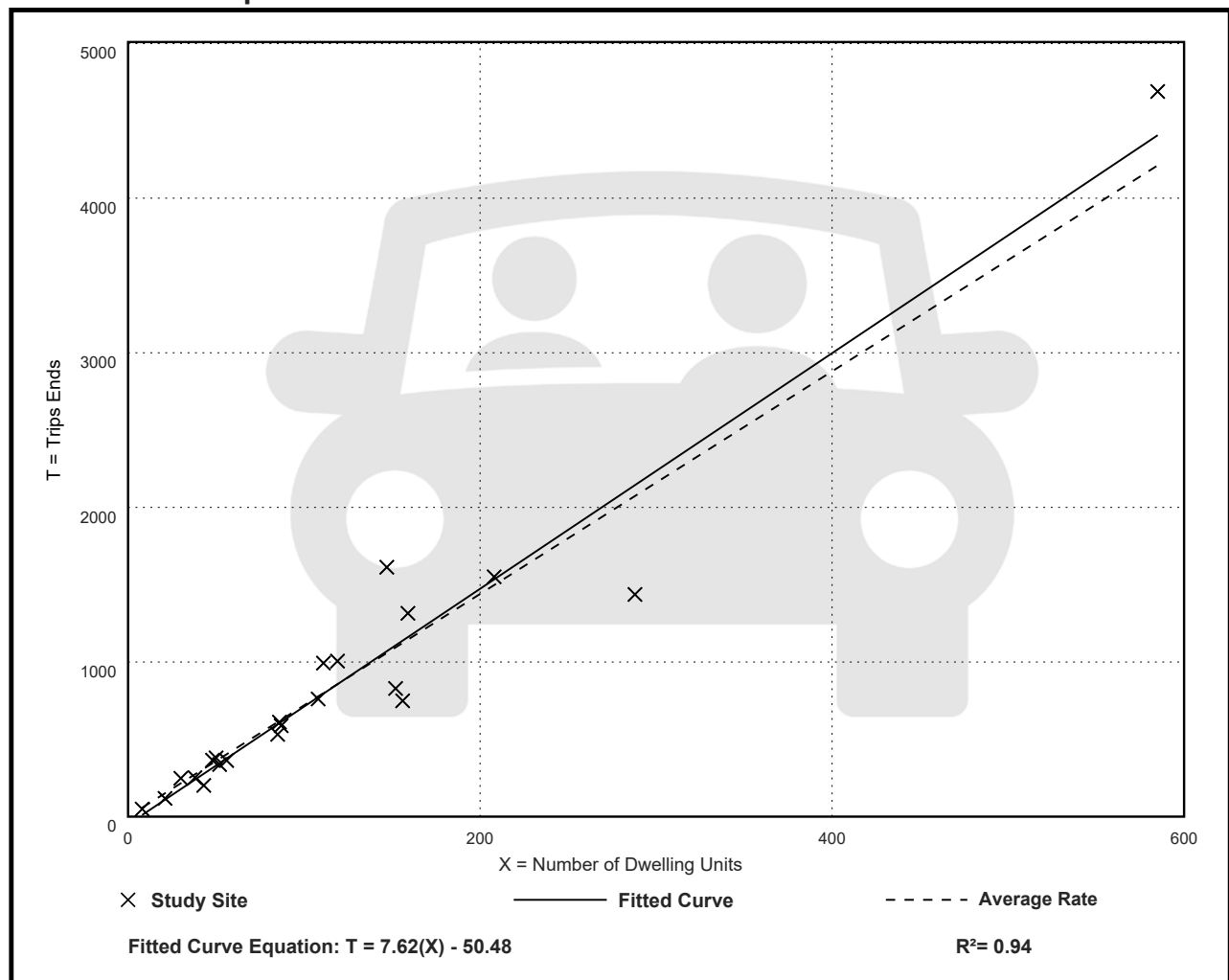
Avg. Num. of Dwelling Units: 120

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 7.20         | 4.70 - 10.97   | 1.61               |

## Data Plot and Equation



# Single-Family Attached Housing (215)

## Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 46

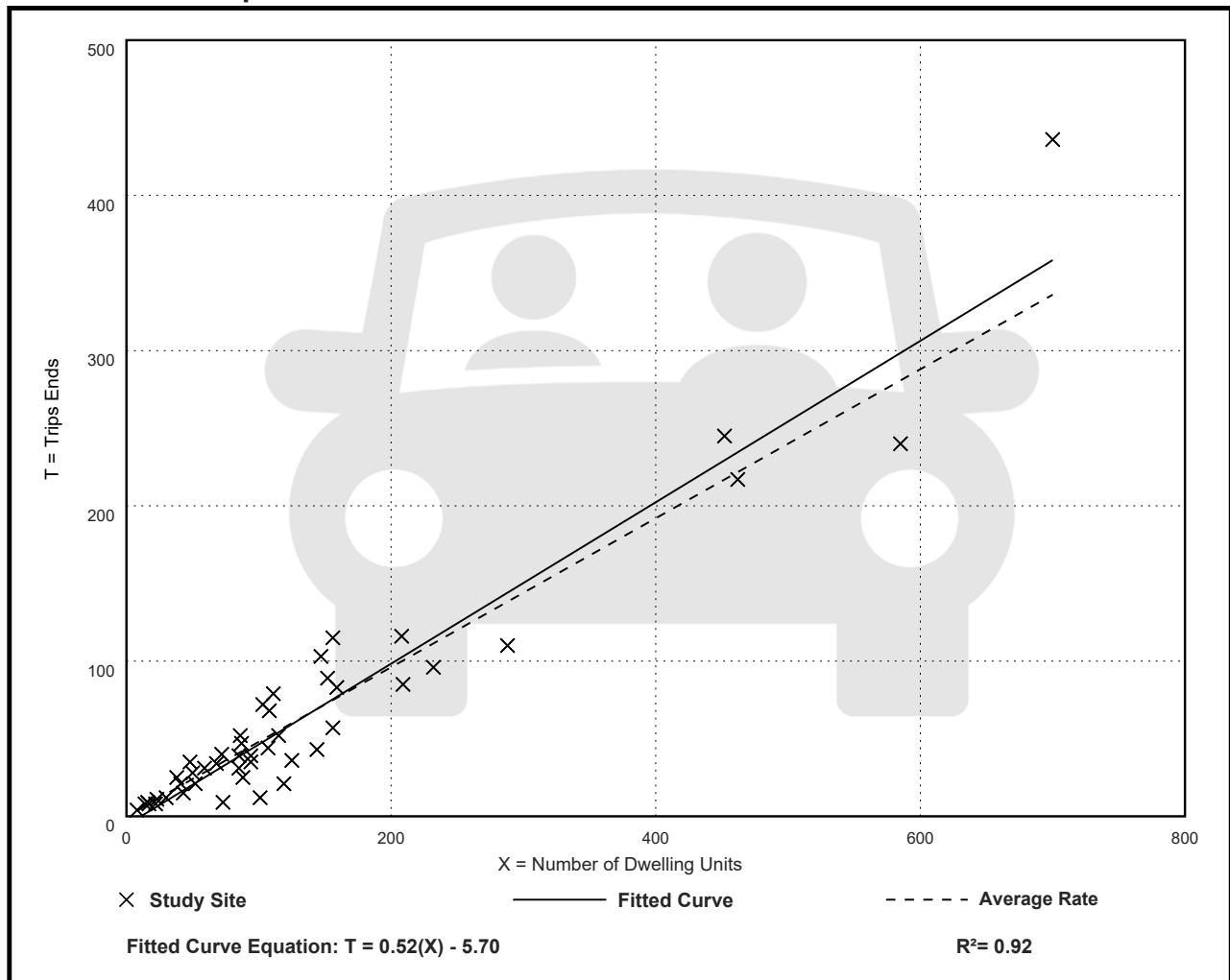
Avg. Num. of Dwelling Units: 135

Directional Distribution: 31% entering, 69% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.48         | 0.12 - 0.74    | 0.14               |

## Data Plot and Equation



# Single-Family Attached Housing (215)

## Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 51

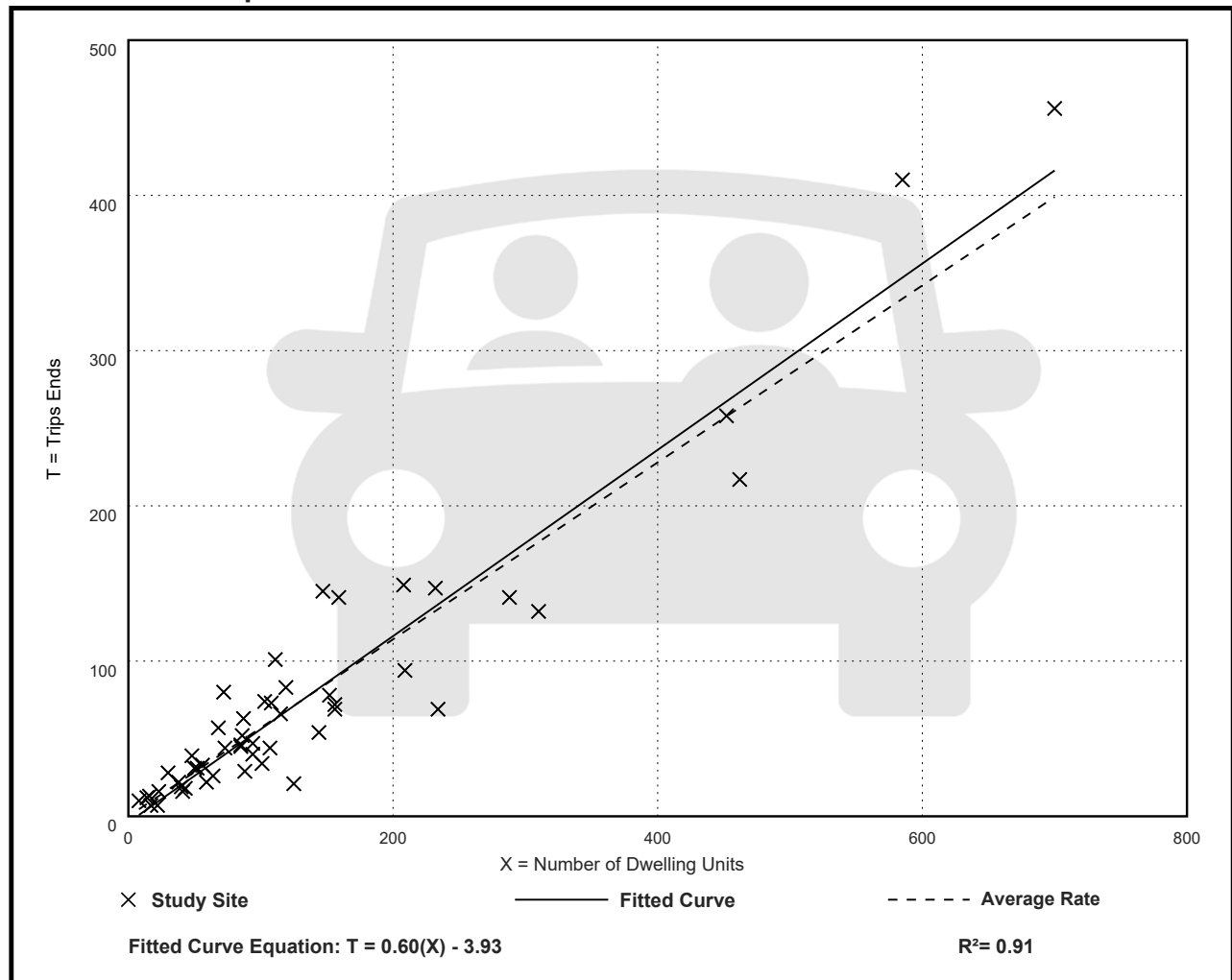
Avg. Num. of Dwelling Units: 136

Directional Distribution: 57% entering, 43% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.57         | 0.17 - 1.25    | 0.18               |

## Data Plot and Equation



# Land Use: 220

## Multifamily Housing (Low-Rise)

---

### Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

### Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

### Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip



generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

***It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).***

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

### **Source Numbers**

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

# Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

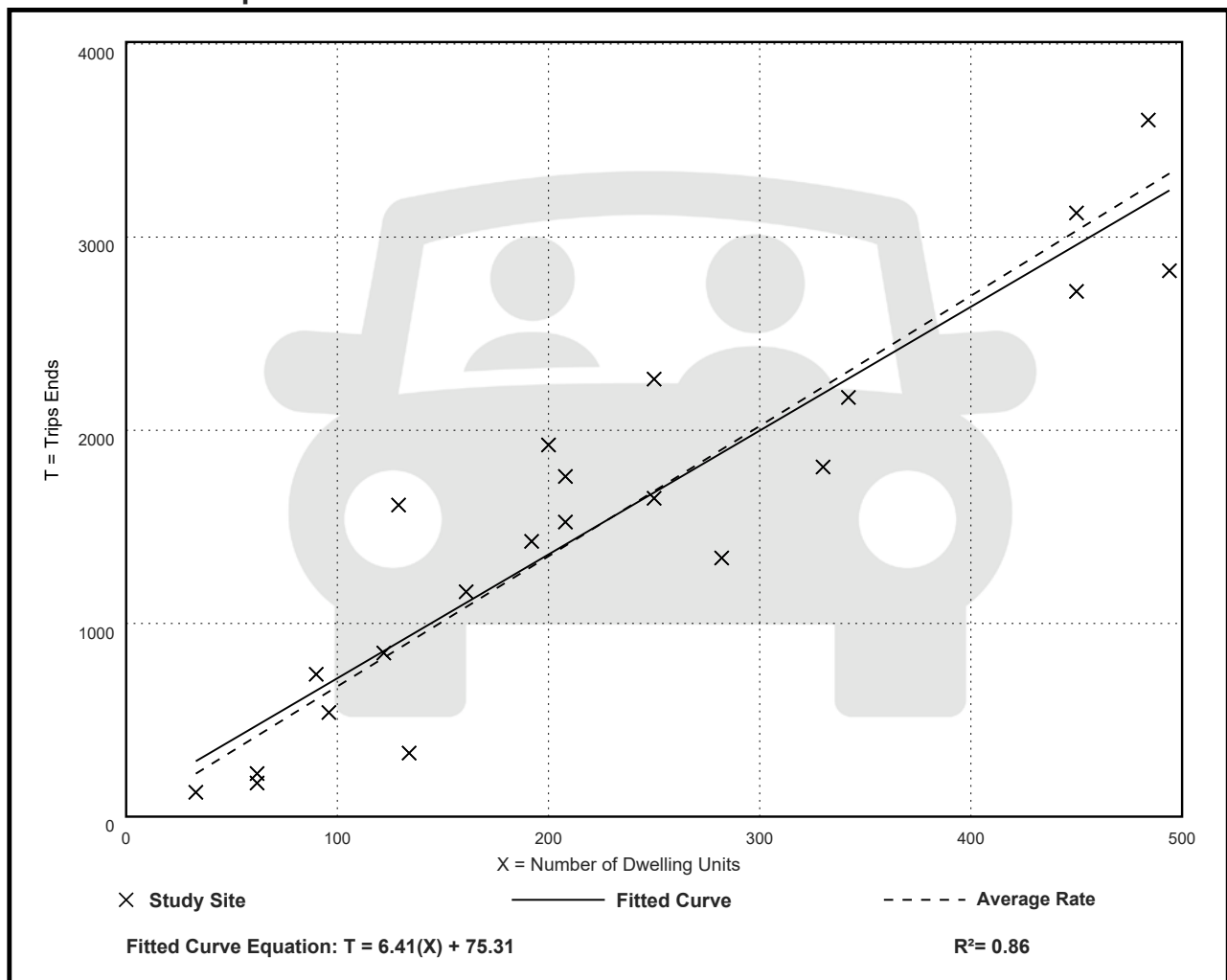
Avg. Num. of Dwelling Units: 229

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 6.74         | 2.46 - 12.50   | 1.79               |

## Data Plot and Equation



# Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

## Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 49

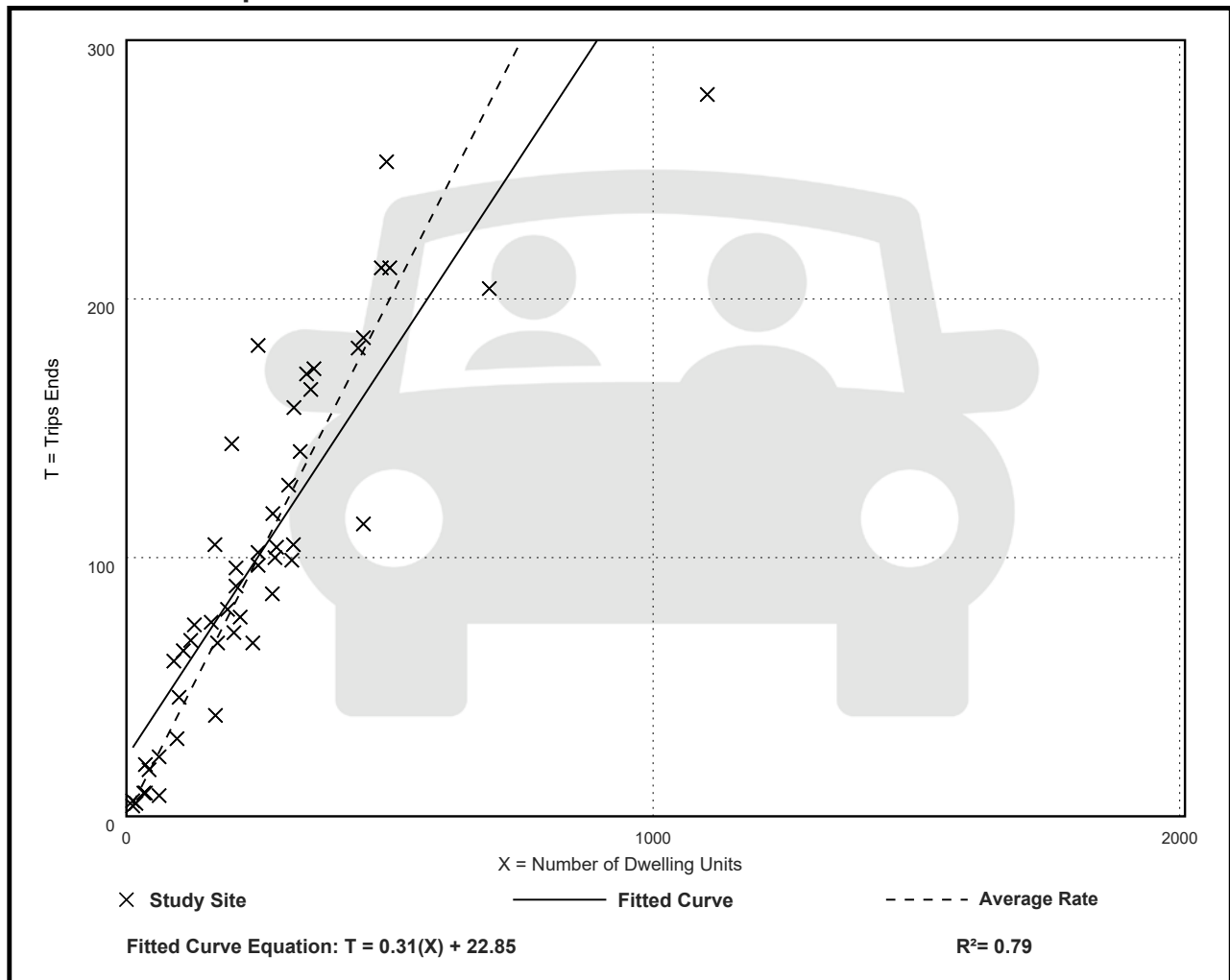
Avg. Num. of Dwelling Units: 249

Directional Distribution: 24% entering, 76% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.40         | 0.13 - 0.73    | 0.12               |

## Data Plot and Equation



# Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

## Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 59

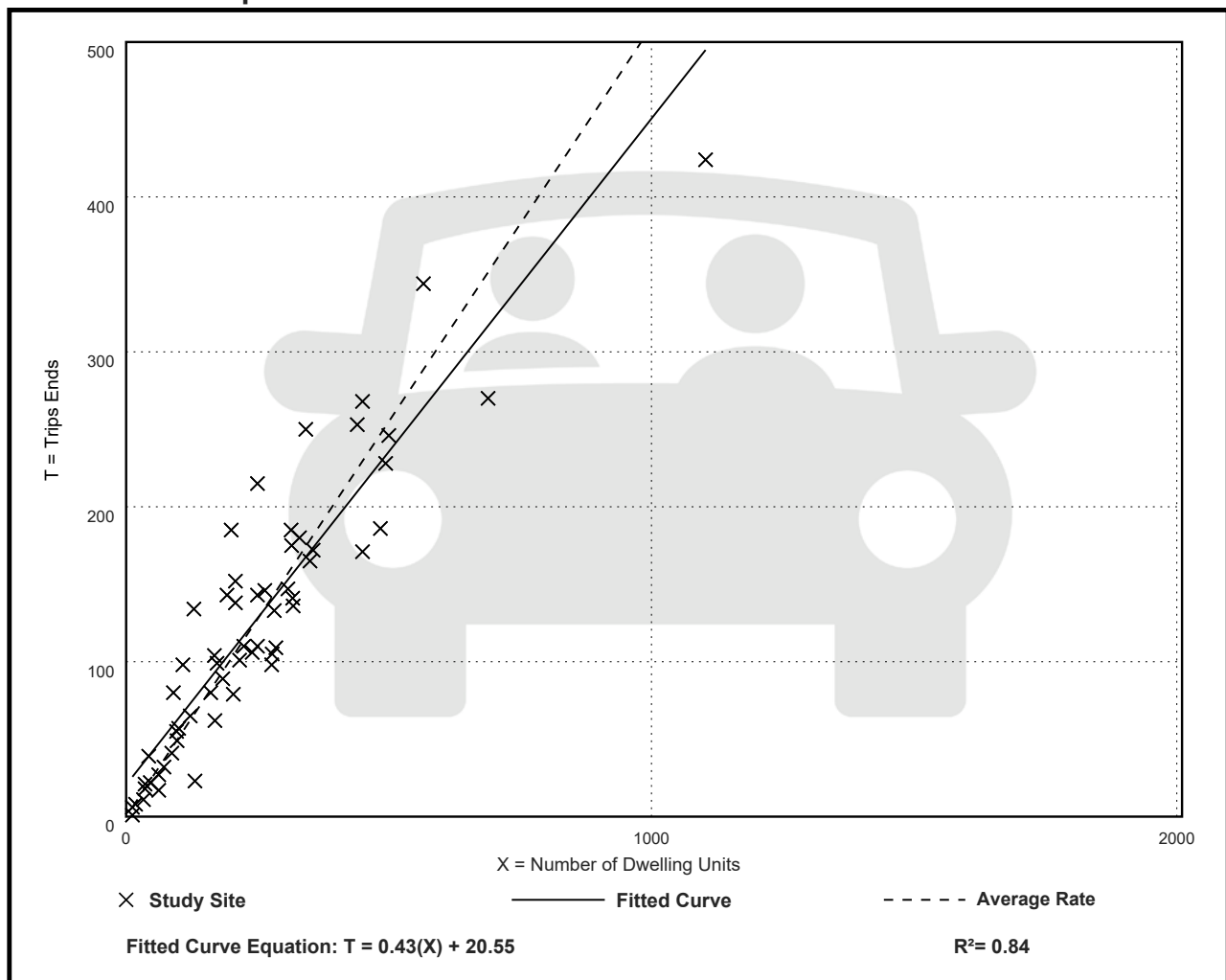
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.51         | 0.08 - 1.04    | 0.15               |

## Data Plot and Equation



# Land Use: 820

## Shopping Center (>150k)

---

### Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has at least 150,000 square feet of gross leasable area (GLA). It often has more than one anchor store. Various names can be assigned to a shopping center within this size range, depending on its specific size and tenants, such as community center, regional center, superregional center, fashion center, and power center.

A shopping center of this size typically contains more than retail merchandising facilities. Office space, a movie theater, restaurants, a post office, banks, a health club, and recreational facilities are common tenants.

A shopping center of this size can be enclosed or open-air. The vehicle trips generated at a shopping center are based upon the total GLA of the center. In the case of a smaller center without an enclosed mall or peripheral buildings, the GLA is the same as the gross floor area of the building.

The 150,000 square feet GLA threshold value between community/regional shopping center and shopping plaza (Land Use 821) is based on an examination of trip generation data. For a shopping plaza that is smaller than the threshold value, the presence or absence of a supermarket within the plaza has a measurable effect on site trip generation. For a shopping center that is larger than the threshold value, the trips generated by its other major tenants mask any effects of the presence or absence of an on-site supermarket.

Shopping plaza (40-150k) (Land Use 821), strip retail plaza (<40k) (Land Use 822), and factory outlet center (Land Use 823) are related uses.

### Additional Data

***Many shopping centers—in addition to the integrated unit of shops in one building or enclosed around a mall—include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied include peripheral buildings, it can be assumed that some of the data show their effect.***

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky,

Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

### **Source Numbers**

77, 110, 154, 156, 159, 190, 199, 202, 204, 213, 251, 269, 294, 295, 299, 304, 305, 307, 308, 309, 311, 314, 315, 316, 317, 319, 365, 385, 404, 414, 423, 442, 446, 562, 629, 702, 715, 728, 868, 871, 880, 899, 912, 926, 946, 962, 973, 974, 978, 1034, 1040, 1067

# Shopping Center (>150k) (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 108

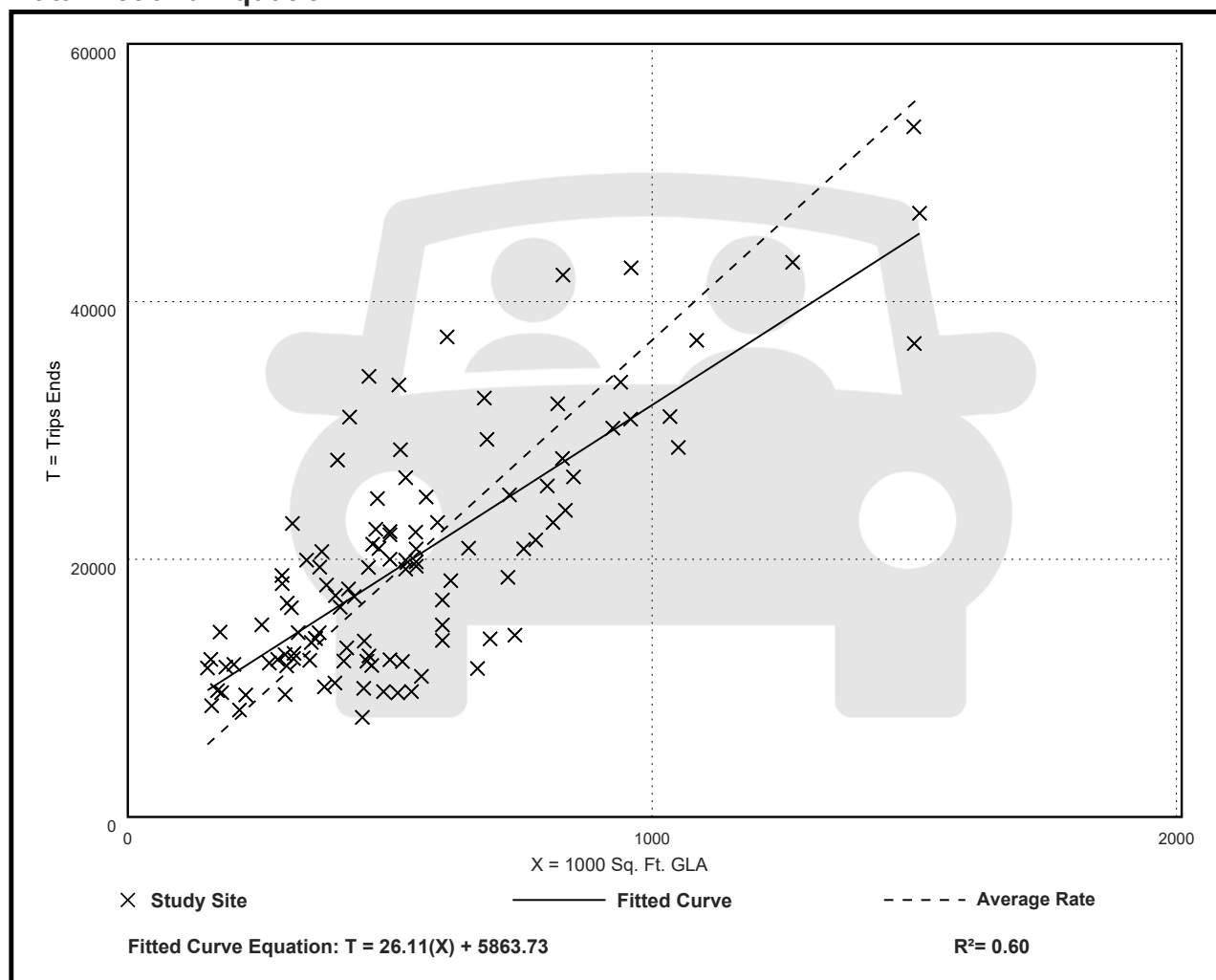
Avg. 1000 Sq. Ft. GLA: 538

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GLA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 37.01        | 17.27 - 81.53  | 12.79              |

## Data Plot and Equation



# Shopping Center (>150k) (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 44

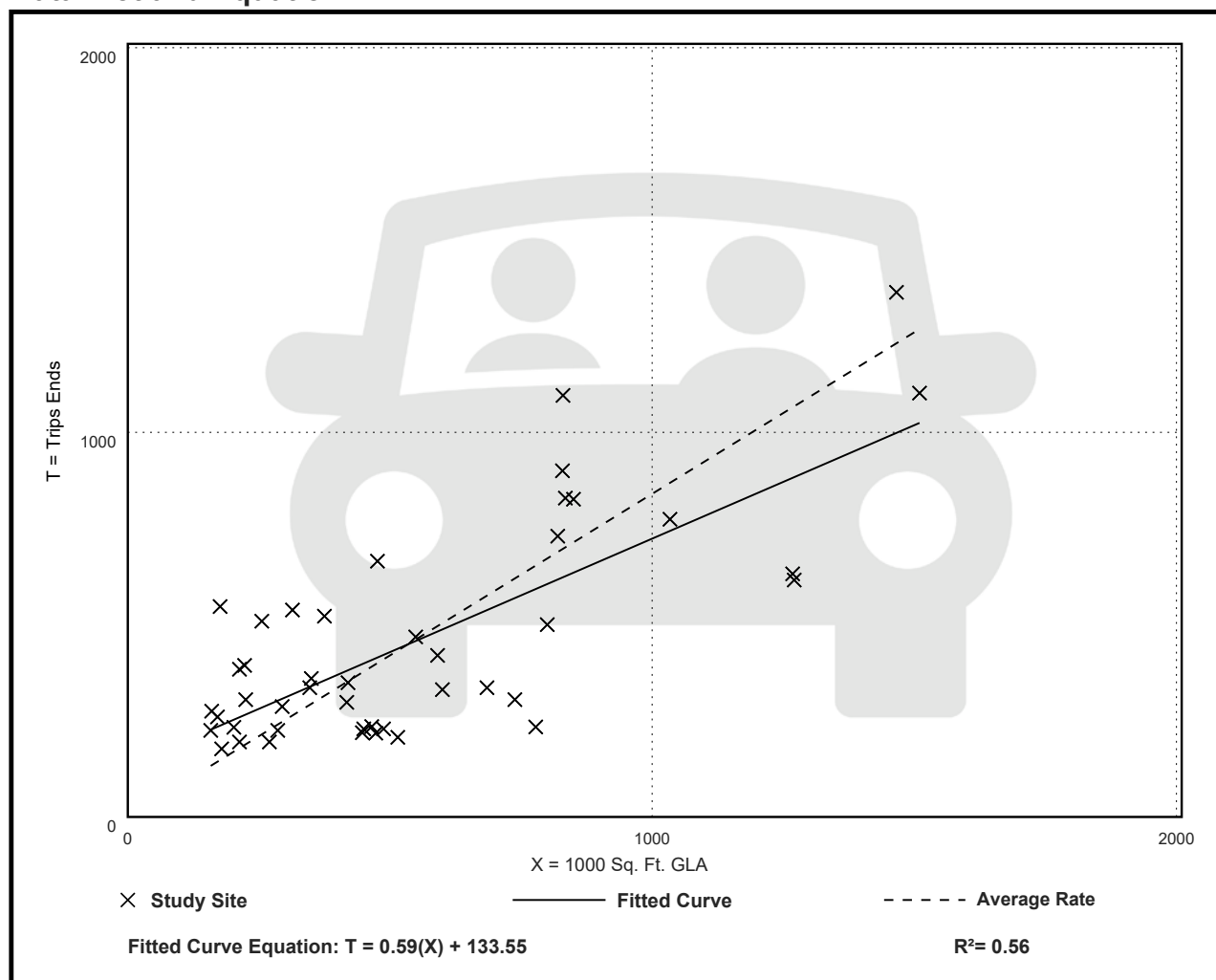
Avg. 1000 Sq. Ft. GLA: 546

Directional Distribution: 62% entering, 38% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GLA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.84         | 0.30 - 3.11    | 0.42               |

## Data Plot and Equation





# Shopping Center (>150k) (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 126

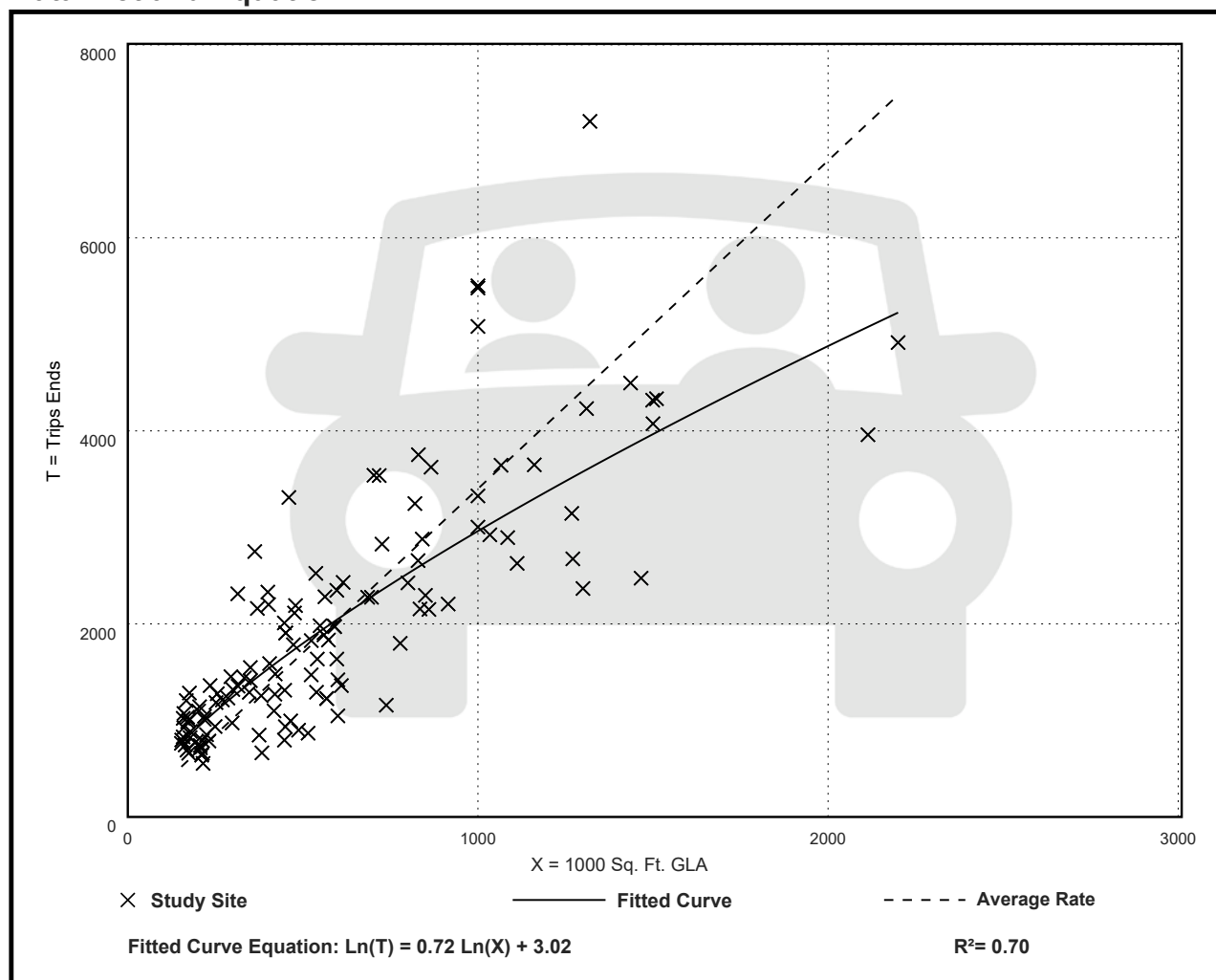
Avg. 1000 Sq. Ft. GLA: 581

Directional Distribution: 48% entering, 52% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GLA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 3.40         | 1.57 - 7.58    | 1.26               |

## Data Plot and Equation



# Land Use: 750

## Office Park

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### Description

An office park is typically a suburban subdivision or planned unit development that contains general office buildings and support services, such as banks, restaurants, and service stations, arranged in a park- or campus-like atmosphere. General office building (Land Use 710), corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), research and development center (Land Use 760), and business park (Land Use 770) are related uses.

### Additional Data

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Connecticut, Georgia, Indiana, Massachusetts, New Jersey, New York, and Pennsylvania.

### Source Numbers

160, 161, 184, 185, 253, 300, 301, 356, 550, 618, 912, 972, 973

# Office Park (750)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 10

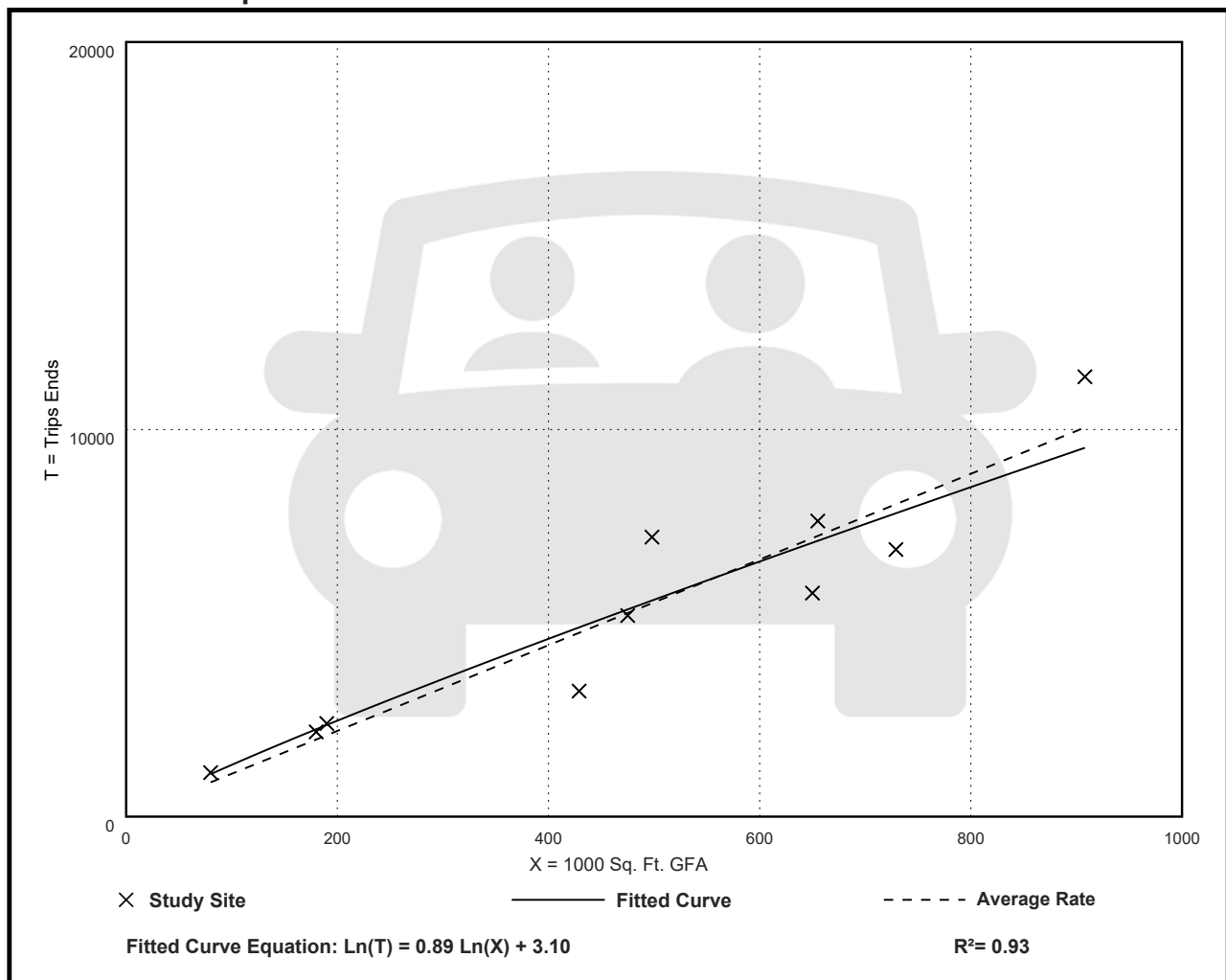
Avg. 1000 Sq. Ft. GFA: 479

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 11.07        | 7.56 - 14.50   | 2.14               |

## Data Plot and Equation



# Office Park (750)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 23

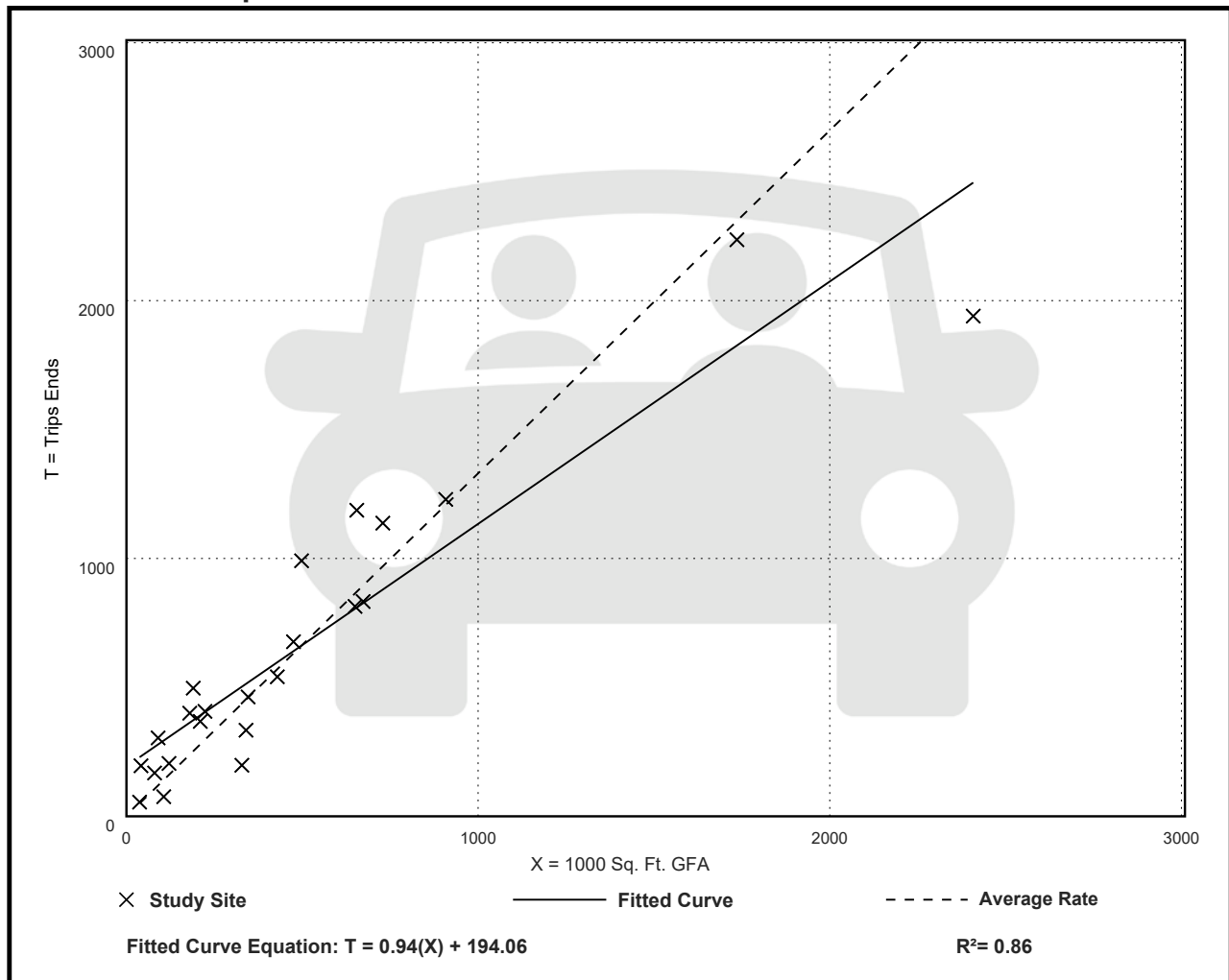
Avg. 1000 Sq. Ft. GFA: 498

Directional Distribution: 89% entering, 11% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.33         | 0.60 - 4.74    | 0.51               |

## Data Plot and Equation



# Office Park (750)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 20

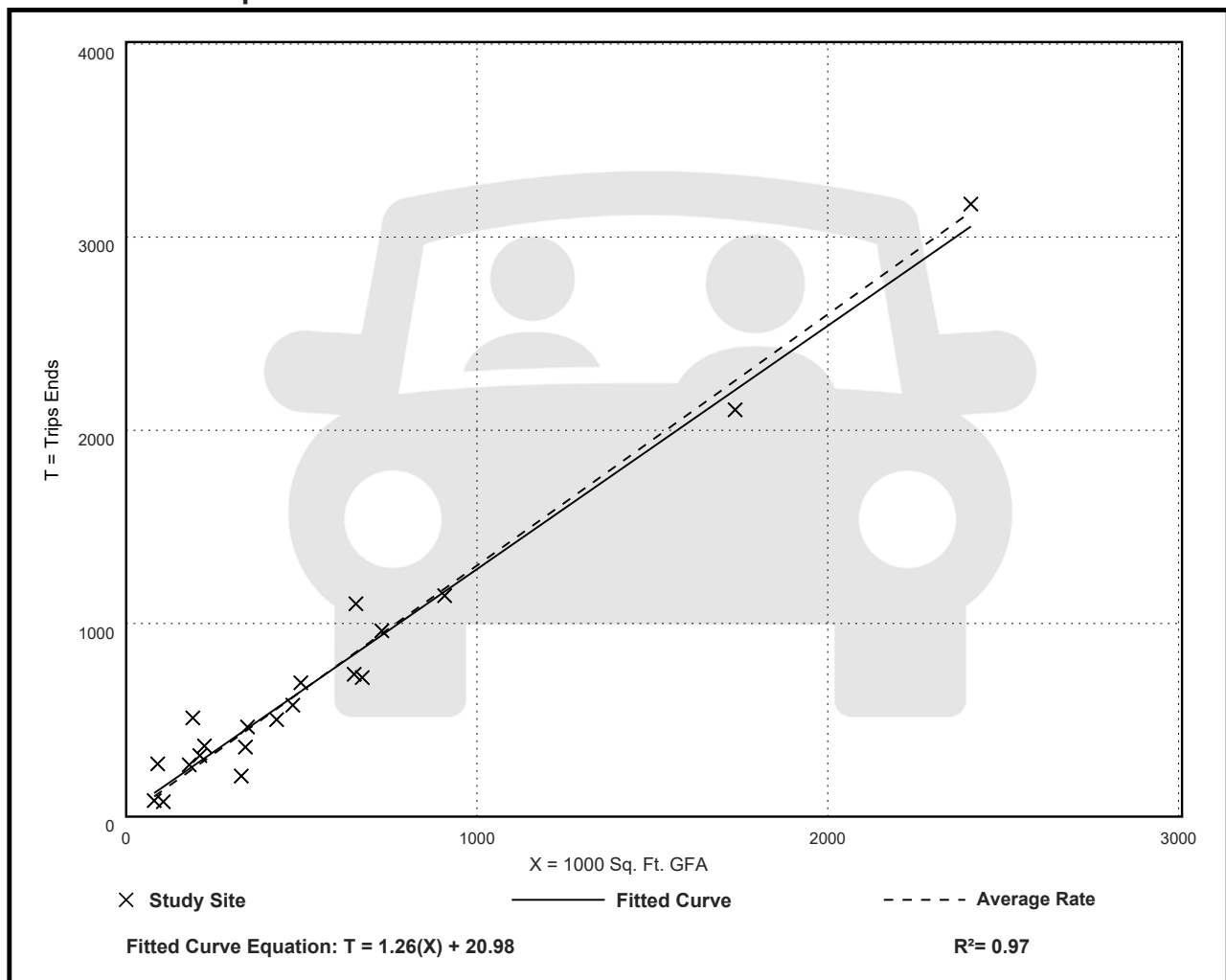
Avg. 1000 Sq. Ft. GFA: 563

Directional Distribution: 14% entering, 86% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.30         | 0.64 - 3.03    | 0.32               |

## Data Plot and Equation



# Land Use: 730

## Government Office Building

---

### Description

A government office building is an individual building containing either the entire function or simply one agency of a city, county, state, federal, or other governmental unit.

### Additional Data

Each study site in the current database serves a municipal or county agency.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 2000s and the 2010s in Oregon and Texas.

### Source Numbers

579, 889

# Government Office Building (730)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 7

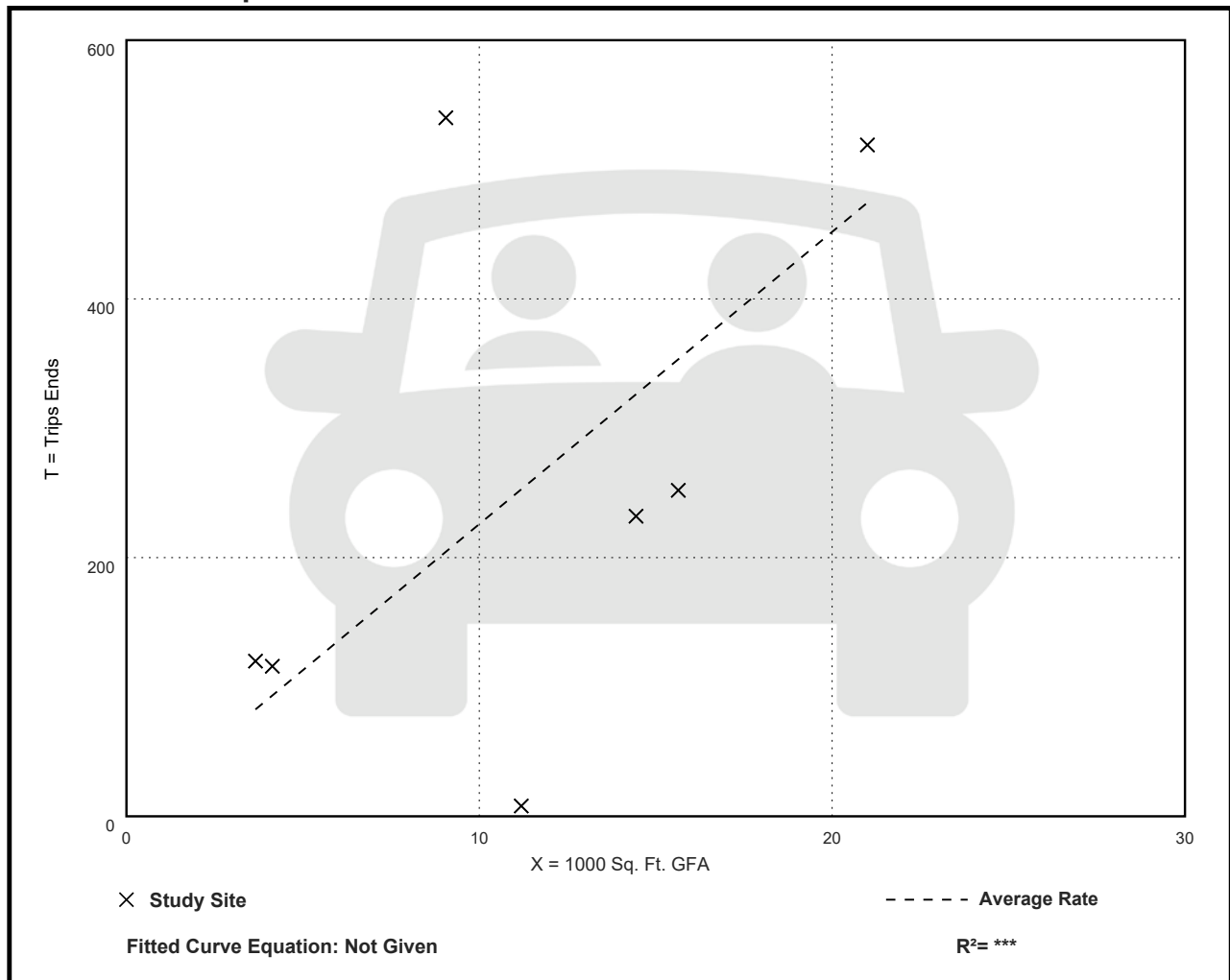
Avg. 1000 Sq. Ft. GFA: 11

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 22.59        | 0.71 - 59.66   | 17.03              |

## Data Plot and Equation



# Government Office Building (730)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 7

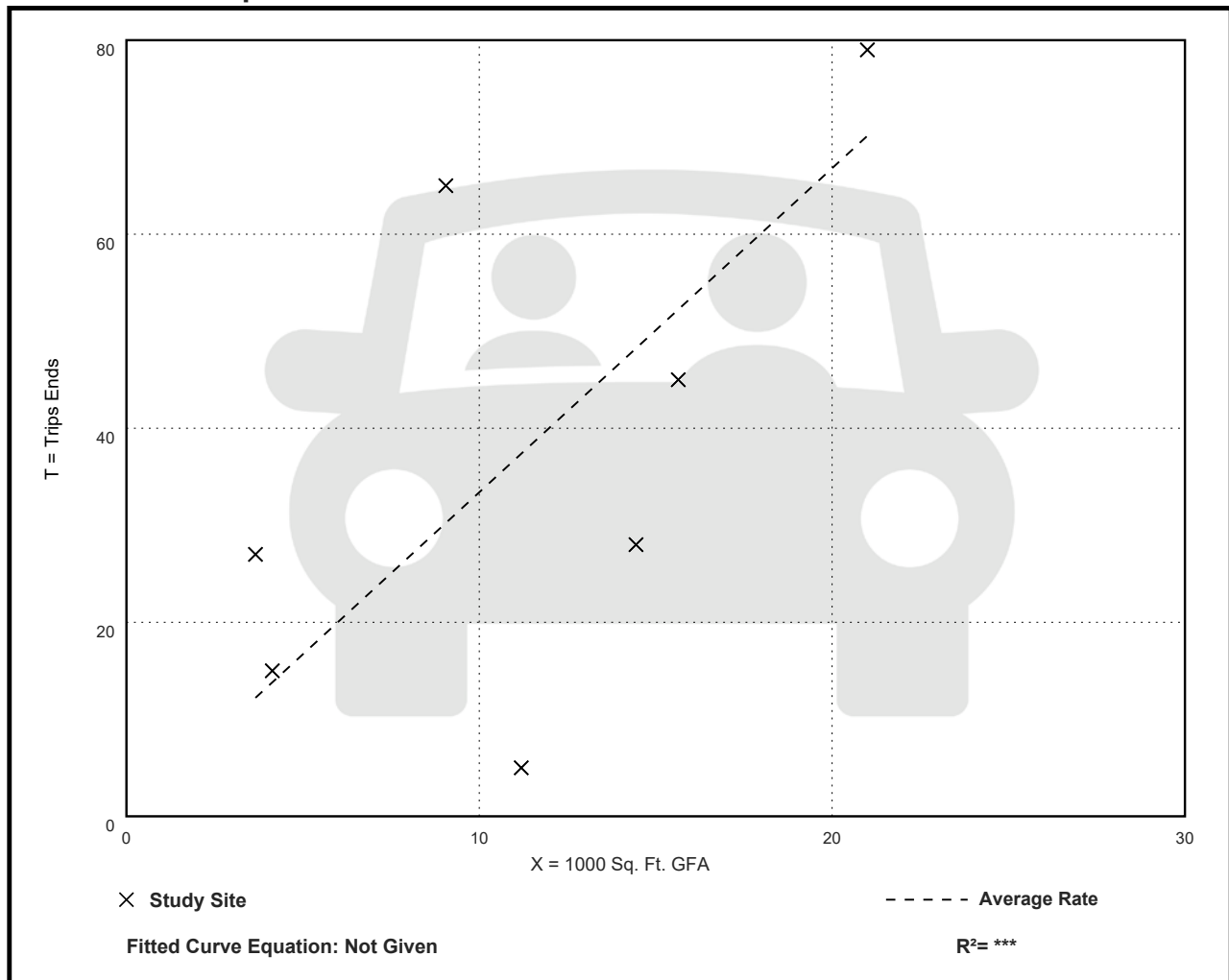
Avg. 1000 Sq. Ft. GFA: 11

Directional Distribution: 75% entering, 25% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 3.34         | 0.45 - 7.38    | 2.18               |

## Data Plot and Equation





# Government Office Building (730)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 8

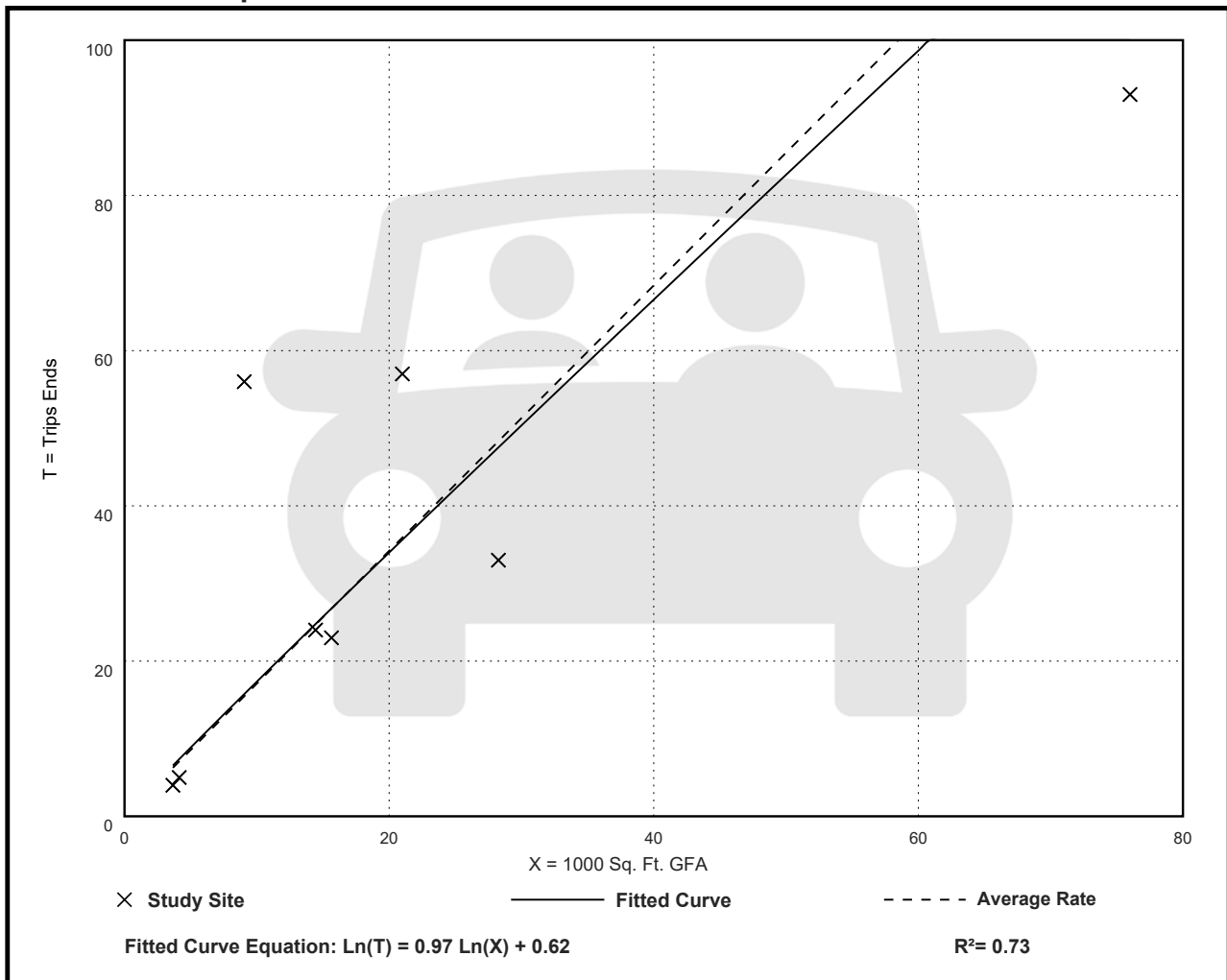
Avg. 1000 Sq. Ft. GFA: 22

Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.71         | 1.09 - 6.19    | 1.24               |

## Data Plot and Equation



# Land Use: 150

## Warehousing

---

### Description

A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas. High-cube transload and short-term storage warehouse (Land Use 154), high-cube fulfillment center warehouse (Land Use 155), high-cube parcel hub warehouse (Land Use 156), and high-cube cold storage warehouse (Land Use 157) are related uses.

### Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, and Texas.

### Source Numbers

184, 331, 406, 411, 443, 579, 583, 596, 598, 611, 619, 642, 752, 869, 875, 876, 914, 940, 1050

# Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 31

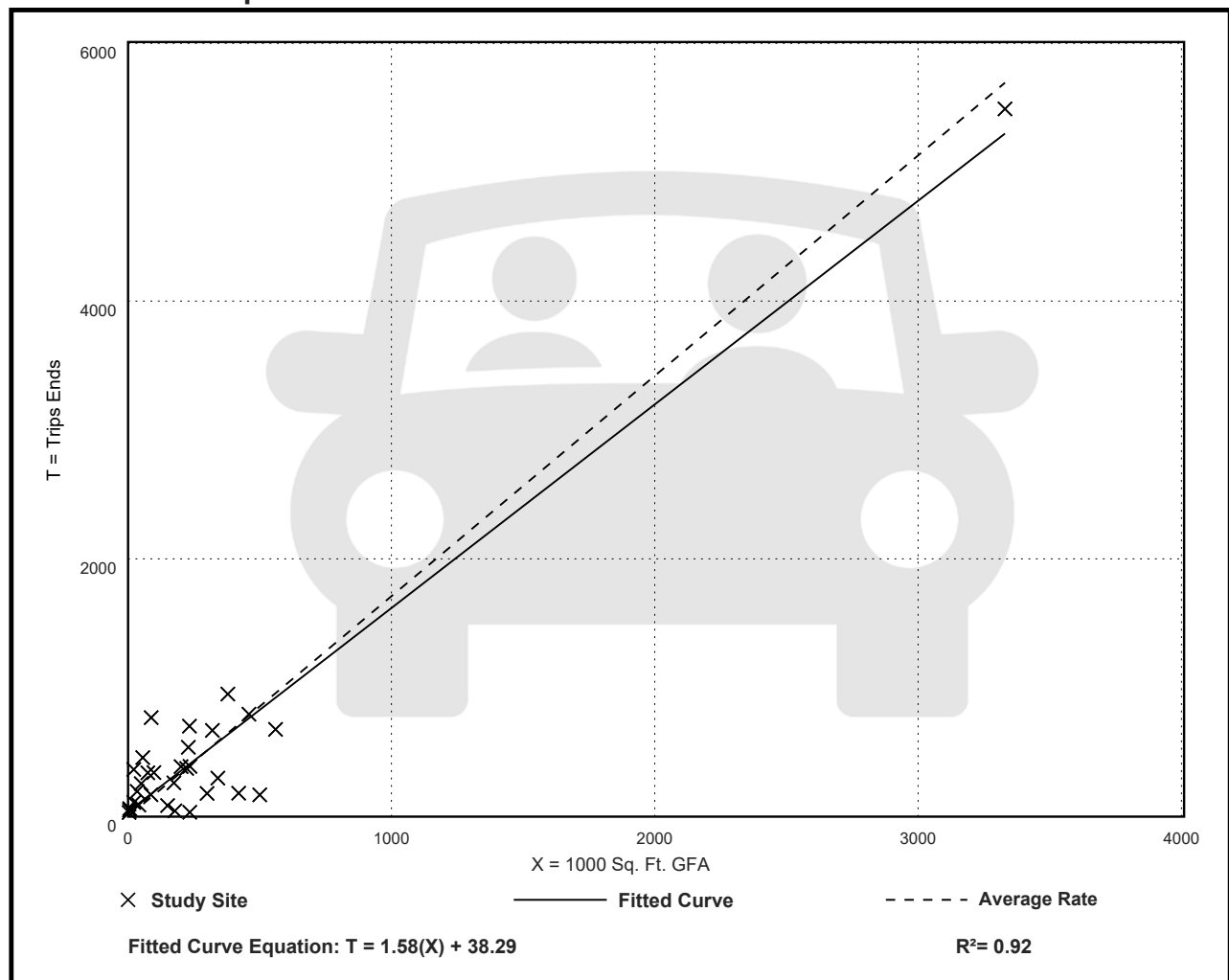
Avg. 1000 Sq. Ft. GFA: 292

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.71         | 0.15 - 16.93   | 1.48               |

## Data Plot and Equation



# Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 36

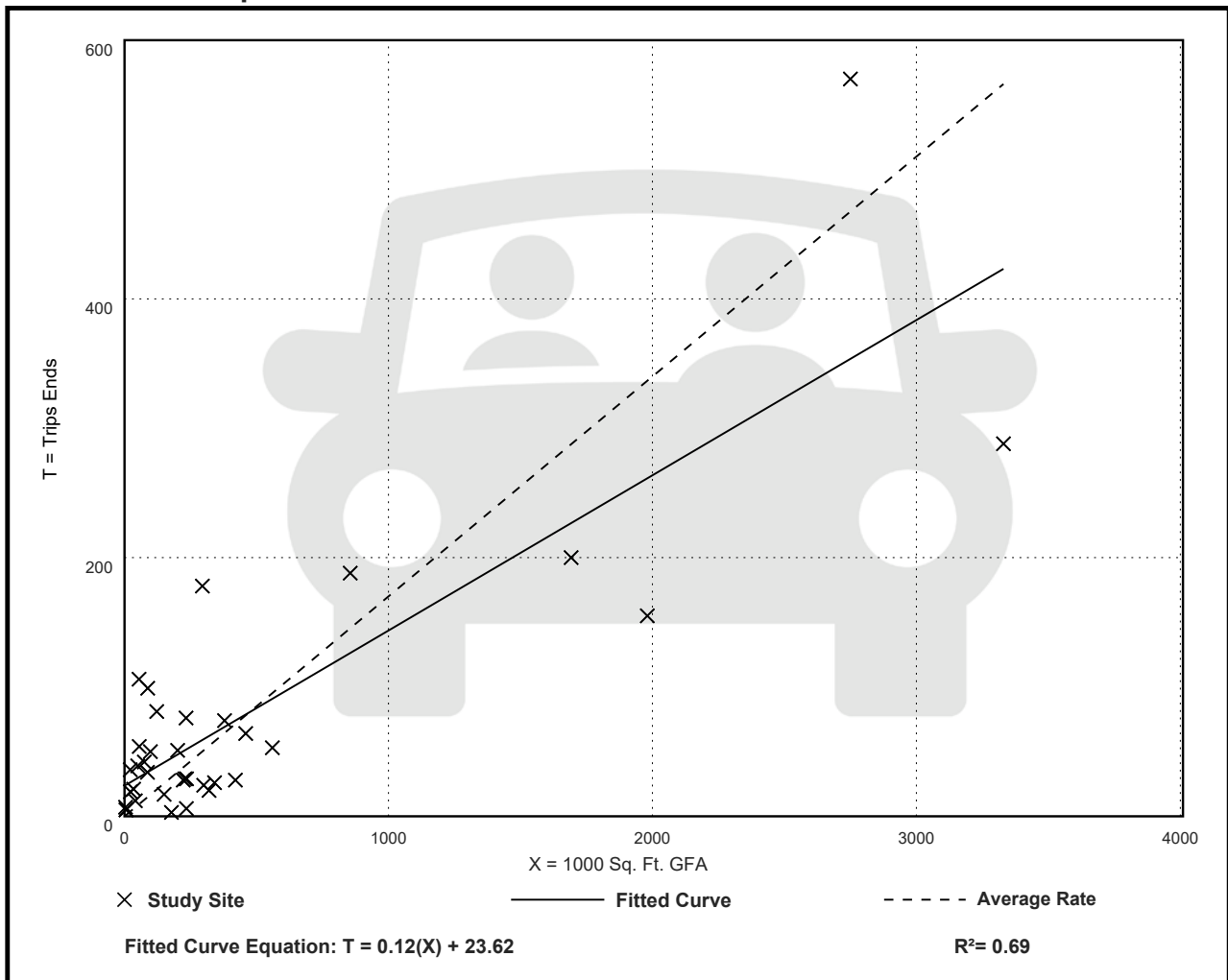
Avg. 1000 Sq. Ft. GFA: 448

Directional Distribution: 77% entering, 23% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.17         | 0.02 - 1.93    | 0.19               |

## Data Plot and Equation



# Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 49

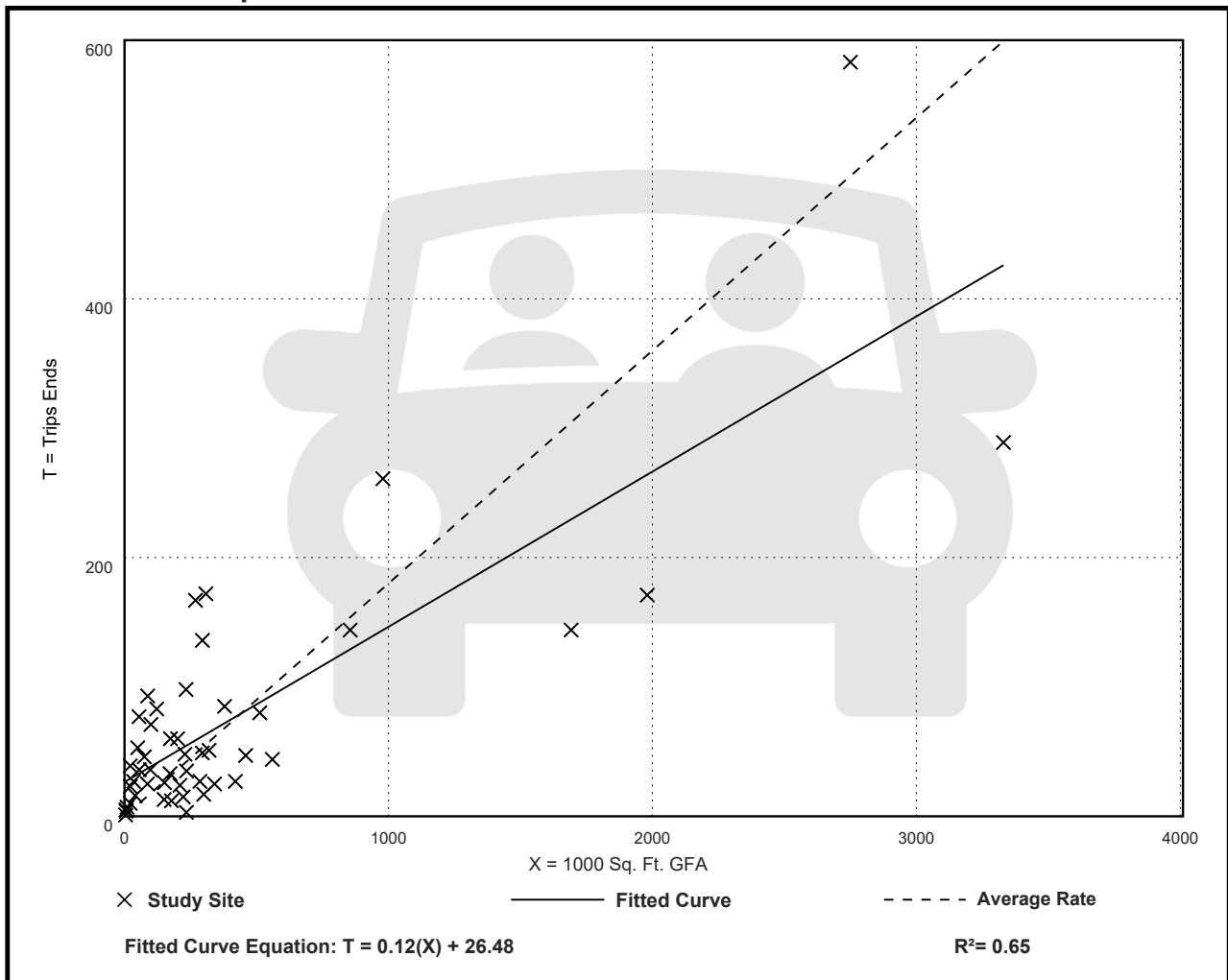
Avg. 1000 Sq. Ft. GFA: 400

Directional Distribution: 28% entering, 72% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.18         | 0.01 - 1.80    | 0.18               |

## Data Plot and Equation



| NCHRP 8-51 Internal Trip Capture Estimation Tool |                             |  |  |               |  |
|--|-----------------------------|--|--|---------------|--|
| Project Name:                                    | Downtown Taft Specific Plan |  |  | Organization: |  |
| Project Location:                                | Taft, CA                    |  |  | Performed By: |  |
| Scenario Description:                            |                             |  |  | Date:         |  |
| Analysis Year:                                   | Horizon Year 2042           |  |  | Checked By:   |  |
| Analysis Period:                                 | AM Street Peak Hour         |  |  | Date:         |  |

| Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |   |          |       |                         |          |         |
|--|---|----------|-------|-------------------------|----------|---------|
| Land Use   | Development Data (For Information Only) |          |       | Estimated Vehicle-Trips |          |         |
|  | ITE LUCs <sup>1</sup>                   | Quantity | Units | Total                   | Entering | Exiting |
| Office   |   |          |       | 2007                    | 1682     | 325     |
| Retail   |   |          |       | 659                     | 409      | 250     |
| Restaurant   |   |          |       | 0                       |          |         |
| Cinema/Entertainment   |   |          |       | 0                       |          |         |
| Residential  |   |          |       | 1543                    | 419      | 1124    |
| Hotel  |   |          |       | 0                       |          |         |
| All Other Land Uses <sup>2</sup>   |   |          |       | 51                      | 39       | 12      |
| Total  |   |          |       | 4260                    | 2549     | 1711    |

| Table 2-A: Mode Split and Vehicle Occupancy Estimates |                |           |                 |               |           |                 |
|---|----------------|-----------|-----------------|---------------|-----------|-----------------|
| Land Use  | Entering Trips |           |                 | Exiting Trips |           |                 |
|   | Veh. Occ.      | % Transit | % Non-Motorized | Veh. Occ.     | % Transit | % Non-Motorized |
| Office  | 1.00           |           |                 | 1.00          |           |                 |
| Retail  | 1.00           |           |                 | 1.00          |           |                 |
| Restaurant  | 1.00           |           |                 | 1.00          |           |                 |
| Cinema/Entertainment                                  |                |           |                 |               |           |                 |
| Residential   |                |           |                 |               |           |                 |
| Hotel   |                |           |                 |               |           |                 |
| All Other Land Uses <sup>2</sup>                      |                |           |                 |               |           |                 |

| Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  |        |            |                      |             |       |
| Retail  |                  |        |            |                      |             |       |
| Restaurant  |                  |        |            |                      |             |       |
| Cinema/Entertainment  |                  |        |            |                      |             |       |
| Residential   |                  |        |            |                      |             |       |
| Hotel   |                  |        |            |                      |             |       |

| Table 4-A: Internal Person-Trip Origin-Destination Matrix* |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 91     | 0          | 0                    | 0           | 0     |
| Retail   | 67               |        | 0          | 0                    | 8           | 0     |
| Restaurant   | 0                | 0      |            | 0                    | 0           | 0     |
| Cinema/Entertainment                                       | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 22               | 11     | 0          | 0                    |             | 0     |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 5-A: Computations Summary           |       |          |         |
|---|-------|----------|---------|
|   | Total | Entering | Exiting |
| All Person-Trips                          | 4,260 | 2,549    | 1,711   |
| Internal Capture Percentage               | 9%    | 8%       | 12%     |
| External Vehicle-Trips <sup>3</sup>       | 3,862 | 2,350    | 1,512   |
| External Transit-Trips <sup>4</sup>       | 0     | 0        | 0       |
| External Non-Motorized Trips <sup>4</sup> | 0     | 0        | 0       |

| Table 6-A: Internal Trip Capture Percentages by Land Use |                |               |
|--|----------------|---------------|
| Land Use   | Entering Trips | Exiting Trips |
| Office   | 5%             | 28%           |
| Retail   | 25%            | 30%           |
| Restaurant   | N/A            | N/A           |
| Cinema/Entertainment                                     | N/A            | N/A           |
| Residential  | 2%             | 3%            |
| Hotel  | N/A            | N/A           |

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

<sup>3</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

<sup>4</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

*Estimation Tool Developed by the Texas Transportation Institute*

|                         |                             |
|-------------------------|-----------------------------|
| <b>Project Name:</b>    | Downtown Taft Specific Plan |
| <b>Analysis Period:</b> | AM Street Peak Hour         |

| Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends |                               |               |               |                              |               |               |
|--|-------------------------------|---------------|---------------|------------------------------|---------------|---------------|
| Land Use   | Table 7-A (D): Entering Trips |               |               | Table 7-A (O): Exiting Trips |               |               |
|  | Veh. Occ.                     | Vehicle-Trips | Person-Trips* | Veh. Occ.                    | Vehicle-Trips | Person-Trips* |
| Office   | 1.00                          | 1682          | 1682          | 1.00                         | 325           | 325           |
| Retail   | 1.00                          | 409           | 409           | 1.00                         | 250           | 250           |
| Restaurant   | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |
| Cinema/Entertainment   | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |
| Residential  | 1.00                          | 419           | 419           | 1.00                         | 1124          | 1124          |
| Hotel  | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |

| Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 91     | 205        | 0                    | 3           | 0     |
| Retail   | 73               |        | 33         | 0                    | 35          | 0     |
| Restaurant   | 0                | 0      |            | 0                    | 0           | 0     |
| Cinema/Entertainment   | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 22               | 11     | 225        | 0                    |             | 0     |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  | 131    | 0          | 0                    | 0           | 0     |
| Retail  | 67               |        | 0          | 0                    | 8           | 0     |
| Restaurant  | 235              | 33     |            | 0                    | 21          | 0     |
| Cinema/Entertainment  | 0                | 0      | 0          |                      | 0           | 0     |
| Residential   | 50               | 70     | 0          | 0                    |             | 0     |
| Hotel   | 50               | 16     | 0          | 0                    | 0           |       |

| Table 9-A (D): Internal and External Trips Summary (Entering Trips) |                       |          |       |                         |                      |                            |
|---|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Destination Land Use  | Person-Trip Estimates |          |       | External Trips by Mode* |                      |                            |
|   | Internal              | External | Total | Vehicles <sup>1</sup>   | Transit <sup>2</sup> | Non-Motorized <sup>2</sup> |
| Office  | 89                    | 1593     | 1682  | 1593                    | 0                    | 0                          |
| Retail  | 102                   | 307      | 409   | 307                     | 0                    | 0                          |
| Restaurant  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Cinema/Entertainment  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Residential   | 8                     | 411      | 419   | 411                     | 0                    | 0                          |
| Hotel   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| All Other Land Uses <sup>3</sup>                                    | 0                     | 39       | 39    | 39                      | 0                    | 0                          |

| Table 9-A (O): Internal and External Trips Summary (Exiting Trips) |                       |          |       |                         |                      |                            |
|--|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Origin Land Use  | Person-Trip Estimates |          |       | External Trips by Mode* |                      |                            |
|  | Internal              | External | Total | Vehicles <sup>1</sup>   | Transit <sup>2</sup> | Non-Motorized <sup>2</sup> |
| Office   | 91                    | 234      | 325   | 234                     | 0                    | 0                          |
| Retail   | 75                    | 175      | 250   | 175                     | 0                    | 0                          |
| Restaurant   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Cinema/Entertainment   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Residential  | 33                    | 1091     | 1124  | 1091                    | 0                    | 0                          |
| Hotel  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| All Other Land Uses <sup>3</sup>                                   | 0                     | 12       | 12    | 12                      | 0                    | 0                          |

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

\*Indicates computation that has been rounded to the nearest whole number.

| NCHRP 8-51 Internal Trip Capture Estimation Tool |                             |  |  |               |  |
|--|-----------------------------|--|--|---------------|--|
| Project Name:                                    | Downtown Taft Specific Plan |  |  | Organization: |  |
| Project Location:                                | Taft, CA                    |  |  | Performed By: |  |
| Scenario Description:                            |                             |  |  | Date:         |  |
| Analysis Year:                                   | Horizon Year 2042           |  |  | Checked By:   |  |
| Analysis Period:                                 | PM Street Peak Hour         |  |  | Date:         |  |

| Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |   |          |       |                         |          |         |
|--|---|----------|-------|-------------------------|----------|---------|
| Land Use   | Development Data (For Information Only) |          |       | Estimated Vehicle-Trips |          |         |
|  | ITE LUCs <sup>1</sup>                   | Quantity | Units | Total                   | Entering | Exiting |
| Office   |   |          |       | 1803                    | 292      | 1511    |
| Retail   |   |          |       | 2726                    | 1308     | 1418    |
| Restaurant   |   |          |       | 0                       |          |         |
| Cinema/Entertainment   |   |          |       | 0                       |          |         |
| Residential  |   |          |       | 1948                    | 1187     | 761     |
| Hotel  |   |          |       | 0                       |          |         |
| All Other Land Uses <sup>2</sup>   |   |          |       | 54                      | 15       | 39      |
| Total  |   |          |       | 6531                    | 2802     | 3729    |

| Table 2-P: Mode Split and Vehicle Occupancy Estimates |                |           |                 |               |           |                 |
|---|----------------|-----------|-----------------|---------------|-----------|-----------------|
| Land Use  | Entering Trips |           |                 | Exiting Trips |           |                 |
|   | Veh. Occ.      | % Transit | % Non-Motorized | Veh. Occ.     | % Transit | % Non-Motorized |
| Office  | 1.00           |           |                 | 1.00          |           |                 |
| Retail  | 1.00           |           |                 | 1.00          |           |                 |
| Restaurant  | 1.00           |           |                 | 1.00          |           |                 |
| Cinema/Entertainment                                  |                |           |                 |               |           |                 |
| Residential   |                |           |                 |               |           |                 |
| Hotel   |                |           |                 |               |           |                 |
| All Other Land Uses <sup>2</sup>                      |                |           |                 |               |           |                 |

| Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  |        |            |                      |             |       |
| Retail  |                  |        |            |                      |             |       |
| Restaurant  |                  |        |            |                      |             |       |
| Cinema/Entertainment  |                  |        |            |                      |             |       |
| Residential   |                  |        |            |                      |             |       |
| Hotel   |                  |        |            |                      |             |       |

| Table 4-P: Internal Person-Trip Origin-Destination Matrix* |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 105    | 0          | 0                    | 30          | 0     |
| Retail   | 28               |        | 0          | 0                    | 369         | 0     |
| Restaurant   | 0                | 0      |            | 0                    | 0           | 0     |
| Cinema/Entertainment                                       | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 30               | 131    | 0          | 0                    |             | 0     |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 5-P: Computations Summary           |       |          |         |
|---|-------|----------|---------|
|   | Total | Entering | Exiting |
| All Person-Trips                          | 6,531 | 2,802    | 3,729   |
| Internal Capture Percentage               | 21%   | 25%      | 19%     |
| External Vehicle-Trips <sup>3</sup>       | 5,145 | 2,109    | 3,036   |
| External Transit-Trips <sup>4</sup>       | 0     | 0        | 0       |
| External Non-Motorized Trips <sup>4</sup> | 0     | 0        | 0       |

| Table 6-P: Internal Trip Capture Percentages by Land Use |                |               |
|--|----------------|---------------|
| Land Use   | Entering Trips | Exiting Trips |
| Office   | 20%            | 9%            |
| Retail   | 18%            | 28%           |
| Restaurant   | N/A            | N/A           |
| Cinema/Entertainment                                     | N/A            | N/A           |
| Residential  | 34%            | 21%           |
| Hotel  | N/A            | N/A           |

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

<sup>3</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>4</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

*Estimation Tool Developed by the Texas Transportation Institute*



|                         |                             |
|-------------------------|-----------------------------|
| <b>Project Name:</b>    | Downtown Taft Specific Plan |
| <b>Analysis Period:</b> | PM Street Peak Hour         |

| Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends |                               |               |               |                              |               |               |
|--|-------------------------------|---------------|---------------|------------------------------|---------------|---------------|
| Land Use   | Table 7-P (D): Entering Trips |               |               | Table 7-P (O): Exiting Trips |               |               |
|  | Veh. Occ.                     | Vehicle-Trips | Person-Trips* | Veh. Occ.                    | Vehicle-Trips | Person-Trips* |
| Office   | 1.00                          | 292           | 292           | 1.00                         | 1511          | 1511          |
| Retail   | 1.00                          | 1308          | 1308          | 1.00                         | 1418          | 1418          |
| Restaurant   | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |
| Cinema/Entertainment   | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |
| Residential  | 1.00                          | 1187          | 1187          | 1.00                         | 761           | 761           |
| Hotel  | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |

| Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 302    | 60         | 0                    | 30          | 0     |
| Retail   | 28               |        | 411        | 57                   | 369         | 71    |
| Restaurant   | 0                | 0      |            | 0                    | 0           | 0     |
| Cinema/Entertainment   | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 30               | 320    | 160        | 0                    |             | 23    |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  | 105    | 0          | 0                    | 47          | 0     |
| Retail  | 91               |        | 0          | 0                    | 546         | 0     |
| Restaurant  | 88               | 654    |            | 0                    | 190         | 0     |
| Cinema/Entertainment  | 18               | 52     | 0          |                      | 47          | 0     |
| Residential   | 166              | 131    | 0          | 0                    |             | 0     |
| Hotel   | 0                | 26     | 0          | 0                    | 0           |       |

| Table 9-P (D): Internal and External Trips Summary (Entering Trips) |                       |          |       |                         |                      |                            |
|---|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Destination Land Use  | Person-Trip Estimates |          |       | External Trips by Mode* |                      |                            |
|   | Internal              | External | Total | Vehicles <sup>1</sup>   | Transit <sup>2</sup> | Non-Motorized <sup>2</sup> |
| Office  | 58                    | 234      | 292   | 234                     | 0                    | 0                          |
| Retail  | 236                   | 1072     | 1308  | 1072                    | 0                    | 0                          |
| Restaurant  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Cinema/Entertainment  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Residential   | 399                   | 788      | 1187  | 788                     | 0                    | 0                          |
| Hotel   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| All Other Land Uses <sup>3</sup>                                    | 0                     | 15       | 15    | 15                      | 0                    | 0                          |

| Table 9-P (O): Internal and External Trips Summary (Exiting Trips) |                       |          |       |                         |                      |                            |
|--|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Origin Land Use  | Person-Trip Estimates |          |       | External Trips by Mode* |                      |                            |
|  | Internal              | External | Total | Vehicles <sup>1</sup>   | Transit <sup>2</sup> | Non-Motorized <sup>2</sup> |
| Office   | 135                   | 1376     | 1511  | 1376                    | 0                    | 0                          |
| Retail   | 397                   | 1021     | 1418  | 1021                    | 0                    | 0                          |
| Restaurant   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Cinema/Entertainment   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Residential  | 161                   | 600      | 761   | 600                     | 0                    | 0                          |
| Hotel  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| All Other Land Uses <sup>3</sup>                                   | 0                     | 39       | 39    | 39                      | 0                    | 0                          |

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

\*Indicates computation that has been rounded to the nearest whole number.

## **APPENDIX D**

### **KERN COG HORIZON YEAR 2042 WITH SPECIFIC PLAN REGIONAL MODEL ADT PLOT AND VOLUME POST-PROCESSING WORKSHEETS**



EX AM #1

N/S Street: 10th Street

E/W Street:

Kern Street (SR-33)

| Existing<br>ADT |            |       |                          |     |                   |       |  |     | FUTURE<br>Link<br>Volumes |     | Minimum<br>10%<br>Growth | Volume<br>Adj.      | Refined<br>Turning<br>Movement<br>Volumes | Refined<br>Link<br>Volumes | Gap<br>Closure | 10% Gap |    |
|-----------------|------------|-------|--------------------------|-----|-------------------|-------|--|-----|---------------------------|-----|--------------------------|---------------------|---|----------------------------|----------------|---------|----|
|                 | Existing   | EX AM | Existing Link<br>Volumes |     | Future ADT (2042) |       | FUTURE Raw Turning<br>Movement Volumes |     |                           |     |                          |                     |   |                            |                |         |    |
| 9,782           | Northbound | N. of | Kern Street (SR-33)      |     |                   |       | %                                      |     | Northbound                |     | N of                     | Kern Street (SR-33) |   |                            |                |         |    |
|                 | Left       | 67    | NB                       | 362 | 53%               | NB    | 602                                    | 111 | Left                      | 605 | NB                       | 605                 | 74  | 111                        | 605            | 4       | 61 |
|                 | Thru       | 181   | SB                       | 322 | 47%               | SB    | 535                                    | 301 | Thru                      | 535 | SB                       | 535                 | 199                                       | 301                        | 535            | 0       | 54 |
|                 | Right      | 129   | Sum                      | 684 |                   | Enter | 16255                                  | 214 | Right                     |     | Sum                      | 1140                | 142                                       | 214                        |                |         |    |
|                 |            |       |                          |     |                   |       |  |     |                           |     |                          |                     |   |                            |                |         |    |
| 9,390           | Southbound | S. of | Kern Street (SR-33)      |     |                   |       | %                                      |     | Southbound                |     | S of                     | Kern Street (SR-33) |   |                            |                |         |    |
|                 | Left       | 57    | NB                       | 377 | 55%               | NB    | 626                                    | 95  | Left                      | 626 | NB                       | 626                 | 63  | 95                         | 626            | 0       | 63 |
|                 | Thru       | 174   | SB                       | 303 | 45%               | SB    | 504                                    | 289 | Thru                      | 506 | SB                       | 506                 | 191                                       | 289                        | 506            | 3       | 51 |
|                 | Right      | 91    | Sum                      | 680 |                   | Enter | 15604                                  | 151 | Right                     |     | Sum                      | 1133                | 100                                       | 151                        |                |         |    |
|                 |            |       |                          |     |                   |       |  |     |                           |     |                          |                     |   |                            |                |         |    |
| 9,278           | Eastbound  | E. of | 10th Street              |     |                   |       | %                                      |     | Eastbound                 |     | E of                     | 10th Street         |   |                            |                |         |    |
|                 | Left       | 123   | EB                       | 416 | 56%               | EB    | 700                                    | 207 | Left                      | 696 | EB                       | 696                 | 135                                       | 207                        | 696            | -4      | 70 |
|                 | Thru       | 230   | WB                       | 332 | 44%               | WB    | 559                                    | 387 | Thru                      | 559 | WB                       | 559                 | 253                                       | 387                        | 559            | 0       | 56 |
|                 | Right      | 54    | Sum                      | 748 |                   | Enter | 15612                                  | 91  | Right                     |     | Sum                      | 1255                | 59  | 91                         |                |         |    |
|                 |            |       |                          |     |                   |       |  |     |                           |     |                          |                     |   |                            |                |         |    |
| 11,803          | Westbound  | W. of | 10th Street              |     |                   |       | %                                      |     | Westbound                 |     | W of                     | 10th Street         |   |                            |                |         |    |
|                 | Left       | 75    | EB                       | 407 | 53%               | EB    | 685                                    | 126 | Left                      | 685 | EB                       | 685                 | 83  | 126                        | 685            | 0       | 68 |
|                 | Thru       | 199   | WB                       | 357 | 47%               | WB    | 601                                    | 335 | Thru                      | 597 | WB                       | 597                 | 219                                       | 335                        | 597            | -3      | 60 |
|                 | Right      | 58    | Sum                      | 764 |                   | Enter | 19861                                  | 98  | Right                     |     | Sum                      | 1282                | 64  | 98                         |                |         |    |
|                 |            |       |                          |     |                   |       |  |     |                           |     |                          |                     |   |                            |                |         |    |

-0.71089

EX PM

N/S Street: 10th Street

E/W Street:

Kern Street (SR-33)

| Existing<br>ADT | Existing Link Volumes |       |                       |     |                   |            |  |       | FUTURE Raw Turning<br>Movement Volumes | FUTURE Link<br>Volumes | Verify | Minimum<br>10%<br>Growth | Volume<br>Adj. | Refined<br>Turning<br>Movement<br>Volumes | Refined<br>Link<br>Volumes | Gap<br>Closure | 10% Gap |
|-----------------|-----------------------|-------|-----------------------|-----|-------------------|------------|--|-------|--|------------------------|--------|--------------------------|----------------|---|----------------------------|----------------|---------|
|                 | Existing              | EX PM | Existing Link Volumes |     | Future ADT (2042) |            | FUTURE Raw Turning<br>Movement Volumes |       |  |                        |        |                          |                |   |                            |                |         |
| 9,782<br>9782   | Northbound            | N.of  | Kern Street (SR-33)   |     | %                 | Northbound |  | 611   | N of                                   | Kern Street (SR-33)    | 111    | 168                      | 611            | 3   | 61                         |                |         |
|                 | Left                  | 101   | NB                    | 366 | 46%               | NB         | 608                                    | 168   | Left                                   | 611                    | 111    | 168                      | 611            | 3   | 61                         |                |         |
|                 | Thru                  | 212   | SB                    | 428 | 54%               | SB         | 711                                    | 352   | Thru                                   | 711                    | 233    | 352                      | 711            | 0   | 71                         |                |         |
|                 | Right                 | 81    | Sum                   | 794 | Enter             | 16255      | 135                                    | Right | Sum                                    | 1323                   | 89     | 135                      |                |   |                            |                |         |
| 9,390<br>9388   | Southbound            | S. of | Kern Street (SR-33)   |     | %                 | Southbound |  | 655   | S of                                   | Kern Street (SR-33)    | 87     | 131                      | 655            | 0   | 65                         |                |         |
|                 | Left                  | 79    | NB                    | 394 | 52%               | NB         | 655                                    | 131   | Left                                   | 655                    | 87     | 131                      | 655            | 0   | 65                         |                |         |
|                 | Thru                  | 202   | SB                    | 368 | 48%               | SB         | 612                                    | 336   | Thru                                   | 615                    | 222    | 336                      | 615            | 3   | 61                         |                |         |
|                 | Right                 | 147   | Sum                   | 762 | Enter             | 15604      | 244                                    | Right | Sum                                    | 1270                   | 162    | 244                      |                |   |                            |                |         |
| 9,278<br>9279   | Eastbound             | E. of | 10th Street           |     | %                 | Eastbound  |  | 606   | E of                                   | 10th Street            | 125    | 192                      | 606            | -3  | 61                         |                |         |
|                 | Left                  | 114   | EB                    | 362 | 54%               | EB         | 609                                    | 192   | Left                                   | 606                    | 125    | 192                      | 606            | -3  | 61                         |                |         |
|                 | Thru                  | 202   | WB                    | 307 | 46%               | WB         | 517                                    | 340   | Thru                                   | 517                    | 222    | 340                      | 517            | 0   | 52                         |                |         |
|                 | Right                 | 93    | Sum                   | 669 | Enter             | 15612      | 156                                    | Right | Sum                                    | 1122                   | 102    | 156                      |                |   |                            |                |         |
| 11,803<br>11803 | Westbound             | W.of  | 10th Street           |     | %                 | Westbound  |  | 688   | W of                                   | 10th Street            | 80     | 123                      | 688            | 0   | 69                         |                |         |
|                 | Left                  | 73    | EB                    | 409 | 48%               | EB         | 688                                    | 123   | Left                                   | 688                    | 80     | 123                      | 688            | 0   | 69                         |                |         |
|                 | Thru                  | 194   | WB                    | 442 | 52%               | WB         | 744                                    | 326   | Thru                                   | 739                    | 213    | 326                      | 739            | -5  | 74                         |                |         |
|                 | Right                 | 40    | Sum                   | 851 | Enter             | 19861      | 67                                     | Right | Sum                                    | 1427                   | 44     | 67                       |                |   |                            |                |         |

-1.84347

EX AM #2

N/S Street: 6th Street

E/W Street:

Kern Street (SR-33)

| Existing ADT | Existing          | EX AM | Existing Link Volumes           | Future ADT (2042) | FUTURE Raw Turning Movement Volumes | FUTURE Link Volumes | Verify                   | Minimum 10% Growth | Volume Adj. | Refined Turning Movement Volumes | Refined Link Volumes | Gap Closure | 10% Gap |
|--------------|-------------------|-------|---------------------------------|-------------------|-------------------------------------|---------------------|--------------------------|--------------------|-------------|----------------------------------|----------------------|-------------|---------|
|              | <b>Northbound</b> |       | <b>N.of Kern Street (SR-33)</b> |                   |                                     |                     | <b>Northbound</b>        |                    |             |                                  |                      |             |         |
|              | Left              | 17    | NB 253 51%                      | NB 554            | 37                                  | Left                | N of Kern Street (SR-33) | 19                 | +20         | 57                               | 504                  | -50         | 50      |
| 3,984        | Thru              | 135   | SB 245 49%                      | SB 536            | 296                                 | Thru                | SB 536                   | 149                |             | 296                              | 491                  | -45         | 49      |
| 3984         | Right             | 21    | Sum 498                         | Enter 8723        | 46                                  | Right               | Sum 1031                 | 23                 | +15         | 61                               |                      |             |         |
|              | <b>Southbound</b> |       | <b>S.of Kern Street (SR-33)</b> |                   |                                     |                     | <b>Southbound</b>        |                    |             |                                  |                      |             |         |
|              | Left              | 43    | NB 173 53%                      | NB 379            | 94                                  | Left                | S of Kern Street (SR-33) | 47                 | -10         | 84                               | 414                  | 35          | 41      |
| 2,637        | Thru              | 128   | SB 156 47%                      | SB 342            | 280                                 | Thru                | SB 327                   | 141                | -20         | 260                              | 347                  | 6           | 35      |
| 2632         | Right             | 74    | Sum 329                         | Enter 5774        | 162                                 | Right               | Sum 706                  | 81                 | -15         | 147                              |                      |             |         |
|              | <b>Eastbound</b>  |       | <b>E.of 6th Street</b>          |                   |                                     |                     | <b>Eastbound</b>         |                    |             |                                  |                      |             |         |
|              | Left              | 79    | EB 291 48%                      | EB 490            | 133                                 | Left                | E of 6th Street          | 87                 |             | 133                              | 527                  | 37          | 53      |
| 8,364        | Thru              | 227   | WB 312 52%                      | WB 525            | 382                                 | Thru                | WB 525                   | 250                |             | 382                              | 535                  | 10          | 54      |
| 8364         | Right             | 12    | Sum 603                         | Enter 14074       | 20                                  | Right               | Sum 1047                 | 13                 | +20         | 40                               |                      |             |         |
|              | <b>Westbound</b>  |       | <b>W.of 6th Street</b>          |                   |                                     |                     | <b>Westbound</b>         |                    |             |                                  |                      |             |         |
|              | Left              | 16    | EB 318 48%                      | EB 535            | 27                                  | Left                | W of 6th Street          | 18                 | +20         | 47                               | 555                  | 20          | 56      |
| 9,237        | Thru              | 257   | WB 348 52%                      | WB 586            | 432                                 | Thru                | WB 632                   | 283                | -20         | 412                              | 617                  | 31          | 62      |
| 9237         | Right             | 39    | Sum 666                         | Enter 15543       | 66                                  | Right               | Sum 1167                 | 43                 | +10         | 76                               |                      |             |         |

44.567

EX PM

N/S Street: 6th Street

E/W Street:

Kern Street (SR-33)

| Existing ADT | Existing          | EX PM | Existing Link Volumes           | Future ADT (2042) | FUTURE Raw Turning Movement Volumes | FUTURE Link Volumes | Verify                   | Minimum 10% Growth | Volume Adj. | Refined Turning Movement Volumes | Refined Link Volumes | Gap Closure | 10% Gap |
|--------------|-------------------|-------|---------------------------------|-------------------|-------------------------------------|---------------------|--------------------------|--------------------|-------------|----------------------------------|----------------------|-------------|---------|
|              | <b>Northbound</b> |       | <b>N.of Kern Street (SR-33)</b> |                   |                                     |                     | <b>Northbound</b>        |                    |             |                                  |                      |             |         |
|              | Left              | 22    | NB 199 46%                      | NB 436            | 48                                  | Left                | N of Kern Street (SR-33) | 24                 | +10         | 58                               | 400                  | -36         | 40      |
| 3,984        | Thru              | 79    | SB 233 54%                      | SB 510            | 173                                 | Thru                | SB 510                   | 87                 | +15         | 188                              | 480                  | -30         | 48      |
|              | Right             | 28    | Sum 432                         | Enter 8723        | 61                                  | Right               | Sum 885                  | 31                 | +5          | 66                               |                      |             |         |
|              | <b>Southbound</b> |       | <b>S.of Kern Street (SR-33)</b> |                   |                                     |                     | <b>Southbound</b>        |                    |             |                                  |                      |             |         |
|              | Left              | 37    | NB 129 44%                      | NB 282            | 81                                  | Left                | S of Kern Street (SR-33) | 41                 | -10         | 71                               | 312                  | 30          | 31      |
| 2,637        | Thru              | 117   | SB 161 56%                      | SB 353            | 256                                 | Thru                | SB 330                   | 129                |             | 256                              | 370                  | 18          | 37      |
|              | Right             | 79    | Sum 290                         | Enter 5774        | 173                                 | Right               | Sum 613                  | 87                 | -20         | 153                              |                      |             |         |
|              | <b>Eastbound</b>  |       | <b>E.of 6th Street</b>          |                   |                                     |                     | <b>Eastbound</b>         |                    |             |                                  |                      |             |         |
|              | Left              | 78    | EB 310 51%                      | EB 522            | 131                                 | Left                | E of 6th Street          | 86                 |             | 131                              | 550                  | 28          | 55      |
| 8,364        | Thru              | 245   | WB 293 49%                      | WB 493            | 412                                 | Thru                | WB 493                   | 270                |             | 412                              | 523                  | 30          | 52      |
|              | Right             | 17    | Sum 603                         | Enter 14074       | 29                                  | Right               | Sum 1048                 | 19                 | +20         | 49                               |                      |             |         |
|              | <b>Westbound</b>  |       | <b>W.of 6th Street</b>          |                   |                                     |                     | <b>Westbound</b>         |                    |             |                                  |                      |             |         |
|              | Left              | 27    | EB 340 51%                      | EB 572            | 45                                  | Left                | W of 6th Street          | 30                 | +20         | 65                               | 592                  | 20          | 59      |
| 9,237        | Thru              | 224   | WB 325 49%                      | WB 547            | 377                                 | Thru                | WB 598                   | 246                |             | 377                              | 588                  | 41          | 59      |
|              | Right             | 42    | Sum 665                         | Enter 15543       | 71                                  | Right               | Sum 1170                 | 46                 | +10         | 81                               |                      |             |         |

101.0079

EX AM #3

N/S Street: 4th Street

E/W Street:

Kern Street (SR-33)

| Existing<br>ADT |            |       |                          |     |                   |       |  |     |            |     | FUTURE<br>Link<br>Volumes |                     | Minimum<br>10%<br>Growth | Volume<br>Adj. | Refined<br>Turning<br>Movement<br>Volumes | Refined<br>Link<br>Volumes | Gap<br>Closure | 10% Gap |
|-----------------|------------|-------|--------------------------|-----|-------------------|-------|--|-----|------------|-----|---------------------------|---------------------|--------------------------|----------------|---|----------------------------|----------------|---------|
|                 | Existing   | EX AM | Existing Link<br>Volumes |     | Future ADT (2042) |       | FUTURE Raw Turning<br>Movement Volumes |     |            |     |                           |                     |                          |                |   |                            |                |         |
|                 | Northbound | N.of  | Kern Street (SR-33)      |     |                   |       | %                                      |     | Northbound |     | N of                      | Kern Street (SR-33) |                          |                |   |                            |                |         |
| 2,776           | Left       | 40    | NB                       | 172 | 50%               | NB    | 435                                    | 101 | Left       | 371 | NB                        | 371                 | 44                       | -10            | 91  | 396                        | -39            | 40      |
|                 | Thru       | 96    | SB                       | 175 | 50%               | SB    | 443                                    | 243 | Thru       | 443 | SB                        | 443                 | 106                      | +5             | 248                                       | 428                        | -15            | 43      |
|                 | Right      | 21    | Sum                      | 347 |                   | Enter | 7027                                   | 53  | Right      |     | Sum                       | 814                 | 23                       |                | 53  |                            |                |         |
|                 | Southbound | S. of | Kern Street (SR-33)      |     |                   |       |  |     | Southbound |     | S of                      | Kern Street (SR-33) |                          |                |   |                            |                |         |
| 2,376           | Left       | 34    | NB                       | 157 | 53%               | NB    | 397                                    | 86  | Left       | 397 | NB                        | 397                 | 37                       | -5             | 81  | 392                        | -5             | 39      |
|                 | Thru       | 104   | SB                       | 140 | 47%               | SB    | 354                                    | 263 | Thru       | 324 | SB                        | 324                 | 114                      |                | 263                                       | 364                        | 9              | 36      |
|                 | Right      | 37    | Sum                      | 297 |                   | Enter | 6015                                   | 94  | Right      |     | Sum                       | 721                 | 41                       | -10            | 84  |                            |                |         |
|                 | Eastbound  | E. of | 4th Street               |     |                   |       |  |     | Eastbound  |     | E of                      | 4th Street          |                          |                |   |                            |                |         |
| 7,520           | Left       | 49    | EB                       | 244 | 50%               | EB    | 411                                    | 82  | Left       | 457 | EB                        | 457                 | 54                       | +10            | 92  | 452                        | 42             | 45      |
|                 | Thru       | 189   | WB                       | 248 | 50%               | WB    | 417                                    | 318 | Thru       | 417 | WB                        | 417                 | 208                      |                | 318                                       | 447                        | 30             | 45      |
|                 | Right      | 20    | Sum                      | 492 |                   | Enter | 12654                                  | 34  | Right      |     | Sum                       | 875                 | 22                       | +20            | 54  |                            |                |         |
|                 | Westbound  | W.of  | 4th Street               |     |                   |       |  |     | Westbound  |     | W of                      | 4th Street          |                          |                |   |                            |                |         |
| 7,672           | Left       | 16    | EB                       | 258 | 48%               | EB    | 434                                    | 27  | Left       | 434 | EB                        | 434                 | 18                       | +20            | 47  | 464                        | 30             | 46      |
|                 | Thru       | 205   | WB                       | 282 | 52%               | WB    | 475                                    | 345 | Thru       | 540 | WB                        | 540                 | 226                      |                | 345                                       | 520                        | 45             | 52      |
|                 | Right      | 27    | Sum                      | 540 |                   | Enter | 12910                                  | 45  | Right      |     | Sum                       | 974                 | 30                       | +10            | 55  |                            |                |         |

96.97746

EX PM

N/S Street: 4th Street

E/W Street:

Kern Street (SR-33)

| Existing<br>ADT |            |       |                          |     |                   |       |  |     |       |                     | FUTURE<br>Link<br>Volumes |     | Minimum<br>10%<br>Growth | Volume<br>Adj. | Refined<br>Turning<br>Movement<br>Volumes | Refined<br>Link<br>Volumes | Gap<br>Closure |    |
|-----------------|------------|-------|--------------------------|-----|-------------------|-------|--|-----|-------|---------------------|---------------------------|-----|--------------------------|----------------|---|----------------------------|----------------|----|
|                 | Existing   | EX PM | Existing Link<br>Volumes |     | Future ADT (2042) |       | FUTURE Raw Turning<br>Movement Volumes |     |       |                     |                           |     |                          |                |   |                            |                |    |
|                 | Northbound | N.of  | Kern Street (SR-33)      |     | %                 |       | Northbound                             |     | N of  | Kern Street (SR-33) |                           |     |                          |                |   |                            |                |    |
| 2,776           | Left       | 37    | NB                       | 150 | 53%               | NB    | 380                                    | 94  | Left  | 314                 | NB                        | 314 | 41                       | -10            | 84  | 349                        | -30            | 35 |
|                 | Thru       | 73    | SB                       | 132 | 47%               | SB    | 334                                    | 185 | Thru  | 334                 | SB                        | 334 | 80                       | +15            | 200                                       | 324                        | -10            | 32 |
|                 | Right      | 20    | Sum                      | 282 |                   | Enter | 7027                                   | 51  | Right | Sum                 | 649                       | 22  |                          | 51             |   |                            |                |    |
|                 | Southbound | S.of  | Kern Street (SR-33)      |     |                   |       | Southbound                             |     | S of  | Kern Street (SR-33) |                           |     |                          |                |   |                            |                |    |
| 2,376           | Left       | 35    | NB                       | 130 | 52%               | NB    | 329                                    | 89  | Left  | 329                 | NB                        | 329 | 39                       |                | 89  | 334                        | 5              | 33 |
|                 | Thru       | 64    | SB                       | 120 | 48%               | SB    | 304                                    | 162 | Thru  | 256                 | SB                        | 256 | 70                       |                | 162                                       | 296                        | -8             | 30 |
|                 | Right      | 33    | Sum                      | 250 |                   | Enter | 6015                                   | 84  | Right | Sum                 | 585                       | 36  | -10                      | 74             |   |                            |                |    |
|                 | Eastbound  | E.of  | 4th Street               |     |                   |       | Eastbound                              |     | E of  | 4th Street          |                           |     |                          |                |   |                            |                |    |
| 7,520<br>7518   | Left       | 38    | EB                       | 302 | 52%               | EB    | 508                                    | 64  | Left  | 555                 | EB                        | 555 | 42                       | +10            | 74  | 555                        | 47             | 55 |
|                 | Thru       | 247   | WB                       | 284 | 48%               | WB    | 478                                    | 416 | Thru  | 478                 | WB                        | 478 | 272                      |                | 416                                       | 508                        | 30             | 51 |
|                 | Right      | 27    | Sum                      | 586 |                   | Enter | 12654                                  | 45  | Right | Sum                 | 1033                      | 30  | +20                      | 65             |   |                            |                |    |
|                 | Westbound  | W.of  | 4th Street               |     |                   |       | Westbound                              |     | W of  | 4th Street          |                           |     |                          |                |   |                            |                |    |
| 7,672<br>7672   | Left       | 29    | EB                       | 312 | 52%               | EB    | 525                                    | 49  | Left  | 525                 | EB                        | 525 | 32                       | +20            | 69  | 555                        | 30             | 55 |
|                 | Thru       | 216   | WB                       | 286 | 48%               | WB    | 481                                    | 363 | Thru  | 541                 | WB                        | 541 | 238                      |                | 363                                       | 521                        | 39             | 52 |
|                 | Right      | 39    | Sum                      | 598 |                   | Enter | 12910                                  | 66  | Right | Sum                 | 1066                      | 43  | +10                      | 76             |   |                            |                |    |

103.2121



EX AM #5

N/S Street: Westside Highway (SR-33)

E/W Street:

Center Street

| Existing ADT | FUTURE Raw Turning Movement Volumes |       |                          |     |                   |       |                  |            | FUTURE Link Volumes | Verify                   |               | Minimum 10% Growth | Volume Adj. | Refined Turning Movement Volumes | Refined Link Volumes | Gap Closure | 10% Gap |    |
|--------------|-------------------------------------|-------|--------------------------|-----|-------------------|-------|------------------|------------|---------------------|--------------------------|---------------|--------------------|-------------|----------------------------------|----------------------|-------------|---------|----|
|              | Existing                            | EX AM | Existing Link Volumes    |     | Future ADT (2042) |       | Movement Volumes |            |                     |                          |               |                    |             |                                  |                      |             |         |    |
| 2,929        | Northbound                          | N.of  | Center Street            |     | %                 |       |                  | Northbound |                     | N of                     | Center Street |                    |             |                                  |                      |             |         |    |
|              | Left                                | 4     | NB                       | 84  | 47%               | NB    | 141              | 7          | Left                | 146                      | NB            | 146                | 4           | +10                              | 17                   | 151         | 9       | 15 |
|              | Thru                                | 82    | SB                       | 95  | 53%               | SB    | 160              | 138        | Thru                | 160                      | SB            | 160                | 90          |                                  | 138                  | 168         | 8       | 17 |
|              | Right                               | 0     | Sum                      | 179 |                   | Enter | 4929             | 0          | Right               |                          | Sum           | 305                | 0           |                                  | 0                    |             |         |    |
|              | Southbound                          | S. of | Center Street            |     |                   |       | Southbound       |            | S of                | Center Street            |               |                    |             |                                  |                      |             |         |    |
| 3,187        | Left                                | 0     | NB                       | 86  | 47%               | NB    | 145              | 0          | Left                | 145                      | NB            | 145                | 0           |                                  | 0                    | 155         | 10      | 15 |
|              | Thru                                | 92    | SB                       | 97  | 53%               | SB    | 163              | 155        | Thru                | 174                      | SB            | 174                | 101         |                                  | 155                  | 174         | 10      | 17 |
|              | Right                               | 3     | Sum                      | 183 |                   | Enter | 5363             | 5          | Right               |                          | Sum           | 318                | 3           | +8                               | 13                   |             |         |    |
| 48           | Eastbound                           | E. of | Westside Highway (SR-33) |     |                   |       | Eastbound        |            | E of                | Westside Highway (SR-33) |               |                    |             |                                  |                      |             |         |    |
|              | Left                                | 2     | EB                       | 0   | 0%                | EB    | 0                | 8          | Left                | 0                        | EB            | 0                  | 2           | +5                               | 13                   | 0           | 0       | 0  |
|              | Thru                                | 0     | WB                       | 0   | 0%                | WB    | 0                | 0          | Thru                | 0                        | WB            | 0                  | 0           |                                  | 0                    | 0           | 0       | 0  |
|              | Right                               | 5     | Sum                      | 0   |                   | Enter | 72               | 19         | Right               |                          | Sum           | 0                  | 6           |                                  | 19                   |             |         |    |
| 331          | Westbound                           | W.of  | Westside Highway (SR-33) |     |                   |       | Westbound        |            | W of                | Westside Highway (SR-33) |               |                    |             |                                  |                      |             |         |    |
|              | Left                                | 0     | EB                       | 7   | 50%               | EB    | 26               | 0          | Left                | 26                       | EB            | 26                 | 0           |                                  | 0                    | 31          | 5       | 3  |
|              | Thru                                | 0     | WB                       | 7   | 50%               | WB    | 26               | 0          | Thru                | 12                       | WB            | 12                 | 0           |                                  | 0                    | 30          | 3       | 3  |
|              | Right                               | 0     | Sum                      | 14  |                   | Enter | 1247             | 0          | Right               |                          | Sum           | 38                 | 0           |                                  | 0                    |             |         |    |

46.00058

EX PM

N/S Street: Westside Highway (SR-33)

E/W Street:

Center Street

| Existing<br>ADT | FUTURE Raw Turning Movement Volumes |       |                          |     |     |                   |            |     |       | FUTURE<br>Link<br>Volumes | Verify | Minimum<br>10%<br>Growth | Volume<br>Adj. | Refined<br>Turning<br>Movement<br>Volumes | Refined<br>Link<br>Volumes | Gap<br>Closure | 10% Gap |    |
|-----------------|-------------------------------------|-------|--------------------------|-----|-----|-------------------|------------|-----|-------|---------------------------|--------|--------------------------|----------------|---|----------------------------|----------------|---------|----|
|                 | Existing                            | EX PM | Existing Link Volumes    |     |     | Future ADT (2042) |            |     |       |                           |        |                          |                |   |                            |                |         |    |
|                 | Northbound                          | N.of  | Center Street            |     |     | %                 | Northbound |     |       |                           | N of   | Center Street            |                |   |                            |                |         |    |
| 2,929           | Left                                | 5     | NB                       | 121 | 60% | NB                | 204        | 8   | Left  | 206                       | NB     | 206                      | 6              | +10                                       | 18                         | 216            | 12      | 22 |
|                 | Thru                                | 119   | SB                       | 81  | 40% | SB                | 136        | 200 | Thru  | 136                       | SB     | 136                      | 131            |   | 200                        | 144            | 8       | 14 |
|                 | Right                               | 0     | Sum                      | 202 |     | Enter             | 4929       | 0   | Right |                           | Sum    | 342                      | 0              |   | 0                          |                |         |    |
|                 | Southbound                          | S. of | Center Street            |     |     |                   | Southbound |     |       |                           | S of   | Center Street            |                |   |                            |                |         |    |
| 3,187           | Left                                | 2     | NB                       | 124 | 58% | NB                | 209        | 3   | Left  | 209                       | NB     | 209                      | 2              |   | 3                          | 219            | 10      | 22 |
|                 | Thru                                | 78    | SB                       | 91  | 42% | SB                | 153        | 131 | Thru  | 180                       | SB     | 180                      | 86             |   | 131                        | 170            | 17      | 17 |
|                 | Right                               | 1     | Sum                      | 215 |     | Enter             | 5363       | 2   | Right |                           | Sum    | 389                      | 1              | +8  | 10                         |                |         |    |
|                 | Eastbound                           | E. of | Westside Highway (SR-33) |     |     |                   | Eastbound  |     |       |                           | E of   | Westside Highway (SR-33) |                |   |                            |                |         |    |
| 48              | Left                                | 1     | EB                       | 2   | 50% | EB                | 3          | 4   | Left  | 3                         | EB     | 3                        | 1              | +10                                       | 14                         | 3              | 0       | 0  |
|                 | Thru                                | 0     | WB                       | 2   | 50% | WB                | 3          | 0   | Thru  | 3                         | WB     | 3                        | 0              |   | 0                          | 3              | 0       | 0  |
|                 | Right                               | 13    | Sum                      | 4   |     | Enter             | 72         | 49  | Right |                           | Sum    | 6                        | 14             | -10                                       | 39                         |                |         |    |
|                 | Westbound                           | W.of  | Westside Highway (SR-33) |     |     |                   | Westbound  |     |       |                           | W of   | Westside Highway (SR-33) |                |   |                            |                |         |    |
| 331             | Left                                | 0     | EB                       | 14  | 67% | EB                | 53         | 0   | Left  | 53                        | EB     | 53                       | 0              |   | 0                          | 53             | 0       | 5  |
|                 | Thru                                | 1     | WB                       | 7   | 33% | WB                | 26         | 2   | Thru  | 12                        | WB     | 12                       | 1              |   | 2                          | 30             | 3       | 3  |
|                 | Right                               | 1     | Sum                      | 21  |     | Enter             | 1247       | 2   | Right |                           | Sum    | 64                       | 1              |   | 2                          |                |         |    |

50.59006



EX AM #6

N/S Street: 10th Street

E/W Street:

Center Street

| Existing ADT | Existing          | EX AM | Existing Link Volumes     | Future ADT (2042) | FUTURE Raw Turning Movement Volumes | FUTURE Link Volumes | Verify | Minimum 10% Growth | Volume Adj. | Refined Turning Movement Volumes | Refined Link Volumes | Gap Closure | 10% Gap |
|--------------|-------------------|-------|---------------------------|-------------------|-------------------------------------|---------------------|--------|--------------------|-------------|----------------------------------|----------------------|-------------|---------|
|              | <b>Northbound</b> |       | <b>N.of Center Street</b> | <b>%</b>          |                                     | <b>Northbound</b>   |        |                    |             |                                  |                      |             |         |
|              | Left              | 0     | NB 391                    | 56%               | NB 650                              | 0                   | Left   | 658                | NB 658      |                                  | 658                  | 8           | 66      |
| 9,390        | Thru              | 375   | SB 308                    | 44%               | SB 512                              | 623                 | Thru   | 512                | SB 512      | 413                              | 623                  | 12          | 52      |
|              | Right             | 42    | Sum 699                   |                   | Enter 15604                         | 70                  | Right  |                    | Sum 1169    | 46                               | 80                   |             |         |
|              | <b>Southbound</b> |       | <b>S.of Center Street</b> |                   |                                     | <b>Southbound</b>   |        |                    |             |                                  |                      |             |         |
|              | Left              | 30    | NB 417                    | 59%               | NB 693                              | 50                  | Left   | 693                | NB 693      | 33                               | 62                   | 10          | 70      |
| 9,044        | Thru              | 278   | SB 293                    | 41%               | SB 487                              | 462                 | Thru   | 494                | SB 494      | 306                              | 462                  | 7           | 49      |
|              | Right             | 0     | Sum 710                   |                   | Enter 15029                         | 0                   | Right  |                    | Sum 1187    | 0                                | 0                    |             |         |
|              | <b>Eastbound</b>  |       | <b>E.of 10th Street</b>   |                   |                                     | <b>Eastbound</b>    |        |                    |             |                                  |                      |             |         |
|              | Left              | 0     | EB 72                     | 70%               | EB 155                              | 0                   | Left   | 120                | EB 120      | 0                                | 0                    | -14         | 14      |
| 2,360        | Thru              | 0     | WB 31                     | 30%               | WB 67                               | 0                   | Thru   | 67                 | WB 67       | 0                                | 0                    | 0           | 7       |
|              | Right             | 0     | Sum 103                   |                   | Enter 5086                          | 0                   | Right  |                    | Sum 186     | 0                                | 0                    |             |         |
|              | <b>Westbound</b>  |       | <b>W.of 10th Street</b>   |                   |                                     | <b>Westbound</b>    |        |                    |             |                                  |                      |             |         |
|              | Left              | 15    | EB 0                      | 0%                | EB 0                                | 32                  | Left   | 0                  | EB 0        | 17                               | 32                   | 0           | 0       |
| 0            | Thru              | 0     | WB 0                      | 0%                | WB 0                                | 0                   | Thru   | 0                  | WB 0        | 0                                | 0                    | 0           | 0       |
| 0            | Right             | 16    | Sum 0                     |                   | Enter 0                             | 34                  | Right  |                    | Sum 0       | 18                               | 34                   |             |         |

23.77362

EX PM

N/S Street: 10th Street

E/W Street:

Center Street

| Existing ADT | Existing          | EX PM | Existing Link Volumes     | Future ADT (2042) | FUTURE Raw Turning Movement Volumes | FUTURE Link Volumes | Verify | Minimum 10% Growth | Volume Adj. | Refined Turning Movement Volumes | Refined Link Volumes | Gap Closure | 10% Gap |
|--------------|-------------------|-------|---------------------------|-------------------|-------------------------------------|---------------------|--------|--------------------|-------------|----------------------------------|----------------------|-------------|---------|
|              | <b>Northbound</b> |       | <b>N.of Center Street</b> | <b>%</b>          |                                     | <b>Northbound</b>   |        |                    |             |                                  |                      |             |         |
|              | Left              | 0     | NB 392                    | 50%               | NB 651                              | 0                   | Left   | 676                | NB 676      |                                  | 676                  | 24          | 68      |
| 9,390        | Thru              | 343   | SB 395                    | 50%               | SB 656                              | 570                 | Thru   | 656                | SB 656      | 377                              | 570                  | 20          | 68      |
| 9365         | Right             | 51    | Sum 787                   |                   | Enter 15604                         | 85                  | Right  |                    | Sum 1332    | 56                               | 100                  |             |         |
|              | <b>Southbound</b> |       | <b>S.of Center Street</b> |                   |                                     | <b>Southbound</b>   |        |                    |             |                                  |                      |             |         |
|              | Left              | 56    | NB 394                    | 52%               | NB 655                              | 93                  | Left   | 655                | NB 655      | 62                               | 113                  | 15          | 67      |
| 9,044        | Thru              | 339   | SB 366                    | 48%               | SB 608                              | 563                 | Thru   | 622                | SB 622      | 373                              | 563                  | 13          | 62      |
| 9044         | Right             | 0     | Sum 760                   |                   | Enter 15029                         | 0                   | Right  |                    | Sum 1276    | 0                                | 0                    |             |         |
|              | <b>Eastbound</b>  |       | <b>E.of 10th Street</b>   |                   |                                     | <b>Eastbound</b>    |        |                    |             |                                  |                      |             |         |
|              | Left              | 0     | EB 107                    | 58%               | EB 231                              | 0                   | Left   | 178                | EB 178      | 0                                | 0                    | -18         | 21      |
| 2,360        | Thru              | 0     | WB 76                     | 42%               | WB 164                              | 0                   | Thru   | 164                | WB 164      | 0                                | 0                    | 0           | 16      |
| 2361         | Right             | 0     | Sum 183                   |                   | Enter 5086                          | 0                   | Right  |                    | Sum 342     | 0                                | 0                    |             |         |
|              | <b>Westbound</b>  |       | <b>W.of 10th Street</b>   |                   |                                     | <b>Westbound</b>    |        |                    |             |                                  |                      |             |         |
|              | Left              | 27    | EB 0                      | 0%                | EB 0                                | 58                  | Left   | 0                  | EB 0        | 30                               | 58                   | 0           | 0       |
| 0            | Thru              | 0     | WB 0                      | 0%                | WB 0                                | 0                   | Thru   | 0                  | WB 0        | 0                                | 0                    | 0           | 0       |
| 0            | Right             | 49    | Sum 0                     |                   | Enter 0                             | 106                 | Right  |                    | Sum 0       | 54                               | 106                  |             |         |

54.70709

## **APPENDIX E**






















### **HORIZON YEAR 2042 WITH PROJECT INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

# HCM 6th Signalized Intersection Summary

## 1: 10th Street & Kern St/Highway 33

Horizon Year 2042 With SP AM

05/06/2022

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |   |  |  |  |
| Traffic Volume (veh/h)       | 207   | 387   | 91  | 126   | 335   | 98  | 111   | 301   | 214   | 95  | 289   | 151   |
| Future Volume (veh/h)        | 207   | 387   | 91  | 126   | 335   | 98  | 111   | 301   | 214   | 95  | 289   | 151   |
| 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  |   | 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         | 269   | 503   | 118   | 164   | 435   | 127   | 144   | 391   | 278   | 123   | 375   | 196   |
| Peak Hour Factor             | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 300   | 833   | 194   | 194   | 628   | 182   | 173   | 547   | 384   | 151   | 931   | 414   |
| Arrive On Green              | 0.17  | 0.29  | 0.29  | 0.11  | 0.23  | 0.23  | 0.10  | 0.27  | 0.27  | 0.08  | 0.26  | 0.26  |
| Sat Flow, veh/h              | 1781  | 2859  | 667   | 1781  | 2708  | 783   | 1781  | 1991  | 1399  | 1781  | 3554  | 1580  |
| Grp Volume(v), veh/h         | 269   | 312   | 309   | 164   | 284   | 278   | 144   | 348   | 321   | 123   | 375   | 196   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777  | 1749  | 1781  | 1777  | 1714  | 1781  | 1777  | 1613  | 1781  | 1777  | 1580  |
| Q Serve(g_s), s              | 15.1  | 15.4  | 15.6  | 9.3   | 15.0  | 15.2  | 8.1   | 18.1  | 18.4  | 7.0   | 8.9   | 10.7  |
| Cycle Q Clear(g_c), s        | 15.1  | 15.4  | 15.6  | 9.3   | 15.0  | 15.2  | 8.1   | 18.1  | 18.4  | 7.0   | 8.9   | 10.7  |
| Prop In Lane                 | 1.00  |   | 0.38  | 1.00  |   | 0.46  | 1.00  |   | 0.87  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h       | 300   | 517   | 509   | 194   | 412   | 398   | 173   | 488   | 443   | 151   | 931   | 414   |
| V/C Ratio(X)                 | 0.90  | 0.60  | 0.61  | 0.84  | 0.69  | 0.70  | 0.83  | 0.71  | 0.72  | 0.81  | 0.40  | 0.47  |
| Avail Cap(c_a), veh/h        | 334   | 711   | 700   | 210   | 588   | 567   | 188   | 573   | 520   | 162   | 1093  | 486   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 41.7  | 31.2  | 31.2  | 44.8  | 35.9  | 36.1  | 45.4  | 33.5  | 33.6  | 46.1  | 31.2  | 31.8  |
| Incr Delay (d2), s/veh       | 22.6  | 5.1   | 5.3   | 22.6  | 5.6   | 6.0   | 22.4  | 8.6   | 9.9   | 22.9  | 1.3   | 3.8   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 8.4   | 7.2   | 7.2   | 5.2   | 7.0   | 6.9   | 4.6   | 8.8   | 8.2   | 4.0   | 3.9   | 4.4   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 64.3  | 36.3  | 36.6  | 67.3  | 41.5  | 42.1  | 67.8  | 42.1  | 43.5  | 69.0  | 32.5  | 35.7  |
| LnGrp LOS                    | E   | D   | D   | E   | D   | D   | E   | D   | D   | E   | C   | D   |
| Approach Vol, veh/h          |   | 890   |   |   | 726   |   |   | 813   |   |   | 694   |   |
| Approach Delay, s/veh        |   | 44.9  |   |   | 47.6  |   |   | 47.2  |   |   | 39.8  |   |
| Approach LOS                 |   | D   |   |   | D   |   |   | D   |   |   | D   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 16.9  | 36.6  | 15.7  | 33.2  | 22.9  | 30.6  | 14.4  | 34.5  |   |   |   |   |
| Change Period (Y+Rc), s      | * 5.7   | 6.8   | * 5.7   | 6.4   | * 5.7   | 6.8   | * 5.7   | 6.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | * 12  | 41.0  | * 11  | 31.5  | * 19  | 33.9  | * 9.3   | 33.0  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 11.3  | 17.6  | 10.1  | 12.7  | 17.1  | 17.2  | 9.0   | 20.4  |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 10.3  | 0.0   | 7.8   | 0.1   | 6.0   | 0.0   | 7.3   |   |   |   |   |

### Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 45.0 |
| HCM 6th LOS        | D    |

### Notes

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

HCM 6th AWSC  
2: 6th Street & Kern St/Highway 33

Horizon Year 2042 With SP AM

05/06/2022

Intersection

Intersection Delay, s/veh 117.7

Intersection LOS F

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h  | 133  | 382  | 40   | 47   | 412  | 76   | 57   | 296  | 61   | 84   | 260  | 147  |
| Future Vol, veh/h   | 133  | 382  | 40   | 47   | 412  | 76   | 57   | 296  | 61   | 84   | 260  | 147  |
| 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 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 182  | 523  | 55   | 64   | 564  | 104  | 78   | 405  | 84   | 115  | 356  | 201  |
| Number of Lanes     | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 2    | 0    |

| Approach                      | EB    | WB    | NB   | SB    |
|-------------------------------|-------|-------|------|-------|
| Opposing Approach             | WB    | EB    | SB   | NB    |
| Opposing Lanes                | 2     | 2     | 2    | 2     |
| Conflicting Approach Left SB  |       | NB    | EB   | WB    |
| Conflicting Lanes Left        | 2     | 2     | 2    | 2     |
| Conflicting Approach Right NB |       | SB    | WB   | EB    |
| Conflicting Lanes Right       | 2     | 2     | 2    | 2     |
| HCM Control Delay             | 163.9 | 122.7 | 66.7 | 103.1 |
| HCM LOS                       | F     | F     | F    | F     |

| Lane                   | NBLn1  | NBLn2  | EBLn1  | EBLn2 | WBLn1  | WBLn2  | SBLn1  | SBLn2  |
|------------------------|--------|--------|--------|-------|--------|--------|--------|--------|
| Vol Left, %            | 28%    | 0%     | 41%    | 0%    | 19%    | 0%     | 39%    | 0%     |
| Vol Thru, %            | 72%    | 71%    | 59%    | 83%   | 81%    | 73%    | 61%    | 47%    |
| Vol Right, %           | 0%     | 29%    | 0%     | 17%   | 0%     | 27%    | 0%     | 53%    |
| Sign Control           | Stop   | Stop   | Stop   | Stop  | Stop   | Stop   | Stop   | Stop   |
| Traffic Vol by Lane    | 205    | 209    | 324    | 231   | 253    | 282    | 214    | 277    |
| LT Vol                 | 57     | 0      | 133    | 0     | 47     | 0      | 84     | 0      |
| Through Vol            | 148    | 148    | 191    | 191   | 206    | 206    | 130    | 130    |
| RT Vol                 | 0      | 61     | 0      | 40    | 0      | 76     | 0      | 147    |
| Lane Flow Rate         | 281    | 286    | 444    | 316   | 347    | 386    | 293    | 379    |
| Geometry Grp           | 7      | 7      | 7      | 7     | 7      | 7      | 7      | 7      |
| Degree of Util (X)     | 0.896  | 0.886  | 1.389  | 0.962 | 1.067  | 1.159  | 0.921  | 1.132  |
| Departure Headway (Hd) | 12.987 | 12.625 | 12.035 | 11.69 | 12.078 | 11.781 | 12.475 | 11.875 |
| Convergence, Y/N       | Yes    | Yes    | Yes    | Yes   | Yes    | Yes    | Yes    | Yes    |
| Cap                    | 281    | 289    | 306    | 313   | 305    | 313    | 293    | 307    |
| Service Time           | 10.687 | 10.325 | 9.735  | 9.39  | 9.778  | 9.481  | 10.175 | 9.575  |
| HCM Lane V/C Ratio     | 1      | 0.99   | 1.451  | 1.01  | 1.138  | 1.233  | 1      | 1.235  |
| HCM Control Delay      | 68.3   | 65.1   | 225.5  | 77.5  | 107.5  | 136.4  | 71.5   | 127.5  |
| HCM Lane LOS           | F      | F      | F      | F     | F      | F      | F      | F      |
| HCM 95th-tile Q        | 8      | 7.9    | 21.7   | 9.8   | 12.2   | 15     | 8.7    | 14.1   |

Intersection

Intersection Delay, s/veh 18.8

Intersection LOS F

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔↔   |      |      | ↔↔   |      |      | ↔    |      |      | ↔↔   |      |
| Traffic Vol, veh/h  | 92   | 318  | 54   | 47   | 345  | 55   | 91   | 248  | 53   | 81   | 263  | 84   |
| Future Vol, veh/h   | 92   | 318  | 54   | 47   | 345  | 55   | 91   | 248  | 53   | 81   | 263  | 84   |
| Peak Hour Factor    | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 116  | 403  | 68   | 59   | 437  | 70   | 115  | 314  | 67   | 103  | 333  | 106  |
| Number of Lanes     | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |


| Approach                      | EB   | WB   | NB    | SB    |
|-------------------------------|------|------|-------|-------|
| Opposing Approach             | WB   | EB   | SB    | NB    |
| Opposing Lanes                | 2    | 2    | 1     | 1     |
| Conflicting Approach Left SB  |      | NB   | EB    | WB    |
| Conflicting Lanes Left        | 1    | 1    | 2     | 2     |
| Conflicting Approach Right NB |      | SB   | WB    | EB    |
| Conflicting Lanes Right       | 1    | 1    | 2     | 2     |
| HCM Control Delay             | 46.9 | 41.3 | 179.1 | 222.5 |
| HCM LOS                       | E    | E    | F     | F     |

| Lane                   | NBLn1  | EBLn1  | EBLn2  | WBLn1  | WBLn2  | SBLn1  |
|------------------------|--------|--------|--------|--------|--------|--------|
| Vol Left, %            | 23%    | 37%    | 0%     | 21%    | 0%     | 19%    |
| Vol Thru, %            | 63%    | 63%    | 75%    | 79%    | 76%    | 61%    |
| Vol Right, %           | 14%    | 0%     | 25%    | 0%     | 24%    | 20%    |
| Sign Control           | Stop   | Stop   | Stop   | Stop   | Stop   | Stop   |
| Traffic Vol by Lane    | 392    | 251    | 213    | 220    | 228    | 428    |
| LT Vol                 | 91     | 92     | 0      | 47     | 0      | 81     |
| Through Vol            | 248    | 159    | 159    | 173    | 173    | 263    |
| RT Vol                 | 53     | 0      | 54     | 0      | 55     | 84     |
| Lane Flow Rate         | 496    | 318    | 270    | 278    | 288    | 542    |
| Geometry Grp           | 2      | 7      | 7      | 7      | 7      | 2      |
| Degree of Util (X)     | 1.286  | 0.859  | 0.702  | 0.749  | 0.754  | 1.397  |
| Departure Headway (Hd) | 10.542 | 11.429 | 11.045 | 11.403 | 11.108 | 10.211 |
| Convergence, Y/N       | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |
| Cap                    | 347    | 321    | 329    | 320    | 328    | 363    |
| Service Time           | 8.542  | 9.129  | 8.745  | 9.103  | 8.808  | 8.211  |
| HCM Lane V/C Ratio     | 1.429  | 0.991  | 0.821  | 0.869  | 0.878  | 1.493  |
| HCM Control Delay      | 179.1  | 56.1   | 36.1   | 41.5   | 41.1   | 222.5  |
| HCM Lane LOS           | F      | F      | E      | E      | E      | F      |
| HCM 95th-tile Q        | 20.3   | 7.7    | 5      | 5.7    | 5.8    | 24.9   |

**Intersection Level Of Service Report**  
**Intersection 4: Kern Street (SR-33) / 1st Street**

|                  |                 |                           |       |
|------------------|-----------------|---------------------------|-------|
| Control Type:    | Two-way stop    | Delay (sec / veh):        | 47.6  |
| Analysis Method: | HCM 6th Edition | Level Of Service:         | E     |
| Analysis Period: | 15 minutes      | Volume to Capacity (v/c): | 0.084 |

**Intersection Setup**

| Name                         | 1st Street  |        |        |        | 1st Street  |        |        |        | Kern Street (SR-33)   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Northbound  |        |        |        | Southbound  |        |        |        | Eastbound   |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |  |        |        |        |
| Turning Movement             | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | 1st Street |        |        |        | 1st Street |        |        |        | Kern Street (SR-33) |        |        |        |
|---|------------|--------|--------|--------|------------|--------|--------|--------|---------------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 40         | 10     | 20     | 10     | 10         | 10     | 28     | 37     | 24                  | 136    | 143    | 60     |
| Base Volume Adjustment Factor           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00       | 2.00   | 0.00   | 2.00   | 0.00       | 2.00   | 2.00   | 2.00   | 2.00                | 0.00   | 2.00   | 2.00   |
| Growth Factor                           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 40         | 10     | 20     | 10     | 10         | 10     | 28     | 37     | 24                  | 136    | 143    | 60     |
| Peak Hour Factor                        | 0.8700     | 0.8700 | 0.8700 | 0.8700 | 0.8700     | 0.8700 | 0.8700 | 0.8700 | 0.8700              | 0.8700 | 0.8700 | 0.8700 |
| Other Adjustment Factor                 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 11         | 3      | 6      | 3      | 3          | 3      | 8      | 11     | 7                   | 39     | 41     | 17     |
| Total Analysis Volume [veh/h]           | 46         | 11     | 23     | 11     | 11         | 11     | 32     | 43     | 28                  | 156    | 164    | 69     |
| Pedestrian Volume [ped/h]               | 0          |        |        |        | 0          |        |        |        | 0                   |        |        |        |



**Intersection Settings**

| Priority Scheme                    | Stop | Stop | Free |
|------------------------------------|------|------|------|
| Flared Lane                        | No   | No   |      |
| Storage Area [veh]                 | 0    | 0    | 0    |
| Two-Stage Gap Acceptance           | No   | No   |      |
| Number of Storage Spaces in Median | 0    | 0    | 0    |

**Movement, Approach, & Intersection Results**

|                                       |       |       |       |       |       |       |       |       |       |       |      |      |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| V/C, Movement V/C Ratio               | 0.29  | 0.08  | 0.08  | 0.01  | 0.04  | 0.04  | 0.11  | 0.04  | 0.02  | 0.11  | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh]       | 43.27 | 47.65 | 32.11 | 24.14 | 19.44 | 19.46 | 20.36 | 11.27 | 7.83  | 7.81  | 0.00 | 0.00 |
| Movement LOS                          | E     | E     | D     | C     | C     | C     | C     | B     | A     | A     | A    | A    |
| 95th-Percentile Queue Length [veh/ln] | 2.24  | 2.24  | 2.24  | 2.24  | 0.88  | 0.88  | 0.88  | 0.88  | 0.43  | 0.43  | 0.21 | 0.00 |
| 95th-Percentile Queue Length [ft/ln]  | 56.00 | 56.00 | 56.00 | 56.00 | 22.03 | 22.03 | 22.03 | 22.03 | 10.75 | 10.75 | 5.37 | 0.00 |
| d_A, Approach Delay [s/veh]           | 38.67 |       |       |       | 16.12 |       |       |       | 3.45  |       |      |      |
| Approach LOS                          | E     |       |       |       | C     |       |       |       | A     |       |      |      |
| d_I, Intersection Delay [s/veh]       | 10.34 |       |       |       |       |       |       |       |       |       |      |      |
| Intersection LOS                      | E     |       |       |       |       |       |       |       |       |       |      |      |

**Intersection Setup**

| Name                         | Kern Street (SR-33)   |        |        |        | E Kern Street   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Westbound   |        |        |        | Southwestbound  |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |
| Turning Movement             | Left  | Thru   | Right  | Right2 | Left  | Thru   | Right  | Right2 |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | Kern Street (SR-33) |        |        |        | E Kern Street |        |        |        |
|---|---------------------|--------|--------|--------|---------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 12                  | 114    | 10     | 10     | 10            | 43     | 172    | 10     |
| Base Volume Adjustment Factor           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00                | 2.00   | 2.00   | 0.00   | 0.00          | 0.00   | 0.00   | 0.00   |
| Growth Factor                           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 12                  | 114    | 10     | 10     | 10            | 43     | 172    | 10     |
| Peak Hour Factor                        | 0.8700              | 0.8700 | 0.8700 | 0.8700 | 0.8700        | 0.8700 | 0.8700 | 0.8700 |
| Other Adjustment Factor                 | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 3                   | 33     | 3      | 3      | 3             | 12     | 49     | 3      |
| Total Analysis Volume [veh/h]           | 14                  | 131    | 11     | 11     | 11            | 49     | 198    | 11     |
| Pedestrian Volume [ped/h]               | 0                   |        |        |        | 0             |        |        |        |



**Intersection Settings**

|                                    |      |      |
|------------------------------------|------|------|
| Priority Scheme                    | Free | Stop |
| Flared Lane                        |      |      |
| Storage Area [veh]                 | 0    | 0    |
| Two-Stage Gap Acceptance           |      | No   |
| Number of Storage Spaces in Median | 0    | 0    |

**Movement, Approach, & Intersection Results**

|                                       |       |      |      |      |       |       |       |       |
|---------------------------------------|-------|------|------|------|-------|-------|-------|-------|
| V/C, Movement V/C Ratio               | 0.01  | 0.00 | 0.00 | 0.00 | 0.04  | 0.20  | 0.28  | 0.02  |
| d_M, Delay for Movement [s/veh]       | 7.73  | 0.00 | 0.00 | 0.00 | 23.82 | 24.86 | 12.77 | 11.19 |
| Movement LOS                          | A     | A    | A    | A    | C     | C     | B     | B     |
| 95th-Percentile Queue Length [veh/ln] | 0.03  | 0.03 | 0.03 | 0.03 | 1.55  | 1.55  | 1.12  | 0.70  |
| 95th-Percentile Queue Length [ft/ln]  | 0.80  | 0.80 | 0.80 | 0.80 | 38.63 | 38.63 | 28.11 | 17.60 |
| d_A, Approach Delay [s/veh]           | 0.65  |      |      |      | 15.36 |       |       |       |
| Approach LOS                          | A     |      |      |      | C     |       |       |       |
| d_I, Intersection Delay [s/veh]       | 10.34 |      |      |      |       |       |       |       |
| Intersection LOS                      | E     |      |      |      |       |       |       |       |

HCM 6th TWSC  
5: Highway 33 & Center Street

Horizon Year 2042 With SP AM

05/06/2022

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 13   | 0    | 19   | 0    | 0    | 0    | 17   | 138  | 0    | 0    | 155  | 13   |
| Future Vol, veh/h        | 13   | 0    | 19   | 0    | 0    | 0    | 17   | 138  | 0    | 0    | 155  | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 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         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 0    | 22   | 0    | 0    | 0    | 19   | 157  | 0    | 0    | 176  | 15   |





| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 379    | 379   | 184    | 390   | 386    | 157   | 191    | 0 | 0 | 157   | 0 | 0 |
| Stage 1              | 184    | 184   | -      | 195   | 195    | -     | -      | - | - | -     | - | - |
| Stage 2              | 195    | 195   | -      | 195   | 191    | -     | -      | - | - | -     | - | - |
| 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   | 579    | 553   | 858    | 569   | 548    | 889   | 1383   | - | - | 1423  | - | - |
| Stage 1              | 818    | 747   | -      | 807   | 739    | -     | -      | - | - | -     | - | - |
| Stage 2              | 807    | 739   | -      | 807   | 742    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 573    | 545   | 858    | 549   | 540    | 889   | 1383   | - | - | 1423  | - | - |
| Mov Cap-2 Maneuver   | 573    | 545   | -      | 549   | 540    | -     | -      | - | - | -     | - | - |
| Stage 1              | 806    | 747   | -      | 795   | 728    | -     | -      | - | - | -     | - | - |
| Stage 2              | 795    | 728   | -      | 787   | 742    | -     | -      | - | - | -     | - | - |

| Approach             | EB   |  | WB |  | NB  |  | SB |  |
|----------------------|------|--|----|--|-----|--|----|--|
| HCM Control Delay, s | 10.3 |  | 0  |  | 0.8 |  | 0  |  |
| HCM LOS              | B    |  | A  |  |     |  |    |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL | SBT  | SBR |
|-----------------------|-------|-----|-----|------------|-----|------|-----|
| Capacity (veh/h)      | 1383  | -   | -   | 714        | -   | 1423 | -   |
| HCM Lane V/C Ratio    | 0.014 | -   | -   | 0.051      | -   | -    | -   |
| HCM Control Delay (s) | 7.6   | 0   | -   | 10.3       | 0   | 0    | -   |
| HCM Lane LOS          | A     | A   | -   | B          | A   | A    | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.2        | -   | 0    | -   |

Intersection

Int Delay, s/veh 1.4

| Movement                 | WBL   | WBR  | NBT   | NBR  | SBL   | SBT   |
|--------------------------|---|------|---|------|---|---|
| Lane Configurations      |  |      |  |      |  |  |
| Traffic Vol, veh/h       | 32  | 34   | 623   | 80   | 62  | 462   |
| Future Vol, veh/h        | 32  | 34   | 623   | 80   | 62  | 462   |
| Conflicting Peds, #/hr   | 0   | 0    | 0   | 0    | 0   | 0   |
| Sign Control             | Stop  | Stop | Free  | Free | Free  | Free  |
| RT Channelized           | -   | None | -   | None | -   | None  |
| Storage Length           | 0   | -    | -   | -    | 50  | -   |
| Veh in Median Storage, # | 0   | -    | 0   | -    | -   | 0   |
| Grade, %                 | 0   | -    | 0   | -    | -   | 0   |
| Peak Hour Factor         | 76  | 76   | 76  | 76   | 76  | 76  |
| Heavy Vehicles, %        | 2   | 2    | 2   | 2    | 2   | 2   |
| Mvmt Flow                | 42  | 45   | 820   | 105  | 82  | 608   |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1341   | 463    | 0      |
| Stage 1              | 873    | -      | -      |
| Stage 2              | 468    | -      | -      |
| Critical Hdwy        | 6.84   | 6.94   | -      |
| Critical Hdwy Stg 1  | 5.84   | -      | -      |
| Critical Hdwy Stg 2  | 5.84   | -      | -      |
| Follow-up Hdwy       | 3.52   | 3.32   | -      |
| Pot Cap-1 Maneuver   | 144    | 546    | -      |
| Stage 1              | 369    | -      | -      |
| Stage 2              | 597    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 128    | 546    | -      |
| Mov Cap-2 Maneuver   | 254    | -      | -      |
| Stage 1              | 369    | -      | -      |
| Stage 2              | 530    | -      | -      |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 18.6 | 0  | 1.2 |
| HCM LOS              | C    |    |     |






















| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 351   | 734   |
| HCM Lane V/C Ratio    | -   | -        | 0.247 | 0.111 |
| HCM Control Delay (s) | -   | -        | 18.6  | 10.5  |
| HCM Lane LOS          | -   | -        | C     | B     |
| HCM 95th %tile Q(veh) | -   | -        | 1     | 0.4   |

# HCM 6th Signalized Intersection Summary

## 1: 10th Street & Kern St/Highway 33

Horizon Year 2042 With SP PM

05/06/2022

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |   |  |  |  |
| Traffic Volume (veh/h)       | 192   | 340   | 156   | 123   | 326   | 67  | 168   | 352   | 135   | 131   | 336   | 244   |
| Future Volume (veh/h)        | 192   | 340   | 156   | 123   | 326   | 67  | 168   | 352   | 135   | 131   | 336   | 244   |
| 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  |   | 0.99  | 1.00  |   | 1.00  | 1.00  |   | 0.98  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| 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         | 206   | 366   | 168   | 132   | 351   | 72  | 181   | 378   | 145   | 141   | 361   | 262   |
| Peak Hour Factor             | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 240   | 659   | 297   | 162   | 686   | 139   | 213   | 704   | 266   | 172   | 910   | 400   |
| Arrive On Green              | 0.13  | 0.28  | 0.28  | 0.09  | 0.23  | 0.23  | 0.12  | 0.28  | 0.28  | 0.10  | 0.26  | 0.26  |
| Sat Flow, veh/h              | 1781  | 2375  | 1072  | 1781  | 2939  | 596   | 1781  | 2519  | 952   | 1781  | 3554  | 1561  |
| Grp Volume(v), veh/h         | 206   | 272   | 262   | 132   | 211   | 212   | 181   | 265   | 258   | 141   | 361   | 262   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777  | 1670  | 1781  | 1777  | 1758  | 1781  | 1777  | 1694  | 1781  | 1777  | 1561  |
| Q Serve(g_s), s              | 10.9  | 12.6  | 12.9  | 7.0   | 9.9   | 10.1  | 9.6   | 12.2  | 12.4  | 7.5   | 8.1   | 14.4  |
| Cycle Q Clear(g_c), s        | 10.9  | 12.6  | 12.9  | 7.0   | 9.9   | 10.1  | 9.6   | 12.2  | 12.4  | 7.5   | 8.1   | 14.4  |
| Prop In Lane                 | 1.00  |   | 0.64  | 1.00  |   | 0.34  | 1.00  |   | 0.56  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h       | 240   | 493   | 463   | 162   | 415   | 411   | 213   | 497   | 473   | 172   | 910   | 400   |
| V/C Ratio(X)                 | 0.86  | 0.55  | 0.56  | 0.81  | 0.51  | 0.52  | 0.85  | 0.53  | 0.54  | 0.82  | 0.40  | 0.66  |
| Avail Cap(c_a), veh/h        | 337   | 767   | 721   | 191   | 621   | 614   | 246   | 610   | 581   | 196   | 1119  | 492   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 40.7  | 29.7  | 29.8  | 42.9  | 32.0  | 32.1  | 41.5  | 29.3  | 29.5  | 42.6  | 29.6  | 32.0  |
| Incr Delay (d2), s/veh       | 11.0  | 4.4   | 4.9   | 17.5  | 2.6   | 2.8   | 18.9  | 4.1   | 4.5   | 18.8  | 1.3   | 8.1   |
| 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     | 5.4   | 5.8   | 5.7   | 3.8   | 4.5   | 4.5   | 5.2   | 5.6   | 5.5   | 4.1   | 3.5   | 6.2   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 51.7  | 34.1  | 34.7  | 60.4  | 34.7  | 34.9  | 60.3  | 33.4  | 33.9  | 61.4  | 30.9  | 40.1  |
| LnGrp LOS                    | D   | C   | C   | E   | C   | C   | E   | C   | C   | E   | C   | D   |
| Approach Vol, veh/h          |   | 740   |   |   | 555   |   |   | 704   |   |   | 764   |   |
| Approach Delay, s/veh        |   | 39.2  |   |   | 40.9  |   |   | 40.5  |   |   | 39.7  |   |
| Approach LOS                 |   | D   |   |   | D   |   |   | D   |   |   | D   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 14.5  | 33.5  | 17.2  | 31.0  | 18.7  | 29.3  | 15.0  | 33.3  |   |   |   |   |
| Change Period (Y+Rc), s      | * 5.7   | 6.8   | * 5.7   | 6.4   | * 5.7   | 6.8   | * 5.7   | 6.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | * 10  | 41.5  | * 13  | 30.3  | * 18  | 33.6  | * 11  | 33.0  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 9.0   | 14.9  | 11.6  | 16.4  | 12.9  | 12.1  | 9.5   | 14.4  |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 9.5   | 0.0   | 6.8   | 0.1   | 5.0   | 0.0   | 7.5   |   |   |   |   |

### Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 40.0 |
| HCM 6th LOS        | D    |

### Notes

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

Intersection

Intersection Delay, s/veh42.9

Intersection LOS E

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔↔   |      |      | ↔↔   |      |      | ↔↔   |      |      | ↔↔   |      |
| Traffic Vol, veh/h  | 131  | 412  | 49   | 65   | 377  | 81   | 58   | 188  | 66   | 71   | 256  | 153  |
| Future Vol, veh/h   | 131  | 412  | 49   | 65   | 377  | 81   | 58   | 188  | 66   | 71   | 256  | 153  |
| 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 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 147  | 463  | 55   | 73   | 424  | 91   | 65   | 211  | 74   | 80   | 288  | 172  |
| Number of Lanes     | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 2    | 0    |

| Approach                      | EB   | WB   | NB   | SB   |
|-------------------------------|------|------|------|------|
| Opposing Approach             | WB   | EB   | SB   | NB   |
| Opposing Lanes                | 2    | 2    | 2    | 2    |
| Conflicting Approach Left SB  |      | NB   | EB   | WB   |
| Conflicting Lanes Left        | 2    | 2    | 2    | 2    |
| Conflicting Approach Right NB |      | SB   | WB   | EB   |
| Conflicting Lanes Right       | 2    | 2    | 2    | 2    |
| HCM Control Delay             | 63.3 | 38.7 | 22.4 | 35.8 |
| HCM LOS                       | F    | E    | C    | E    |

| Lane                   | NBLn1  | NBLn2  | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1  | SBLn2 |
|------------------------|--------|--------|-------|-------|-------|-------|--------|-------|
| Vol Left, %            | 38%    | 0%     | 39%   | 0%    | 26%   | 0%    | 36%    | 0%    |
| Vol Thru, %            | 62%    | 59%    | 61%   | 81%   | 74%   | 70%   | 64%    | 46%   |
| Vol Right, %           | 0%     | 41%    | 0%    | 19%   | 0%    | 30%   | 0%     | 54%   |
| Sign Control           | Stop   | Stop   | Stop  | Stop  | Stop  | Stop  | Stop   | Stop  |
| Traffic Vol by Lane    | 152    | 160    | 337   | 255   | 254   | 270   | 199    | 281   |
| LT Vol                 | 58     | 0      | 131   | 0     | 65    | 0     | 71     | 0     |
| Through Vol            | 94     | 94     | 206   | 206   | 189   | 189   | 128    | 128   |
| RT Vol                 | 0      | 66     | 0     | 49    | 0     | 81    | 0      | 153   |
| Lane Flow Rate         | 171    | 180    | 379   | 287   | 285   | 303   | 224    | 316   |
| Geometry Grp           | 7      | 7      | 7     | 7     | 7     | 7     | 7      | 7     |
| Degree of Util (X)     | 0.486  | 0.492  | 1.023 | 0.747 | 0.765 | 0.784 | 0.605  | 0.812 |
| Departure Headway (Hd) | 10.529 | 10.024 | 9.728 | 9.384 | 9.823 | 9.468 | 10.005 | 9.419 |
| Convergence, Y/N       | Yes    | Yes    | Yes   | Yes   | Yes   | Yes   | Yes    | Yes   |
| Cap                    | 345    | 361    | 375   | 390   | 370   | 385   | 362    | 388   |
| Service Time           | 8.229  | 7.724  | 7.416 | 7.072 | 7.523 | 7.168 | 7.705  | 7.119 |
| HCM Lane V/C Ratio     | 0.496  | 0.499  | 1.011 | 0.736 | 0.77  | 0.787 | 0.619  | 0.814 |
| HCM Control Delay      | 22.8   | 22.1   | 84.7  | 35.1  | 38.2  | 39.1  | 26.9   | 42.1  |
| HCM Lane LOS           | C      | C      | F     | E     | E     | E     | D      | E     |
| HCM 95th-tile Q        | 2.5    | 2.6    | 12.5  | 5.9   | 6.2   | 6.6   | 3.8    | 7.2   |

Intersection

Intersection Delay, s/veh55.4

Intersection LOS F

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔↔   |      |      | ↔↔   |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h  | 74   | 416  | 65   | 69   | 363  | 76   | 84   | 200  | 51   | 89   | 162  | 74   |
| Future Vol, veh/h   | 74   | 416  | 65   | 69   | 363  | 76   | 84   | 200  | 51   | 89   | 162  | 74   |
| Peak Hour Factor    | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 84   | 473  | 74   | 78   | 413  | 86   | 95   | 227  | 58   | 101  | 184  | 84   |
| Number of Lanes     | 0    | 2    | 0    | 0    | 2    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |




| Approach                     | EB   | WB | NB | SB   |
|------------------------------|------|----|----|------|
| Opposing Approach            | WB   | EB | SB | NB   |
| Opposing Lanes               | 2    | 2  | 1  | 1    |
| Conflicting Approach Left SB |      | NB | EB | WB   |
| Conflicting Lanes Left       | 1    | 1  | 2  | 2    |
| Conflicting Approach RightNB |      | SB | WB | EB   |
| Conflicting Lanes Right      | 1    | 1  | 2  | 2    |
| HCM Control Delay            | 47.6 | 39 | 80 | 69.2 |
| HCM LOS                      | E    | E  | F  | F    |

| Lane                   | NBLn1 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 25%   | 26%   | 0%    | 28%   | 0%    | 27%   |
| Vol Thru, %            | 60%   | 74%   | 76%   | 72%   | 70%   | 50%   |
| Vol Right, %           | 15%   | 0%    | 24%   | 0%    | 30%   | 23%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 335   | 282   | 273   | 251   | 258   | 325   |
| LT Vol                 | 84    | 74    | 0     | 69    | 0     | 89    |
| Through Vol            | 200   | 208   | 208   | 182   | 182   | 162   |
| RT Vol                 | 51    | 0     | 65    | 0     | 76    | 74    |
| Lane Flow Rate         | 381   | 320   | 310   | 285   | 293   | 369   |
| Geometry Grp           | 2     | 7     | 7     | 7     | 7     | 2     |
| Degree of Util (X)     | 1.008 | 0.867 | 0.813 | 0.775 | 0.768 | 0.963 |
| Departure Headway (Hd) | 9.534 | 9.964 | 9.65  | 10.03 | 9.667 | 9.571 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 384   | 365   | 378   | 364   | 377   | 380   |
| Service Time           | 7.497 | 7.664 | 7.35  | 7.73  | 7.367 | 7.571 |
| HCM Lane V/C Ratio     | 0.992 | 0.877 | 0.82  | 0.783 | 0.777 | 0.971 |
| HCM Control Delay      | 80    | 51.9  | 43.1  | 40    | 38    | 69.2  |
| HCM Lane LOS           | F     | F     | E     | E     | E     | F     |
| HCM 95th-tile Q        | 12.2  | 8.2   | 7.2   | 6.3   | 6.3   | 10.8  |

**Intersection Level Of Service Report**  
**Intersection 4: Kern Street (SR-33) / 1st Street**

|                  |                 |                           |       |
|------------------|-----------------|---------------------------|-------|
| Control Type:    | Two-way stop    | Delay (sec / veh):        | 67.2  |
| Analysis Method: | HCM 6th Edition | Level Of Service:         | F     |
| Analysis Period: | 15 minutes      | Volume to Capacity (v/c): | 0.100 |

**Intersection Setup**

| Name                         | 1st Street  |        |        |        | 1st Street  |        |        |        | Kern Street (SR-33)   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Northbound  |        |        |        | Southbound  |        |        |        | Eastbound   |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |  |        |        |        |
| Turning Movement             | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | 1st Street |        |        |        | 1st Street |        |        |        | Kern Street (SR-33) |        |        |        |
|---|------------|--------|--------|--------|------------|--------|--------|--------|---------------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 45         | 10     | 20     | 10     | 10         | 10     | 20     | 27     | 16                  | 233    | 140    | 37     |
| Base Volume Adjustment Factor           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00       | 2.00   | 0.00   | 2.00   | 0.00       | 2.00   | 2.00   | 2.00   | 2.00                | 0.00   | 2.00   | 2.00   |
| Growth Factor                           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 45         | 10     | 20     | 10     | 10         | 10     | 20     | 27     | 16                  | 233    | 140    | 37     |
| Peak Hour Factor                        | 0.9400     | 0.9400 | 0.9400 | 0.9400 | 0.9400     | 0.9400 | 0.9400 | 0.9400 | 0.9400              | 0.9400 | 0.9400 | 0.9400 |
| Other Adjustment Factor                 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 12         | 3      | 5      | 3      | 3          | 3      | 5      | 7      | 4                   | 62     | 37     | 10     |
| Total Analysis Volume [veh/h]           | 48         | 11     | 21     | 11     | 11         | 11     | 21     | 29     | 17                  | 248    | 149    | 39     |
| Pedestrian Volume [ped/h]               | 0          |        |        |        | 0          |        |        |        | 0                   |        |        |        |

**Intersection Settings**



| Priority Scheme                    | Stop | Stop | Free |
|------------------------------------|------|------|------|
| Flared Lane                        | No   | No   |      |
| Storage Area [veh]                 | 0    | 0    | 0    |
| Two-Stage Gap Acceptance           | No   | No   |      |
| Number of Storage Spaces in Median | 0    | 0    | 0    |

**Movement, Approach, & Intersection Results**

|                                       |       |       |       |       |       |       |       |       |       |       |      |      |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| V/C, Movement V/C Ratio               | 0.38  | 0.10  | 0.10  | 0.01  | 0.06  | 0.06  | 0.11  | 0.03  | 0.01  | 0.18  | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh]       | 63.19 | 67.16 | 51.69 | 38.34 | 28.29 | 28.37 | 27.47 | 13.26 | 8.30  | 8.27  | 0.00 | 0.00 |
| Movement LOS                          | F     | F     | F     | E     | D     | D     | D     | B     | A     | A     | A    | A    |
| 95th-Percentile Queue Length [veh/ln] | 3.13  | 3.13  | 3.13  | 3.13  | 0.99  | 0.99  | 0.99  | 0.99  | 0.72  | 0.72  | 0.36 | 0.00 |
| 95th-Percentile Queue Length [ft/ln]  | 78.17 | 78.17 | 78.17 | 78.17 | 24.67 | 24.67 | 24.67 | 24.67 | 18.00 | 18.00 | 9.00 | 0.00 |
| d_A, Approach Delay [s/veh]           | 58.01 |       |       |       | 22.01 |       |       |       | 4.84  |       |      |      |
| Approach LOS                          | F     |       |       |       | C     |       |       |       | A     |       |      |      |
| d_I, Intersection Delay [s/veh]       | 11.79 |       |       |       |       |       |       |       |       |       |      |      |
| Intersection LOS                      | F     |       |       |       |       |       |       |       |       |       |      |      |



**Intersection Setup**

| Name                         | Kern Street (SR-33)   |        |        |        | E Kern Street   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Westbound   |        |        |        | Southwestbound  |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |
| Turning Movement             | Left  | Thru   | Right  | Right2 | Left  | Thru   | Right  | Right2 |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | Kern Street (SR-33) |        |        |        | E Kern Street |        |        |        |
|---|---------------------|--------|--------|--------|---------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 10                  | 204    | 15     | 10     | 10            | 30     | 135    | 10     |
| Base Volume Adjustment Factor           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00                | 2.00   | 2.00   | 0.00   | 0.00          | 0.00   | 0.00   | 0.00   |
| Growth Factor                           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 10                  | 204    | 15     | 10     | 10            | 30     | 135    | 10     |
| Peak Hour Factor                        | 0.9400              | 0.9400 | 0.9400 | 0.9400 | 0.9400        | 0.9400 | 0.9400 | 0.9400 |
| Other Adjustment Factor                 | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 3                   | 54     | 4      | 3      | 3             | 8      | 36     | 3      |
| Total Analysis Volume [veh/h]           | 11                  | 217    | 16     | 11     | 11            | 32     | 144    | 11     |
| Pedestrian Volume [ped/h]               | 0                   |        |        |        | 0             |        |        |        |

**Intersection Settings**

|                                    |      |      |
|------------------------------------|------|------|
| Priority Scheme                    | Free | Stop |
| Flared Lane                        |      |      |
| Storage Area [veh]                 | 0    | 0    |
| Two-Stage Gap Acceptance           |      | No   |
| Number of Storage Spaces in Median | 0    | 0    |

**Movement, Approach, & Intersection Results**

|                                       |       |      |      |      |       |       |       |       |
|---------------------------------------|-------|------|------|------|-------|-------|-------|-------|
| V/C, Movement V/C Ratio               | 0.01  | 0.00 | 0.00 | 0.00 | 0.06  | 0.18  | 0.23  | 0.02  |
| d_M, Delay for Movement [s/veh]       | 7.62  | 0.00 | 0.00 | 0.00 | 32.24 | 31.34 | 13.71 | 11.63 |
| Movement LOS                          | A     | A    | A    | A    | D     | D     | B     | B     |
| 95th-Percentile Queue Length [veh/ln] | 0.02  | 0.02 | 0.02 | 0.02 | 1.43  | 1.43  | 0.99  | 0.55  |
| 95th-Percentile Queue Length [ft/ln]  | 0.60  | 0.60 | 0.60 | 0.60 | 35.67 | 35.67 | 24.77 | 13.86 |
| d_A, Approach Delay [s/veh]           | 0.33  |      |      |      | 17.48 |       |       |       |
| Approach LOS                          | A     |      |      |      | C     |       |       |       |
| d_I, Intersection Delay [s/veh]       | 11.79 |      |      |      |       |       |       |       |
| Intersection LOS                      | F     |      |      |      |       |       |       |       |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 14   | 0    | 39   | 0    | 2    | 2    | 18   | 200  | 0    | 3    | 131  | 10   |
| Future Vol, veh/h        | 14   | 0    | 39   | 0    | 2    | 2    | 18   | 200  | 0    | 3    | 131  | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 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         | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 17   | 0    | 48   | 0    | 2    | 2    | 22   | 244  | 0    | 4    | 160  | 12   |





| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 464    | 462   | 166    | 486   | 468    | 244   | 172    | 0 | 0 | 244   | 0 | 0 |
| Stage 1              | 174    | 174   | -      | 288   | 288    | -     | -      | - | - | -     | - | - |
| Stage 2              | 290    | 288   | -      | 198   | 180    | -     | -      | - | - | -     | - | - |
| 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   | 508    | 497   | 878    | 492   | 493    | 795   | 1405   | - | - | 1322  | - | - |
| Stage 1              | 828    | 755   | -      | 720   | 674    | -     | -      | - | - | -     | - | - |
| Stage 2              | 718    | 674   | -      | 804   | 750    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | 496    | 487   | 878    | 458   | 483    | 795   | 1405   | - | - | 1322  | - | - |
| Mov Cap-2 Maneuver   | 496    | 487   | -      | 458   | 483    | -     | -      | - | - | -     | - | - |
| Stage 1              | 813    | 753   | -      | 707   | 662    | -     | -      | - | - | -     | - | - |
| Stage 2              | 700    | 662   | -      | 758   | 748    | -     | -      | - | - | -     | - | - |

| Approach             | EB   |  | WB |  | NB  |  | SB  |  |
|----------------------|------|--|----|--|-----|--|-----|--|
| HCM Control Delay, s | 10.4 |  | 11 |  | 0.6 |  | 0.2 |  |
| HCM LOS              | B    |  | B  |  |     |  |     |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1405  | -   | -   | 730        | 601   | 1322  | -   |
| HCM Lane V/C Ratio    | 0.016 | -   | -   | 0.089      | 0.008 | 0.003 | -   |
| HCM Control Delay (s) | 7.6   | 0   | -   | 10.4       | 11    | 7.7   | 0   |
| HCM Lane LOS          | A     | A   | -   | B          | B     | A     | A   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.3        | 0     | 0     | -   |

Intersection

Int Delay, s/veh 2.8

| Movement                 | WBL   | WBR  | NBT   | NBR  | SBL   | SBT   |
|--------------------------|---|------|---|------|---|---|
| Lane Configurations      |  |      |  |      |  |  |
| Traffic Vol, veh/h       | 58  | 106  | 570   | 100  | 113   | 563   |
| Future Vol, veh/h        | 58  | 106  | 570   | 100  | 113   | 563   |
| Conflicting Peds, #/hr   | 0   | 1    | 0   | 5    | 0   | 0   |
| Sign Control             | Stop  | Stop | Free  | Free | Free  | Free  |
| RT Channelized           | -   | None | -   | None | -   | None  |
| Storage Length           | 0   | -    | -   | -    | 50  | -   |
| Veh in Median Storage, # | 0   | -    | 0   | -    | -   | 0   |
| Grade, %                 | 0   | -    | 0   | -    | -   | 0   |
| Peak Hour Factor         | 92  | 92   | 92  | 92   | 92  | 92  |
| Heavy Vehicles, %        | 2   | 2    | 2   | 2    | 2   | 2   |
| Mvmt Flow                | 63  | 115  | 620   | 109  | 123   | 612   |

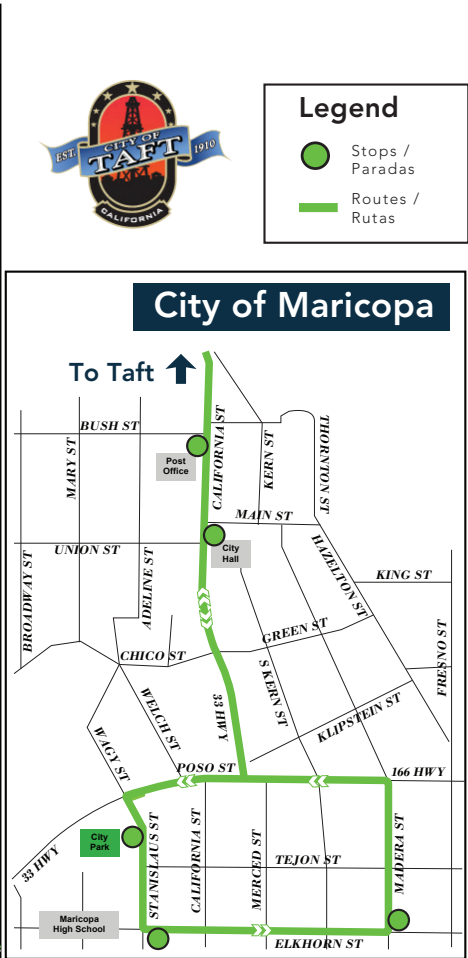
| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1232   | 371    | 0      |
| Stage 1              | 680    | -      | -      |
| Stage 2              | 552    | -      | -      |
| Critical Hdwy        | 6.84   | 6.94   | -      |
| Critical Hdwy Stg 1  | 5.84   | -      | -      |
| Critical Hdwy Stg 2  | 5.84   | -      | -      |
| Follow-up Hdwy       | 3.52   | 3.32   | -      |
| Pot Cap-1 Maneuver   | 169    | 626    | -      |
| Stage 1              | 465    | -      | -      |
| Stage 2              | 541    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 144    | 622    | -      |
| Mov Cap-2 Maneuver   | 277    | -      | -      |
| Stage 1              | 463    | -      | -      |
| Stage 2              | 464    | -      | -      |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 19.1 | 0  | 1.6 |
| HCM LOS              | C    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 432   | 863   |
| HCM Lane V/C Ratio    | -   | -        | 0.413 | 0.142 |
| HCM Control Delay (s) | -   | -        | 19.1  | 9.9   |
| HCM Lane LOS          | -   | -        | C     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 2     | 0.5   |

## **APPENDIX F**

### **TAFT AREA TRANSIT AND KERN TRANSIT ROUTES AND SCHEDULES**



City of Taft

City of Maricopa

To Maricopa

To Taft

Taft-Maricopa Weekday Route / Ruta de Taft-Maricopa de Entre Semana

|   | Stanislaus St       |                        |                     |                            |         |                     |                     |                   |                         |                       |                               |
|---|---------------------|------------------------|---------------------|----------------------------|---------|---------------------|---------------------|-------------------|-------------------------|-----------------------|-------------------------------|
|   | Kern St<br>& 2nd St | Chamber of<br>Commerce | Taft High<br>School | Cougar Ct &<br>Wildcat Way | Fort    | Albertsons<br>Plaza | Kern St<br>& 5th St | Little<br>Caesars | Maricopa<br>Post Office | Tejon St<br>City Park | Elkhorn St &<br>Stanislaus St |
| 1 |                     |                        |                     |                            |         |                     |                     |                   | 7:12 AM                 | 7:13 AM               | 7:14 AM                       |
| 2 | 1:34 PM             | 1:35 PM                | 1:36 PM             | 1:39 PM                    | 1:41 PM | 1:43 PM             | 1:44 PM             | 1:45 PM           | 1:55 PM                 | 1:56 PM               | 1:57 PM                       |
| 3 | 5:14 PM             | 5:15 PM                | 5:16 PM             | 5:19 PM                    | 5:21 PM | 5:23 PM             | 5:24 PM             | 5:25 PM           | 5:35 PM                 | 5:36 PM               | 5:37 PM                       |

Taft-Maricopa Weekday Route (CONTINUED) / Ruta de Taft-Maricopa de Entre Semana (CONTINUADA)

|   | Madera St &<br>Elkhorn St | Maricopa<br>City Hall | Kern St &<br>2nd St | Chamber of<br>Commerce | Taft High<br>School | Cougar Ct &<br>Wildcat Way | Fort    | Albertsons<br>Plaza | Kern St<br>& 5th St | Little<br>Caesars |
|---|---------------------------|-----------------------|---------------------|------------------------|---------------------|----------------------------|---------|---------------------|---------------------|-------------------|
| 1 | 7:15 AM                   | 7:18 AM               | 7:29 AM             | 7:30 AM                | 7:32 AM             | 7:37 AM                    | 7:39 AM | 7:40 AM             | 7:41 AM             | 7:42 AM           |
| 2 | 1:58 PM                   | 2:01 PM               | 2:12 PM             | 2:13 PM                | 2:15 PM             | 2:20 PM                    | 2:22 PM | 2:23 PM             | 2:24 PM             | 2:25 PM           |
| 3 | 5:38 PM                   | 5:41 PM               | 5:52 PM             | 5:53 PM                | 5:55 PM             | 6:00 PM                    | 6:02 PM | 6:03 PM             | 6:04 PM             | 6:05 PM           |

Route Hours of Operation

Taft - Maricopa Route:

Monday – Friday

7:12 a.m. to 6:05 p.m.

| Fares   | Taft-Mar |
|---|----------|
| General   | \$2.00   |
| ADA-Certified / Senior / Youth                  | \$2.00   |
| Children under 5 per fare paying adult          | Free     |
| ADA Attendant (with paid registered ADA patron) | Free     |

| Taft 12-Trip Pass    | Taft-Mar |
|----------------------|----------|
| General              | \$20.00  |
| ADA / Senior / Youth | \$20.00  |

Note: Have exact fare.  
Drivers do not make change.

Horas de Operación

Ruta de Taft - Maricopa:

Lunes - Viernes

7:12 a.m. a 6:05 p.m.

| Tarifas   | Taft-Mar |
|---|----------|
| General   | \$2.00   |
| Certificado de ADA / Mayor de 60 años / Jovenes           | \$2.00   |
| Niños menores de 5 años acompañados por pasajero que paga | Gratis   |
| Asistente ADA (con pasajero registrado ADA que paga)      | Gratis   |

| Pase de 12-Viajes Taft  | Ruta Taft-Mar |
|---|---------------|
| General   | \$20.00       |
| Certificado ADA / Mayor de 60 años / Jovenes                    | \$20.00       |
| Nota : Tener tarifa exacta.<br>Los conductores no hacen cambio. |               |

TAFT-MARICOPA  
AREA TRANSIT

SYSTEM MAP & SCHEDULE  
HORARIO Y MAPA DE SISTEMA



661.763.3822  
www.cityoftaft.org





# Welcome Aboard! / ¡Bienvenido a Bordo!

Taft Area Transit (TAT) travels throughout the cities of Taft and Maricopa. For additional service information or transportation planning assistance call (661) 763-3822.

Taft Area Transit (TAT) viaja a través de las ciudades de Taft y Maricopa. Para información adicional del servicio o asistencia de planificación de transporte llame al (661) 763-3822.

## Passenger Guidelines

See the system map for service and area routes. For additional service information or transportation planning assistance call (661) 763-3822.

## Do

- Pay your fare (exact change only).
- Be respectful of your driver and fellow passengers.
- Reserve front seats for the elderly or disabled passengers.
- Keep hands and objects inside vehicle.
- Remain seated until vehicle comes to a complete stop.
- Report any vandalism to driver.

## Don't

- No smoking.
- No offensive language or threatening behavior.
- No littering.
- No music or excessive noise.
- No food or drinks onboard.
- No marking or defacing vehicle.
- No pets/animals except assistance animals with an official tag.

*Note: TAT drivers may refuse service to persons acting inappropriately or causing harm to other customers or driver. Passengers unwilling to abide by these guidelines may be barred from using the City of Taft's transportation services.*

## Bikes on Bus

Getting around on Taft Area Transit just got easier. Take your bike along when you ride the bus. TAT buses feature easy-to-load bike racks. Motorized bicycles may not be loaded on the TAT bus bike racks.

## Guías de Pasajeros

Vea el mapa del sistema para las rutas y áreas de servicio. Para información adicional del servicio o asistencia de planificación de transporte llame al (661) 763-3822.

## Hacer:

- Pague su tarifa (cambio exacto solamente).
- Sea respetuoso de su conductor y los demás pasajeros.
- Reserva los asientos delanteros para los pasajeros de edad avanzada o discapacitados.
- Mantenga las manos y los objetos en el interior del vehículo.
- Permanezca sentado hasta que el vehículo se haya detenido por completo.
- Reporte cualquier vandalismo al conductor.

## No Hacer:

- No fumar.
- Ningún lenguaje ofensivo o comportamiento amenazante.
- No tirar basura.
- No música o ruido excesivo.
- No comida o bebidas a bordo.
- Ningún marcando o desfigurando del vehículo.
- No mascotas / animales, excepto los animales de asistencia con una etiqueta oficial.

*Nota: Los conductores TAT pueden negar el servicio a las personas que actúan de manera inapropiada o causar daño a otros clientes o el conductor. Los pasajeros que no están dispuestos a cumplir con estas guías pueden ser excluidos de usar los servicios de transporte de la ciudad de Taft.*

## Bicicletas en el Autobús

Moverse en Taft Area Transit ahora es más fácil. Tome su bicicleta junto al montar el autobús. TAT autobuses disponen bastidores de bicicletas fáciles de carga. Bicicletas motorizadas no se pueden cargar en los bastidores de bicicleta de los autobuses TAT.

[www.cityoftaft.org](http://www.cityoftaft.org) | **661.763.3822**

## Dial-A-Ride Information

TAT offers a curb-to-curb, reservation based Dial-A-Ride service that is open to the public. Dial-A-Ride is limited to the City of Taft and does not travel to the City of Maricopa. Reservations must be made a minimum of two hours before you wish to ride by calling (661) 763-3822. Standing reservations may also be made. ADA-certified patrons and seniors (60 + years) may fill out an application to receive discount Dial-A-Ride pricing. Persons with disabilities interested in using Dial-A-Ride must submit an application signed by a physician. A photocopy of a state-issued identification card is also required. To request a Dial-A-Ride application call (661) 763-3822.

**Please be ready when the vehicle arrives!** Drivers will not wait longer than 2 minutes past the scheduled pick-up time. To schedule a ride call 2 hours prior to pickup time desired (661) 763-3822.

## Información Dial-A-Ride

TAT ofrece al público servicio de curva a curva, basado en reserva por medio de Dial-A-Ride. Dial-A-Ride está limitado a la Ciudad de Taft y no viaja a la Ciudad de Maricopa. Reservaciones deben de ser hechas por lo menos dos horas antes de viajar llamando al (661) 763-3822. También se pueden hacer reservaciones permanentes. Patrones certificados ADA y mayores de edad (60 + años) pueden llenar una aplicación para recibir descuento. Personas con discapacidad interesados en utilizar Dial-A-Ride, deberán presentar una aplicación firmada por un médico. También se requiere una fotocopia de una tarjeta de identificación emitida por el estado. Para solicitar una aplicación llame al (661) 763-3822.

**Por favor, ¡estar listo cuando llegue el vehículo!** Los conductores no esperaran más de 2 minutos después de la hora de recogida programada. Para programar un viaje, por favor llame 2 horas antes de la hora deseada (661) 763-3822.

## Holidays

TAT does not operate on New Year's Day, Labor Day, Independence Day, Lincoln's Birthday, Washington's Birthday, Memorial Day, Veteran's Day, Thanksgiving Day, Thanksgiving Day Friday, Christmas Eve, Christmas Day, and New Year's Eve.

## Dial-A-Ride Hours of Operation

Monday – Friday 7:15 a.m. to 5:30 p.m.  
Saturday 10:15 a.m. to 2:30 p.m.

| Dial-A-Ride Fares                                  |         |
|--|---------|
| <b>One-Way Fare</b><br>(General Public)            | \$2.50  |
| ADA / Senior / Youth                               | \$1.75  |
| Children under 5<br>per fare paying adult          | Free    |
| <b>12-Trip Pass</b><br>(General Public)            | \$25.00 |
| ADA / Senior / Youth                               | \$17.50 |
| ADA Attendant (with paid<br>registered ADA patron) | Free    |

*Note: Have exact fare. Drivers do not make change.*

## Horas de Operación Dial-A-Ride

Lunes – Viernes 7:15 a.m. a 5:30 p.m.  
Sábado 10:15 a.m. a 2:30 p.m.

| Tarifas de Dial-A-Ride  |         |
|---|---------|
| <b>Viaje Sencillo</b> (Publico General)                         | \$2.50  |
| ADA / Mayores de Edad / Jovenes                                 | \$1.75  |
| Niños menores de 5<br>años acompañados<br>por pasajero que paga | Gratis  |
| <b>Pase de 12 Viajes</b> (Publico General)                      | \$25.00 |
| ADA / Mayores de Edad / Jovenes                                 | \$17.50 |

Asistente ADA (con pasajero  
registrado ADA que paga) Gratis  
*Nota: Tenga tarifa exacta. Los conductores no hacen el cambio.*

## Días de Fiesta

TAT no opera en el día de Año Nuevo, Día del Trabajo, Día de la Independencia, el Cumpleaños de Lincoln, el Cumpleaños de Washington, Día Conmemorativo, Día de los Veteranos, Día de Acción de Gracias, el Viernes Después de Día de Acción de Gracias, Víspera de Navidad, el día de Navidad y Fin de Año.

# Schedules

Monday through Saturday

DAYS:

Weekday

Saturday

DIRECTIONS:

Eastbound

Westbound

| STOP  | 175237 | 175084  | 175248 | 175238 |
|---|--------|---------|--------|--------|
| <b>Taft</b>   |        |         |        |        |
| Taft College - 6th St. at Cougar Ct. (WB)           | 7:40am | 10:00am | 2:30pm | 7:35pm |
| 8th St. at North St. (Heritage Park Senior Complex) | 7:44am | 10:04am | 2:34pm | 7:39pm |
| Taft Transit Center                                 | 7:48am | 10:08am | 2:38pm | 7:43pm |
| Harrison St. at Cedar St.                           | 7:54am | 10:14am | 2:44pm | 7:49pm |
| Valley Acres (East)                                 | 8:01am | 10:21am | 2:51pm | 7:56pm |
| <b>Dustin Acres East</b>                            |        |         |        |        |
| <b>Bakersfield</b>                                  |        |         |        |        |
| Stockdale Hwy. at Buena Vista Rd.                   | 8:31am | 10:51am | 3:21pm | 8:26pm |
| Cal State University Bakersfield                    | 8:37am | 10:57am | 3:27pm | 8:32pm |
| <b>Stockdale Hwy. at New Stine Rd. (7/11)</b>       |        |         |        |        |
| <b>Brundage Ln. at A St. (East)</b>                 |        |         |        |        |
| <b>Kern County Superior Court - Truxtun Ave.</b>    |        |         |        |        |
| Bakersfield Amtrak                                  | 8:59am | 11:19am | 3:49pm | 8:54pm |
| Greyhound/18th St.                                  | 9:04am | 11:24am | 3:54pm | 8:59pm |
| GET Downtown Transit Center                         | 9:07am | 11:27am | 3:57pm | 9:02pm |



# Schedules

Monday through Saturday

DAYS:

Weekday

Saturday

DIRECTIONS:

Eastbound

Westbound

| STOP  | 175071 | 175099 | 175066  | 175244 |
|---|--------|--------|---------|--------|
| <b>Bakersfield</b>                                  |        |        |         |        |
| Bakersfield Amtrak                                  | —      | 8:22am | 12:47pm | 5:47pm |
| Greyhound/18th St.                                  | —      | 8:27am | 12:52pm | 5:52pm |
| GET Downtown Transit Center                         | 6:10am | 8:30am | 12:55pm | 5:55pm |
| Chester Ave. at Truxtun Ave. - City Hall            |        |        |         |        |
| Brundage Ln. at A St.                               |        |        |         |        |
| Stockdale Hwy. at New Stine Rd.                     |        |        |         |        |
| Cal State University Bakersfield                    | 6:22am | 8:52am | 1:17pm  | 6:17pm |
| Stockdale Hwy. at Buena Vista Rd.                   | 6:27am | 8:57am | 1:22pm  | 6:22pm |
| <b>Taft</b>   |        |        |         |        |
| Dustin Acres West                                   |        |        |         |        |
| Valley Acres (West)                                 | 6:57am | 9:25am | 1:50pm  | 6:50pm |
| Harrison St. at Cedar St. (WB)                      | 7:07am | 9:35am | 2:00pm  | 7:00pm |
| Taft College - 6th St. at Cougar Ct. (WB)           | 7:09am | 9:37am | 2:02pm  | 7:02pm |
| 8th St. at North St. (Heritage Park Senior Complex) | 7:13am | 9:41am | 2:06pm  | 7:06pm |
| Taft Transit Center                                 | 7:16am | 9:44am | 2:09pm  | 7:09pm |

# Schedules

Monday through Saturday

DAYS:

Weekday

Saturday

DIRECTIONS:

Eastbound

Westbound

| STOP  | 175252 | 175300  | 175129 |
|---|--------|---------|--------|
| <b>Taft</b>   |        |         |        |
| Taft College - 6th St. at Cougar Ct. (WB)           | 7:50am | 12:12pm | 5:30pm |
| 8th St. at North St. (Heritage Park Senior Complex) | 7:54am | 12:16pm | 5:34pm |
| Taft Transit Center                                 | 7:58am | 12:20pm | 5:38pm |
| Harrison St. at Cedar St.                           | 8:04am | 12:26pm | 5:44pm |
| Valley Acres (East)                                 | 8:11am | 12:33pm | 5:51pm |
| Dustin Acres East                                   |        |         |        |
| <b>Bakersfield</b>                                  |        |         |        |
| Stockdale Hwy. at Buena Vista Rd.                   | 8:41am | 1:03pm  | 6:21pm |
| Cal State University Bakersfield                    | 8:47am | 1:09pm  | 6:27pm |
| Stockdale Hwy. at New Stine Rd. (7/11)              |        |         |        |
| Brundage Ln. at A St. (East)                        |        |         |        |
| Kern County Superior Court - Truxtun Ave.           |        |         |        |
| Bakersfield Amtrak                                  | 9:09am | 1:31pm  | 6:49pm |
| Greyhound/18th St.                                  | 9:14am | 1:36pm  | 6:54pm |
| GET Downtown Transit Center                         | 9:17am | 1:39pm  | 6:57pm |

DAYS:

Weekday

Saturday

DIRECTIONS:

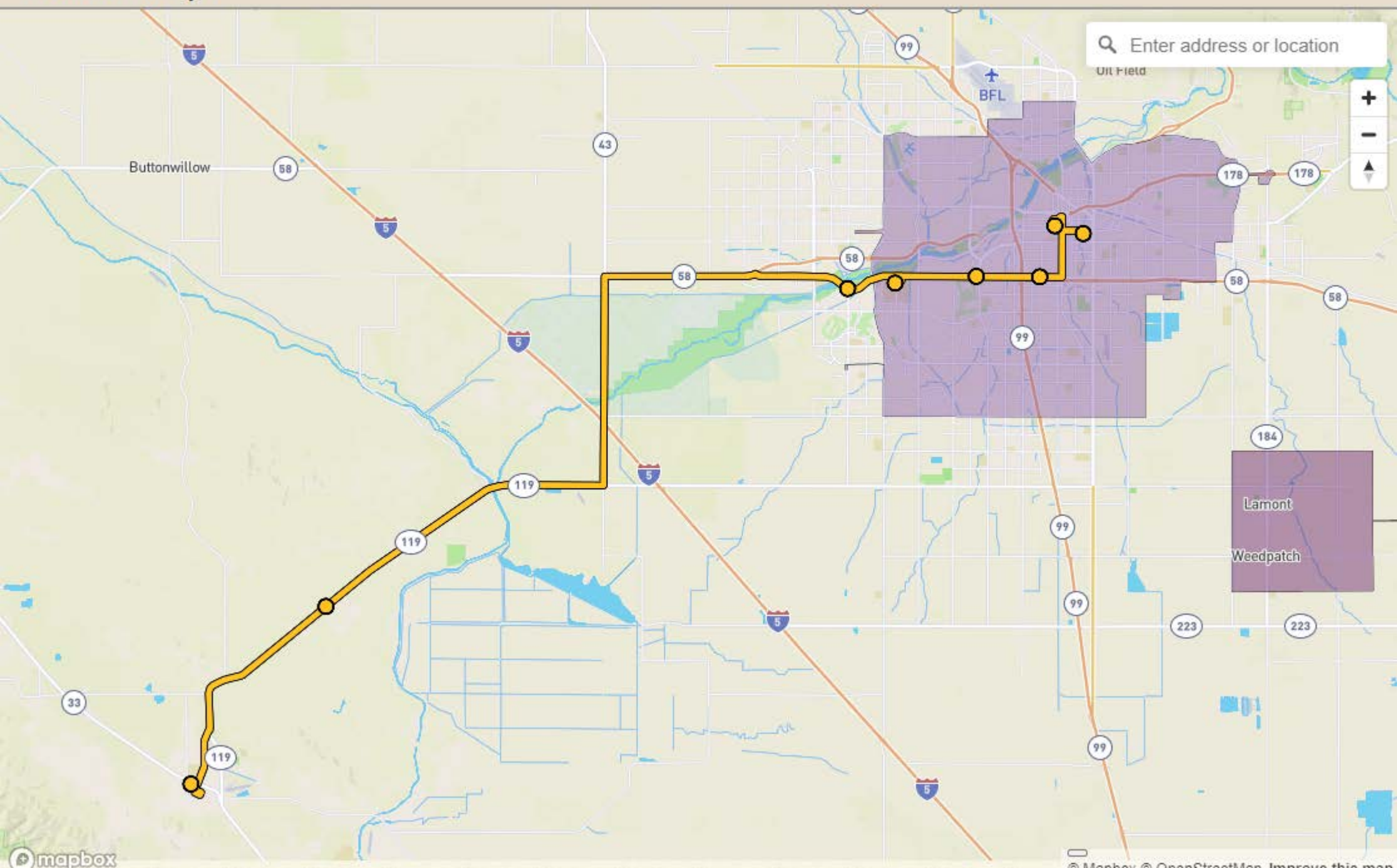
Eastbound

Westbound

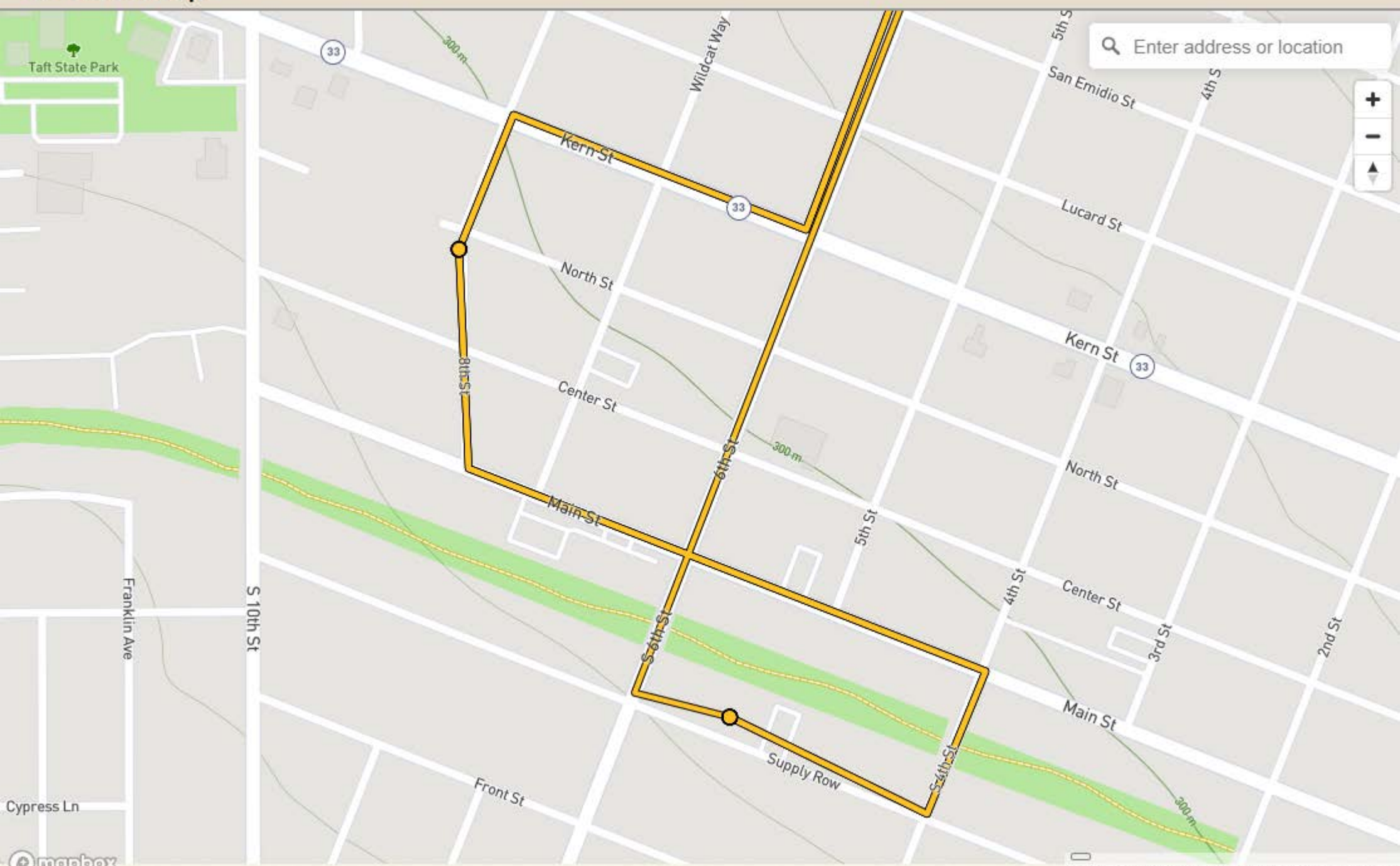
| STOP  | 175139  | 175130 |
|---|---------|--------|
| Bakersfield   |         |        |
| Bakersfield Amtrak                                  | 10:27am | 3:42pm |
| Greyhound/18th St.                                  | 10:32am | 3:47pm |
| GET Downtown Transit Center                         | 10:35am | 3:50pm |
| Chester Ave. at Truxtun Ave. - City Hall            |         |        |
| Brundage Ln. at A St.                               |         |        |
| Stockdale Hwy. at New Stine Rd.                     |         |        |
| Cal State University Bakersfield                    | 10:57am | 4:12pm |
| Stockdale Hwy. at Buena Vista Rd.                   | 11:02am | 4:17pm |
| Taft  |         |        |
| Dustin Acres West                                   |         |        |
| Valley Acres (West)                                 | 11:30am | 4:45pm |
| Harrison St. at Cedar St. (WB)                      | 11:40am | 4:55pm |
| Taft College - 6th St. at Cougar Ct. (WB)           | 11:42am | 4:57pm |
| 8th St. at North St. (Heritage Park Senior Complex) | 11:46am | 5:01pm |
| Taft Transit Center                                 | 11:49am | 5:04pm |



# Route Map



# Route Map



## **APPENDIX G**

### **CA MUTCD PEAK HOUR WARRANT (WARRANT 3) WORKSHEETS**

## SIGNAL WARRANT ANALYSIS

**Minor Street:** Kern Street  
**Major Street:** 4th Street  
**Scenario:** Horizon Year 2042  
 AM Peak

**Number of Lanes on minor street:** 1  
**Number of Lanes on major street:** 2  
**Total Number of Vehicles Entering:** 1731  
**Number of Approaches:** 4  
**Intersection total delay (seconds):** 118.8  
**Minor St approach total delay (veh-hr):** 14.1

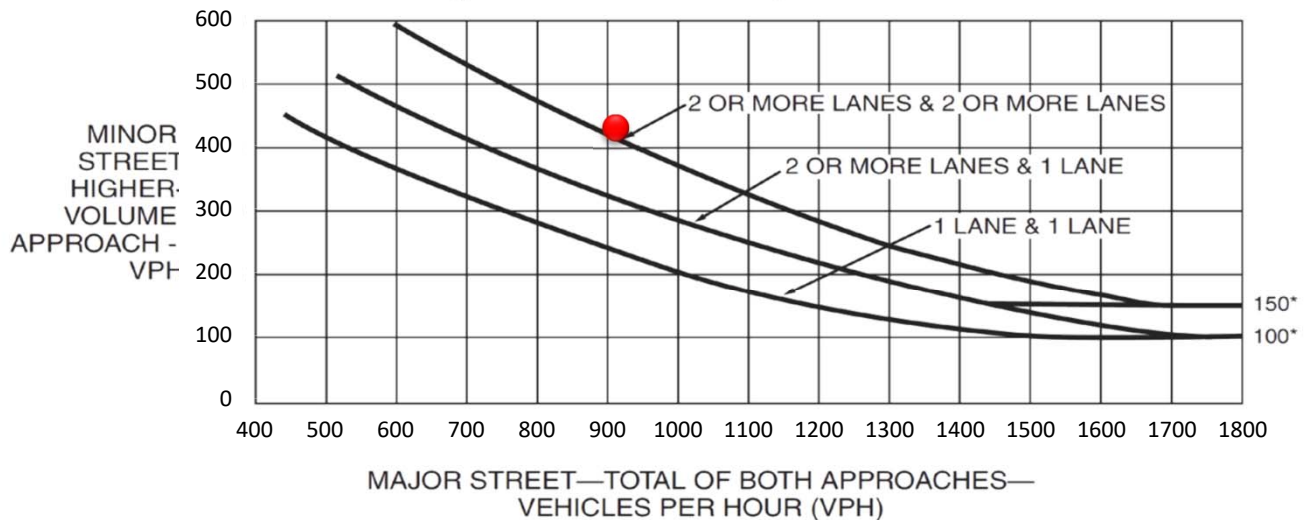
### Part A

|   |   | Criteria Met? |
|---|---|---------------|
| 1 | Minor St approach total stopped time delay                      | YES           |
| 2 | Volume on the same minor street approach (one directional only) | YES           |
| 3 | Total volume entering the intersection during the peak hour     | YES           |

### Part B

| Volume on Major St ( $\Sigma$ of both Approaches) | Volumes on Minor St (higher approach) |
|---|---------------------------------------|
| 911   | 428                                   |

**Figure 4C-3. Warrant 3, Peak Hour**



\*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Does the Intersection Meet Peak Hour Signal Warrants?: |     |
|--|-----|
| PART A   | YES |
| PART B   | YES |



## SIGNAL WARRANT ANALYSIS

Minor Street: Kern Street  
 Major Street 4th Street  
 Scenario: Horizon Year 2042  
 PM Peak

Number of Lanes on minor street: 1  
 Number of Lanes on major street: 2  
 Total Number of Vehicles Entering: 1723  
 Number of Approaches: 4  
 Intersection total delay (seconds): 55.4  
 Minor St approach total delay (veh-hr): 5.2

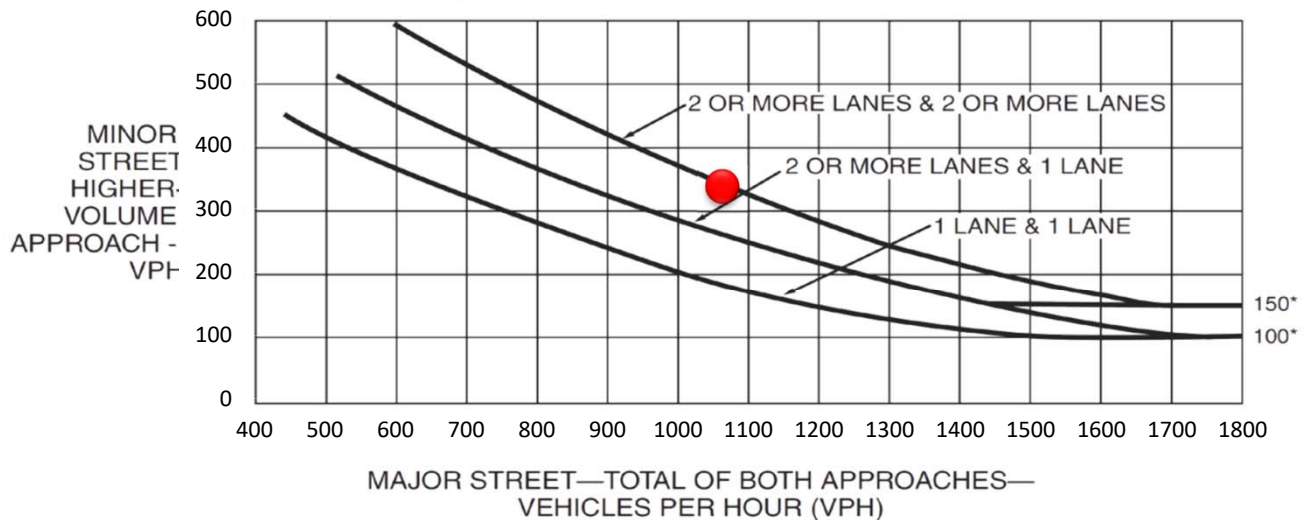
### Part A

|   |   | Criteria Met? |
|---|---|---------------|
| 1 | Minor St approach total stopped time delay                      | YES           |
| 2 | Volume on the same minor street approach (one directional only) | YES           |
| 3 | Total volume entering the intersection during the peak hour     | YES           |

### Part B

| Volume on Major St (Σ of both Approaches) | Volumes on Minor St (higher approach) |
|---|---------------------------------------|
| 1063                                      | 335                                   |

**Figure 4C-3. Warrant 3, Peak Hour**



\*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Does the Intersection Meet Peak Hour Signal Warrants?: |     |
|--|-----|
| PART A   | YES |
| PART B   | YES |



## SIGNAL WARRANT ANALYSIS

Minor Street: Kern Street  
 Major Street: 6th Street  
 Scenario: Horizon Year 2042  
 AM Peak

Number of Lanes on minor street: 2  
 Number of Lanes on major street: 2  
 Total Number of Vehicles Entering: 1995  
 Number of Approaches: 4  
 Intersection total delay (seconds): 117.7  
 Minor St approach total delay (veh-hr): 16.1

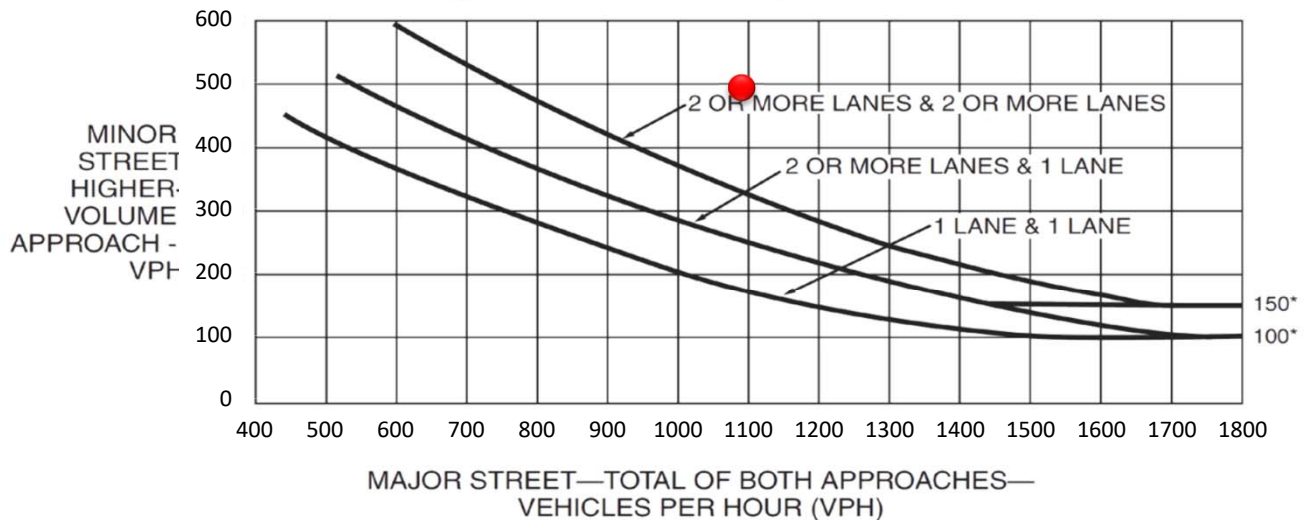
### Part A

|   |   | Criteria Met? |
|---|---|---------------|
| 1 | Minor St approach total stopped time delay                      | YES           |
| 2 | Volume on the same minor street approach (one directional only) | YES           |
| 3 | Total volume entering the intersection during the peak hour     | YES           |

### Part B

| Volume on Major St ( $\Sigma$ of both Approaches) | Volumes on Minor St (higher approach) |
|---|---------------------------------------|
| 1090  | 491                                   |

**Figure 4C-3. Warrant 3, Peak Hour**



\*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Does the Intersection Meet Peak Hour Signal Warrants?: |     |
|--|-----|
| PART A   | YES |
| PART B   | YES |

## SIGNAL WARRANT ANALYSIS

Minor Street: Kern Street  
 Major Street: 6th Street  
 Scenario: Horizon Year 2042  
 PM Peak

Number of Lanes on minor street: 2  
 Number of Lanes on major street: 2  
 Total Number of Vehicles Entering: 1907  
 Number of Approaches: 4  
 Intersection total delay (seconds): 42.9  
 Minor St approach total delay (veh-hr): 5.7

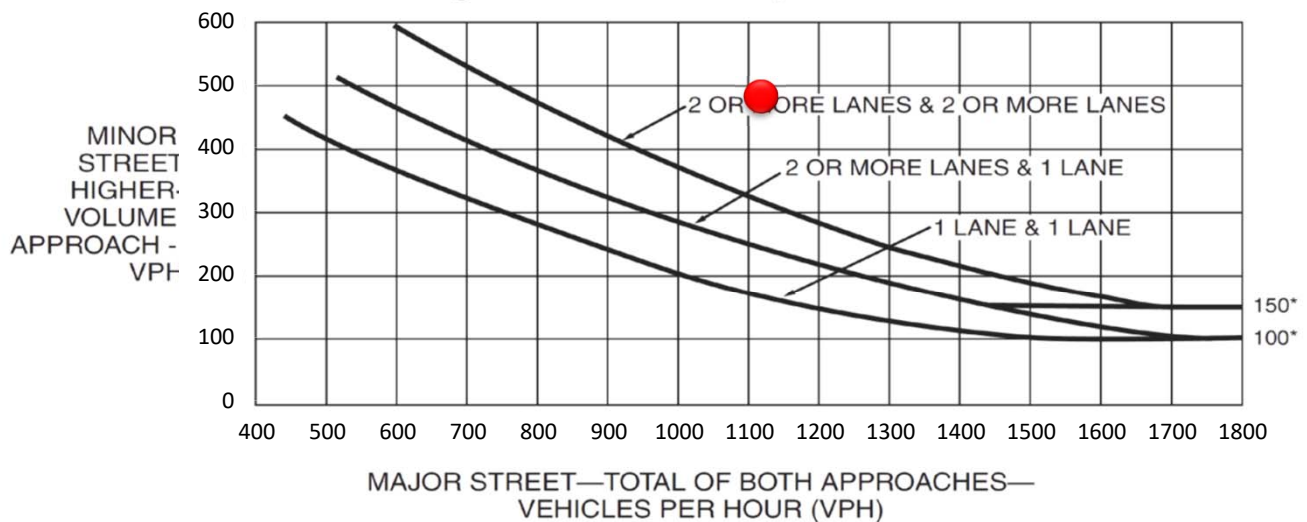
### Part A

|   |   | Criteria Met? |
|---|---|---------------|
| 1 | Minor St approach total stopped time delay                      | YES           |
| 2 | Volume on the same minor street approach (one directional only) | YES           |
| 3 | Total volume entering the intersection during the peak hour     | YES           |

### Part B

| Volume on Major St (Σ of both Approaches) | Volumes on Minor St (higher approach) |
|---|---------------------------------------|
| 1115                                      | 480                                   |

**Figure 4C-3. Warrant 3, Peak Hour**



\*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Does the Intersection Meet Peak Hour Signal Warrants?: |     |
|--|-----|
| PART A   | YES |
| PART B   | YES |

## **APPENDIX H**























### **HORIZON YEAR 2042 WITH PROJECT INTERSECTION OPERATIONS WITH RECOMMENDED IMPROVEMENTS ANALYSIS WORKSHEETS**

# HCM 6th Signalized Intersection Summary

## 2: 6th Street & Kern St/Highway 33

Horizon Year 2042 AM With Improvements

05/09/2022

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 133   | 382   | 40  | 47  | 412   | 76  | 57  | 296   | 61  | 84  | 260   | 147   |
| Future Volume (veh/h)        | 133   | 382   | 40  | 47  | 412   | 76  | 57  | 296   | 61  | 84  | 260   | 147   |
| 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  |   | 0.99  | 1.00  |   | 0.97  | 1.00  |   | 0.98  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| 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         | 182   | 523   | 55  | 64  | 564   | 104   | 78  | 405   | 84  | 115   | 356   | 201   |
| 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                   | 212   | 924   | 97  | 129   | 714   | 131   | 139   | 530   | 434   | 154   | 545   | 453   |
| Arrive On Green              | 0.12  | 0.28  | 0.28  | 0.07  | 0.24  | 0.24  | 0.08  | 0.28  | 0.28  | 0.09  | 0.29  | 0.29  |
| Sat Flow, veh/h              | 1781  | 3244  | 340   | 1781  | 2994  | 550   | 1781  | 1870  | 1534  | 1781  | 1870  | 1554  |
| Grp Volume(v), veh/h         | 182   | 286   | 292   | 64  | 334   | 334   | 78  | 405   | 84  | 115   | 356   | 201   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777  | 1807  | 1781  | 1777  | 1767  | 1781  | 1870  | 1534  | 1781  | 1870  | 1554  |
| Q Serve(g_s), s              | 8.7   | 11.9  | 11.9  | 3.0   | 15.3  | 15.4  | 3.7   | 17.1  | 3.6   | 5.5   | 14.4  | 9.1   |
| Cycle Q Clear(g_c), s        | 8.7   | 11.9  | 11.9  | 3.0   | 15.3  | 15.4  | 3.7   | 17.1  | 3.6   | 5.5   | 14.4  | 9.1   |
| Prop In Lane                 | 1.00  |   | 0.19  | 1.00  |   | 0.31  | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h       | 212   | 506   | 515   | 129   | 424   | 422   | 139   | 530   | 434   | 154   | 545   | 453   |
| V/C Ratio(X)                 | 0.86  | 0.56  | 0.57  | 0.50  | 0.79  | 0.79  | 0.56  | 0.76  | 0.19  | 0.75  | 0.65  | 0.44  |
| Avail Cap(c_a), veh/h        | 212   | 577   | 587   | 189   | 554   | 551   | 165   | 672   | 551   | 165   | 672   | 558   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 37.4  | 26.4  | 26.4  | 38.6  | 30.9  | 30.9  | 38.5  | 28.4  | 23.5  | 38.6  | 26.8  | 25.0  |
| Incr Delay (d2), s/veh       | 27.9  | 1.0   | 1.0   | 2.9   | 5.6   | 5.9   | 3.5   | 4.0   | 0.2   | 15.8  | 1.6   | 0.7   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 5.3   | 4.9   | 5.1   | 1.4   | 6.9   | 6.9   | 1.7   | 7.9   | 1.3   | 3.0   | 6.4   | 3.3   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 65.4  | 27.4  | 27.4  | 41.5  | 36.5  | 36.8  | 41.9  | 32.4  | 23.7  | 54.5  | 28.4  | 25.6  |
| LnGrp LOS                    | E   | C   | C   | D   | D   | D   | D   | C   | C   | D   | C   | C   |
| Approach Vol, veh/h          | 760   |   |   | 732   |   |   | 567   |   |   | 672   |   |   |
| Approach Delay, s/veh        | 36.5  |   |   | 37.1  |   |   | 32.4  |   |   | 32.1  |   |   |
| Approach LOS                 | D   |   |   | D   |   |   | C   |   |   | C   |   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 12.2  | 30.9  | 12.0  | 31.5  | 11.5  | 31.6  | 16.0  | 27.5  |   |   |   |   |
| Change Period (Y+Rc), s      | * 4.7   | 6.4   | * 5.7   | 6.8   | * 4.7   | 6.4   | * 5.7   | 6.8   |   |   |   |   |
| Max Green Setting (Gmax), s  | * 8   | 31.1  | * 9.2   | 28.1  | * 8   | 31.1  | * 10  | 27.0  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 7.5   | 19.1  | 5.0   | 13.9  | 5.7   | 16.4  | 10.7  | 17.4  |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 2.1   | 0.0   | 2.9   | 0.0   | 2.4   | 0.0   | 2.8   |   |   |   |   |

### Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 34.7 |
| HCM 6th LOS        | C    |





















### Notes

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

# HCM 6th Signalized Intersection Summary 3: 4th Street & Kern St/Highway 33

Horizon Year 2042 AM With Improvements


05/09/2022

|  |  |  |  |  |  |  |   |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |  |  |   |  |  |   |  |  |   |  |  |   |
| Traffic Volume (veh/h)   | 92  | 318   | 54  | 47  | 345   | 55  | 91  | 248   | 53  | 81  | 263   | 84  |
| Future Volume (veh/h)  | 92  | 318   | 54  | 47  | 345   | 55  | 91  | 248   | 53  | 81  | 263   | 84  |
| 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  |   | 0.97  | 1.00  |   | 0.99  | 1.00  |   | 0.99  |
| 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   | 116   | 403   | 68  | 59  | 437   | 70  | 115   | 314   | 67  | 103   | 333   | 106   |
| Peak Hour Factor   | 0.79  | 0.79  | 0.79  | 0.79  | 0.79  | 0.79  | 0.79  | 0.79  | 0.79  | 0.79  | 0.79  | 0.79  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 169   | 639   | 107   | 132   | 580   | 92  | 168   | 457   | 98  | 164   | 412   | 131   |
| Arrive On Green  | 0.09  | 0.21  | 0.21  | 0.07  | 0.19  | 0.19  | 0.09  | 0.31  | 0.31  | 0.09  | 0.30  | 0.30  |
| Sat Flow, veh/h  | 1781  | 3042  | 509   | 1781  | 3056  | 486   | 1781  | 1491  | 318   | 1781  | 1356  | 432   |
| Grp Volume(v), veh/h   | 116   | 234   | 237   | 59  | 253   | 254   | 115   | 0   | 381   | 103   | 0   | 439   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1777  | 1774  | 1781  | 1777  | 1765  | 1781  | 0   | 1810  | 1781  | 0   | 1788  |
| Q Serve(g_s), s  | 4.9   | 9.3   | 9.4   | 2.5   | 10.4  | 10.6  | 4.8   | 0.0   | 14.3  | 4.3   | 0.0   | 17.6  |
| Cycle Q Clear(g_c), s  | 4.9   | 9.3   | 9.4   | 2.5   | 10.4  | 10.6  | 4.8   | 0.0   | 14.3  | 4.3   | 0.0   | 17.6  |
| Prop In Lane   | 1.00  |   | 0.29  | 1.00  |   | 0.28  | 1.00  |   | 0.18  | 1.00  |   | 0.24  |
| Lane Grp Cap(c), veh/h   | 169   | 373   | 373   | 132   | 337   | 335   | 168   | 0   | 555   | 164   | 0   | 543   |
| V/C Ratio(X)   | 0.69  | 0.63  | 0.64  | 0.45  | 0.75  | 0.76  | 0.68  | 0.00  | 0.69  | 0.63  | 0.00  | 0.81  |
| Avail Cap(c_a), veh/h  | 237   | 495   | 494   | 204   | 463   | 460   | 237   | 0   | 831   | 214   | 0   | 798   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 0.00  | 1.00  | 1.00  | 0.00  | 1.00  |
| Uniform Delay (d), s/veh   | 34.0  | 27.9  | 27.9  | 34.4  | 29.7  | 29.7  | 34.0  | 0.0   | 23.6  | 33.9  | 0.0   | 24.9  |
| Incr Delay (d2), s/veh   | 4.9   | 1.7   | 1.8   | 2.3   | 4.4   | 4.9   | 4.8   | 0.0   | 1.5   | 3.9   | 0.0   | 3.9   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 2.3   | 3.9   | 4.0   | 1.1   | 4.6   | 4.7   | 2.3   | 0.0   | 6.2   | 2.0   | 0.0   | 7.8   |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 38.9  | 29.6  | 29.7  | 36.7  | 34.1  | 34.6  | 38.8  | 0.0   | 25.1  | 37.9  | 0.0   | 28.8  |
| LnGrp LOS  | D   | C   | C   | D   | C   | C   | D   | A   | C   | D   | A   | C   |
| Approach Vol, veh/h  |   | 587   |   |   | 566   |   |   | 496   |   |   | 542   |   |
| Approach Delay, s/veh  |   | 31.5  |   |   | 34.6  |   |   | 28.3  |   |   | 30.5  |   |
| Approach LOS   |   | C   |   |   | C   |   |   | C   |   |   | C   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 12.8  | 30.2  | 11.5  | 23.1  | 13.0  | 30.0  | 13.0  | 21.5  |   |   |   |   |
| Change Period (Y+Rc), s  | * 5.7   | 6.4   | * 5.7   | 6.8   | * 5.7   | 6.4   | * 5.7   | 6.8   |   |   |   |   |
| Max Green Setting (Gmax), s  | * 9.3   | 35.6  | * 8.9   | 21.6  | * 10  | 34.6  | * 10  | 20.2  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 6.3   | 16.3  | 4.5   | 11.4  | 6.8   | 19.6  | 6.9   | 12.6  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 2.4   | 0.0   | 1.9   | 0.1   | 2.6   | 0.1   | 1.8   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 31.3  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | C   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

**Intersection Level Of Service Report**  
**Intersection 4: Kern Street (SR-33) / 1st Street**

|                  |                 |                           |       |
|------------------|-----------------|---------------------------|-------|
| Control Type:    | All-way stop    | Delay (sec / veh):        | 12.3  |
| Analysis Method: | HCM 6th Edition | Level Of Service:         | B     |
| Analysis Period: | 15 minutes      | Volume to Capacity (v/c): | 0.399 |

**Intersection Setup**

| Name                         | 1st Street  |        |        |        | 1st Street  |        |        |        | Kern Street (SR-33)   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Northbound  |        |        |        | Southbound  |        |        |        | Eastbound   |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |  |        |        |        |
| Turning Movement             | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | 1st Street |        |        |        | 1st Street |        |        |        | Kern Street (SR-33) |        |        |        |
|---|------------|--------|--------|--------|------------|--------|--------|--------|---------------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 40         | 10     | 20     | 10     | 10         | 10     | 28     | 37     | 24                  | 136    | 143    | 60     |
| Base Volume Adjustment Factor           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00       | 2.00   | 0.00   | 2.00   | 0.00       | 2.00   | 2.00   | 2.00   | 2.00                | 0.00   | 2.00   | 2.00   |
| Growth Factor                           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 40         | 10     | 20     | 10     | 10         | 10     | 28     | 37     | 24                  | 136    | 143    | 60     |
| Peak Hour Factor                        | 0.8700     | 0.8700 | 0.8700 | 0.8700 | 0.8700     | 0.8700 | 0.8700 | 0.8700 | 0.8700              | 0.8700 | 0.8700 | 0.8700 |
| Other Adjustment Factor                 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 11         | 3      | 6      | 3      | 3          | 3      | 8      | 11     | 7                   | 39     | 41     | 17     |
| Total Analysis Volume [veh/h]           | 46         | 11     | 23     | 11     | 11         | 11     | 32     | 43     | 28                  | 156    | 164    | 69     |
| Pedestrian Volume [ped/h]               | 0          |        |        |        | 0          |        |        |        | 0                   |        |        |        |



**Intersection Settings****Lanes**

|                                 |      |      |      |      |
|---------------------------------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 496  | 550  | 523  | 579  |
| Degree of Utilization, x        | 0.18 | 0.18 | 0.40 | 0.36 |

**Movement, Approach, & Intersection Results**

|                                    |       |       |       |       |
|------------------------------------|-------|-------|-------|-------|
| 95th-Percentile Queue Length [veh] | 0.67  | 0.64  | 1.90  | 1.63  |
| 95th-Percentile Queue Length [ft]  | 16.63 | 15.88 | 47.43 | 40.84 |
| Approach Delay [s/veh]             | 11.88 | 10.94 | 13.23 |       |
| Approach LOS                       | B     | B     | B     |       |
| Intersection Delay [s/veh]         | 12.29 |       |       |       |
| Intersection LOS                   | B     |       |       |       |

**Intersection Setup**

| Name                         | Kern Street (SR-33)   |        |        |        | E Kern Street   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Westbound   |        |        |        | Southwestbound  |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |
| Turning Movement             | Left  | Thru   | Right  | Right2 | Left  | Thru   | Right  | Right2 |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | Kern Street (SR-33) |        |        |        | E Kern Street |        |        |        |
|---|---------------------|--------|--------|--------|---------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 12                  | 114    | 10     | 10     | 10            | 43     | 172    | 10     |
| Base Volume Adjustment Factor           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00                | 2.00   | 2.00   | 0.00   | 0.00          | 0.00   | 0.00   | 0.00   |
| Growth Factor                           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 12                  | 114    | 10     | 10     | 10            | 43     | 172    | 10     |
| Peak Hour Factor                        | 0.8700              | 0.8700 | 0.8700 | 0.8700 | 0.8700        | 0.8700 | 0.8700 | 0.8700 |
| Other Adjustment Factor                 | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 3                   | 33     | 3      | 3      | 3             | 12     | 49     | 3      |
| Total Analysis Volume [veh/h]           | 14                  | 131    | 11     | 11     | 11            | 49     | 198    | 11     |
| Pedestrian Volume [ped/h]               | 0                   |        |        |        | 0             |        |        |        |



**Intersection Settings****Lanes**

|                                 |      |      |      |
|---------------------------------|------|------|------|
| Capacity per Entry Lane [veh/h] | 524  | 554  | 586  |
| Degree of Utilization, x        | 0.32 | 0.24 | 0.23 |

**Movement, Approach, & Intersection Results**

|                                    |       |       |       |
|------------------------------------|-------|-------|-------|
| 95th-Percentile Queue Length [veh] | 1.36  | 0.94  | 0.88  |
| 95th-Percentile Queue Length [ft]  | 34.11 | 23.60 | 21.99 |
| Approach Delay [s/veh]             | 13.07 | 10.96 |       |
| Approach LOS                       | B     | B     |       |
| Intersection Delay [s/veh]         | 12.29 |       |       |
| Intersection LOS                   | B     |       |       |

# HCM 6th Signalized Intersection Summary 2: 6th Street & Kern St/Highway 33

Horizon Year 2042 PM With Improvements

05/09/2022

| Movement                     | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|-------|------|-------|------|-------|------|------|------|------|------|
| Lane Configurations          |       |      |       |      |       |      |       |      |      |      |      |      |
| Traffic Volume (veh/h)       | 131   | 412  | 49    | 65   | 377   | 81   | 58    | 188  | 66   | 71   | 256  | 153  |
| Future Volume (veh/h)        | 131   | 412  | 49    | 65   | 377   | 81   | 58    | 188  | 66   | 71   | 256  | 153  |
| 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 |       | 0.99 | 1.00  |      | 0.98 | 1.00 |      | 0.99 |
| 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         | 147   | 463  | 55    | 73   | 424   | 91   | 65    | 211  | 74   | 80   | 288  | 172  |
| 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, %         | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 198   | 763  | 90    | 158  | 628   | 134  | 149   | 430  | 356  | 164  | 446  | 374  |
| Arrive On Green              | 0.11  | 0.24 | 0.24  | 0.09 | 0.22  | 0.22 | 0.08  | 0.23 | 0.23 | 0.09 | 0.24 | 0.24 |
| Sat Flow, veh/h              | 1781  | 3198 | 378   | 1781 | 2911  | 620  | 1781  | 1870 | 1546 | 1781 | 1870 | 1567 |
| Grp Volume(v), veh/h         | 147   | 256  | 262   | 73   | 257   | 258  | 65    | 211  | 74   | 80   | 288  | 172  |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777 | 1799  | 1781 | 1777  | 1754 | 1781  | 1870 | 1546 | 1781 | 1870 | 1567 |
| Q Serve(g_s), s              | 5.4   | 8.6  | 8.7   | 2.6  | 8.9   | 9.1  | 2.3   | 6.6  | 2.6  | 2.9  | 9.3  | 6.3  |
| Cycle Q Clear(g_c), s        | 5.4   | 8.6  | 8.7   | 2.6  | 8.9   | 9.1  | 2.3   | 6.6  | 2.6  | 2.9  | 9.3  | 6.3  |
| Prop In Lane                 | 1.00  |      | 0.21  | 1.00 |       | 0.35 | 1.00  |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 198   | 424  | 429   | 158  | 383   | 378  | 149   | 430  | 356  | 164  | 446  | 374  |
| V/C Ratio(X)                 | 0.74  | 0.60 | 0.61  | 0.46 | 0.67  | 0.68 | 0.44  | 0.49 | 0.21 | 0.49 | 0.65 | 0.46 |
| Avail Cap(c_a), veh/h        | 273   | 729  | 738   | 257  | 713   | 704  | 212   | 864  | 715  | 212  | 864  | 724  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 29.0  | 22.8 | 22.8  | 29.1 | 24.2  | 24.3 | 29.3  | 22.5 | 20.9 | 29.0 | 23.1 | 21.9 |
| Incr Delay (d2), s/veh       | 6.8   | 1.4  | 1.4   | 2.1  | 2.0   | 2.2  | 2.0   | 0.9  | 0.3  | 2.2  | 1.6  | 0.9  |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.5   | 3.5  | 3.6   | 1.2  | 3.7   | 3.7  | 1.0   | 2.8  | 0.9  | 1.3  | 4.0  | 2.2  |
| Unsig. Movement Delay, s/veh |       |      |       |      |       |      |       |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 35.8  | 24.2 | 24.2  | 31.3 | 26.2  | 26.4 | 31.3  | 23.3 | 21.2 | 31.3 | 24.6 | 22.8 |
| LnGrp LOS                    | D     | C    | C     | C    | C     | C    | C     | C    | C    | C    | C    | C    |
| Approach Vol, veh/h          |       | 665  |       |      | 588   |      |       | 350  |      |      | 540  |      |
| Approach Delay, s/veh        |       | 26.8 |       |      | 26.9  |      |       | 24.4 |      |      | 25.0 |      |
| Approach LOS                 |       | C    |       |      | C     |      |       | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1     | 2    | 3     | 4    | 5     | 6    | 7     | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.9  | 21.9 | 11.7  | 22.8 | 10.3  | 22.5 | 13.2  | 21.3 |      |      |      |      |
| Change Period (Y+Rc), s      | * 4.7 | 6.4  | * 5.7 | 6.8  | * 4.7 | 6.4  | * 5.7 | 6.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | * 8   | 31.1 | * 9.7 | 27.6 | * 8   | 31.1 | * 10  | 27.0 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 4.9   | 8.6  | 4.6   | 10.7 | 4.3   | 11.3 | 7.4   | 11.1 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0   | 1.4  | 0.1   | 2.8  | 0.0   | 2.1  | 0.1   | 2.7  |      |      |      |      |

## Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 26.0 |
| HCM 6th LOS        | C    |





















## Notes

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

# HCM 6th Signalized Intersection Summary 3: 4th Street & Kern St/Highway 33

Horizon Year 2042 PM With Improvements


05/09/2022

|  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |  |  |   |  |  |   |  |  |   |  |  |   |
| Traffic Volume (veh/h)   | 74  | 416   | 65  | 69  | 363   | 76  | 84  | 200   | 51  | 89  | 162   | 74  |
| Future Volume (veh/h)  | 74  | 416   | 65  | 69  | 363   | 76  | 84  | 200   | 51  | 89  | 162   | 74  |
| 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   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 84  | 473   | 74  | 78  | 412   | 86  | 95  | 227   | 58  | 101   | 184   | 84  |
| 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, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 171   | 663   | 103   | 166   | 621   | 129   | 180   | 302   | 77  | 184   | 258   | 118   |
| Arrive On Green  | 0.10  | 0.22  | 0.22  | 0.09  | 0.21  | 0.21  | 0.10  | 0.21  | 0.21  | 0.10  | 0.21  | 0.21  |
| Sat Flow, veh/h  | 1781  | 3079  | 479   | 1781  | 2929  | 606   | 1781  | 1437  | 367   | 1781  | 1215  | 555   |
| Grp Volume(v), veh/h   | 84  | 272   | 275   | 78  | 249   | 249   | 95  | 0   | 285   | 101   | 0   | 268   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1777  | 1781  | 1781  | 1777  | 1758  | 1781  | 0   | 1804  | 1781  | 0   | 1770  |
| Q Serve(g_s), s  | 2.9   | 9.2   | 9.3   | 2.7   | 8.3   | 8.5   | 3.3   | 0.0   | 9.6   | 3.5   | 0.0   | 9.1   |
| Cycle Q Clear(g_c), s  | 2.9   | 9.2   | 9.3   | 2.7   | 8.3   | 8.5   | 3.3   | 0.0   | 9.6   | 3.5   | 0.0   | 9.1   |
| Prop In Lane   | 1.00  |   | 0.27  | 1.00  |   | 0.34  | 1.00  |   | 0.20  | 1.00  |   | 0.31  |
| Lane Grp Cap(c), veh/h   | 171   | 382   | 383   | 166   | 377   | 373   | 180   | 0   | 379   | 184   | 0   | 375   |
| V/C Ratio(X)   | 0.49  | 0.71  | 0.72  | 0.47  | 0.66  | 0.67  | 0.53  | 0.00  | 0.75  | 0.55  | 0.00  | 0.71  |
| Avail Cap(c_a), veh/h  | 269   | 618   | 620   | 266   | 615   | 609   | 318   | 0   | 872   | 321   | 0   | 858   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 0.00  | 1.00  | 1.00  | 0.00  | 1.00  |
| Uniform Delay (d), s/veh   | 27.9  | 23.6  | 23.7  | 27.9  | 23.4  | 23.5  | 27.7  | 0.0   | 24.1  | 27.7  | 0.0   | 23.8  |
| Incr Delay (d2), s/veh   | 2.2   | 2.5   | 2.5   | 2.1   | 2.0   | 2.1   | 2.4   | 0.0   | 3.0   | 2.5   | 0.0   | 2.5   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 1.3   | 3.8   | 3.9   | 1.2   | 3.4   | 3.4   | 1.5   | 0.0   | 4.2   | 1.6   | 0.0   | 3.9   |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 30.0  | 26.1  | 26.2  | 30.0  | 25.4  | 25.6  | 30.1  | 0.0   | 27.1  | 30.2  | 0.0   | 26.3  |
| LnGrp LOS  | C   | C   | C   | C   | C   | C   | C   | A   | C   | C   | A   | C   |
| Approach Vol, veh/h  |   | 631   |   |   | 576   |   |   | 380   |   |   | 369   |   |
| Approach Delay, s/veh  |   | 26.7  |   |   | 26.1  |   |   | 27.9  |   |   | 27.4  |   |
| Approach LOS   |   | C   |   |   | C   |   |   | C   |   |   | C   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 12.4  | 20.0  | 11.7  | 20.8  | 12.3  | 20.2  | 11.9  | 20.6  |   |   |   |   |
| Change Period (Y+Rc), s  | * 5.7   | 6.4   | * 5.7   | 6.8   | * 5.7   | 6.4   | * 5.7   | 6.8   |   |   |   |   |
| Max Green Setting (Gmax), s  | * 12  | 31.4  | * 9.7   | 22.6  | * 12  | 31.5  | * 9.8   | 22.5  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 5.5   | 11.6  | 4.7   | 11.3  | 5.3   | 11.1  | 4.9   | 10.5  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 1.7   | 0.1   | 2.4   | 0.1   | 1.6   | 0.1   | 2.3   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 26.9  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | C   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

**Intersection Level Of Service Report**  
**Intersection 4: Kern Street (SR-33) / 1st Street**

|                  |                 |                           |       |
|------------------|-----------------|---------------------------|-------|
| Control Type:    | All-way stop    | Delay (sec / veh):        | 13.9  |
| Analysis Method: | HCM 6th Edition | Level Of Service:         | B     |
| Analysis Period: | 15 minutes      | Volume to Capacity (v/c): | 0.515 |

**Intersection Setup**

| Name                         | 1st Street  |        |        |        | 1st Street  |        |        |        | Kern Street (SR-33)   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Northbound  |        |        |        | Southbound  |        |        |        | Eastbound   |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |  |        |        |        |
| Turning Movement             | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  | Left2   | Left   | Thru   | Right  |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | 1st Street |        |        |        | 1st Street |        |        |        | Kern Street (SR-33) |        |        |        |
|---|------------|--------|--------|--------|------------|--------|--------|--------|---------------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 45         | 10     | 20     | 10     | 10         | 10     | 20     | 27     | 16                  | 233    | 140    | 37     |
| Base Volume Adjustment Factor           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00       | 2.00   | 0.00   | 2.00   | 0.00       | 2.00   | 2.00   | 2.00   | 2.00                | 0.00   | 2.00   | 2.00   |
| Growth Factor                           | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0          | 0      | 0      | 0      | 0          | 0      | 0      | 0      | 0                   | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 45         | 10     | 20     | 10     | 10         | 10     | 20     | 27     | 16                  | 233    | 140    | 37     |
| Peak Hour Factor                        | 0.9400     | 0.9400 | 0.9400 | 0.9400 | 0.9400     | 0.9400 | 0.9400 | 0.9400 | 0.9400              | 0.9400 | 0.9400 | 0.9400 |
| Other Adjustment Factor                 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000     | 1.0000 | 1.0000 | 1.0000 | 1.0000              | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 12         | 3      | 5      | 3      | 3          | 3      | 5      | 7      | 4                   | 62     | 37     | 10     |
| Total Analysis Volume [veh/h]           | 48         | 11     | 21     | 11     | 11         | 11     | 21     | 29     | 17                  | 248    | 149    | 39     |
| Pedestrian Volume [ped/h]               | 0          |        |        |        | 0          |        |        |        | 0                   |        |        |        |



**Intersection Settings****Lanes**

|                                 |      |      |      |      |
|---------------------------------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 482  | 532  | 515  | 566  |
| Degree of Utilization, x        | 0.19 | 0.14 | 0.51 | 0.33 |

**Movement, Approach, & Intersection Results**

|                                    |       |       |       |       |
|------------------------------------|-------|-------|-------|-------|
| 95th-Percentile Queue Length [veh] | 0.69  | 0.47  | 2.91  | 1.45  |
| 95th-Percentile Queue Length [ft]  | 17.23 | 11.64 | 72.78 | 36.23 |
| Approach Delay [s/veh]             | 12.21 | 10.82 | 14.94 |       |
| Approach LOS                       | B     | B     | B     |       |
| Intersection Delay [s/veh]         | 13.92 |       |       |       |
| Intersection LOS                   | B     |       |       |       |

**Intersection Setup**

| Name                         | Kern Street (SR-33)   |        |        |        | E Kern Street   |        |        |        |
|------------------------------|---|--------|--------|--------|---|--------|--------|--------|
| Approach                     | Westbound   |        |        |        | Southwestbound  |        |        |        |
| Lane Configuration           |  |        |        |        |  |        |        |        |
| Turning Movement             | Left  | Thru   | Right  | Right2 | Left  | Thru   | Right  | Right2 |
| Lane Width [ft]              | 12.00   | 12.00  | 12.00  | 12.00  | 12.00   | 12.00  | 12.00  | 12.00  |
| No. of Lanes in Entry Pocket | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Entry Pocket Length [ft]     | 100.00  | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket  | 0   | 0      | 0      | 0      | 0   | 0      | 0      | 0      |
| Exit Pocket Length [ft]      | 0.00  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   |
| Speed [mph]                  | 30.00   |        |        |        | 30.00   |        |        |        |
| Grade [%]                    | 0.00  |        |        |        | 0.00  |        |        |        |
| Crosswalk                    | No  |        |        |        | No  |        |        |        |

**Volumes**

| Name                                    | Kern Street (SR-33) |        |        |        | E Kern Street |        |        |        |
|---|---------------------|--------|--------|--------|---------------|--------|--------|--------|
| Base Volume Input [veh/h]               | 10                  | 204    | 15     | 10     | 10            | 30     | 135    | 10     |
| Base Volume Adjustment Factor           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%]           | 2.00                | 2.00   | 2.00   | 0.00   | 0.00          | 0.00   | 0.00   | 0.00   |
| Growth Factor                           | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h]               | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Site-Generated Trips [veh/h]            | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Diverted Trips [veh/h]                  | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Pass-by Trips [veh/h]                   | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Existing Site Adjustment Volume [veh/h] | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Other Volume [veh/h]                    | 0                   | 0      | 0      | 0      | 0             | 0      | 0      | 0      |
| Total Hourly Volume [veh/h]             | 10                  | 204    | 15     | 10     | 10            | 30     | 135    | 10     |
| Peak Hour Factor                        | 0.9400              | 0.9400 | 0.9400 | 0.9400 | 0.9400        | 0.9400 | 0.9400 | 0.9400 |
| Other Adjustment Factor                 | 1.0000              | 1.0000 | 1.0000 | 1.0000 | 1.0000        | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h]          | 3                   | 54     | 4      | 3      | 3             | 8      | 36     | 3      |
| Total Analysis Volume [veh/h]           | 11                  | 217    | 16     | 11     | 11            | 32     | 144    | 11     |
| Pedestrian Volume [ped/h]               | 0                   |        |        |        | 0             |        |        |        |

**Intersection Settings****Lanes**

|                                 |      |      |      |
|---------------------------------|------|------|------|
| Capacity per Entry Lane [veh/h] | 530  | 524  | 553  |
| Degree of Utilization, x        | 0.48 | 0.19 | 0.18 |

**Movement, Approach, & Intersection Results**

|                                    |       |       |       |
|------------------------------------|-------|-------|-------|
| 95th-Percentile Queue Length [veh] | 2.59  | 0.69  | 0.65  |
| 95th-Percentile Queue Length [ft]  | 64.79 | 17.25 | 16.17 |
| Approach Delay [s/veh]             | 15.95 | 10.90 |       |
| Approach LOS                       | C     | B     |       |
| Intersection Delay [s/veh]         | 13.92 |       |       |
| Intersection LOS                   | B     |       |       |