



## Memorandum

**To:** Mr. Charles Davidson, Catapult Real Estate  
**From:** Bill Grieve, P.E., PTOE  
**Date:** August 30, 2024  
**Re:** **Traffic Impact Study – 912 Custer Avenue Residential Development, Evanston, Illinois**

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### Project Context and Summary Statement

Fish Transportation Group, Inc. (FTG) has conducted a Traffic Impact Study (TIS) for the above captioned project. The site is located at 912 Custer Avenue, which is currently a light industrial building approximately 350 feet north of Main Street on the west side of Custer Avenue. As proposed, the 5-story residential building would have 228 multi-family units, and 50 outdoor at-grade parking spaces split between two parking lots, one 12-space lot to the north of the building and one 38-space to the south of the building.

Access to the south parking lot is provided via a full access driveway at Custer Avenue. Access to the north parking lot is also provided via a full access driveway at Custer Avenue, as well as a connection to the public alleyway that wraps the building on the west and south sides and provides connection to both Custer Avenue and Sherman Avenue via a public parking lot. Furthermore, a drop-off/pick-up zone will be provided via a porte cochere that has one-way counter-clockwise circulation with its entrance off Custer Avenue and exit into the south parking. Main Street, Sherman Avenue, and Custer Avenue are all under the City of Evanston jurisdiction.

The following summarizes our TIS findings and provides various recommendations for your consideration. *Exhibits* and *Appendices* referenced are centrally located at the end of this document. Briefly summarizing, we believe that the development traffic can be accommodated on the adjacent streets. Reasons include:

- The site is served well by all modes of transportation, including major streets and Pace bus route 213. Additionally, the development is located within a very short walk, about 300 feet, of both the CTA Purple Line Main Street stop and the Metra Union Pacific North (UP-N) Main Street stop.
- Per US Census data, the mixed-use development could generate a significant portion of non-auto trips, approximately 30%.
- Based on the analysis, development traffic should have a limited impact on current operations along Main Street, Custer Avenue, and Sherman Avenue and at their intersections.

**Key Conclusion.** This redevelopment project is an excellent example of the revitalization the City of Evanston is promoting along the Main Street corridor. It nicely complements the Tapestry apartments that have recently opened on the former Vogue Fabrics site.

## **Background Information**

**Exhibit 1** provides a site location map, **Exhibit 2A** depicts the existing roadway characteristics, while **Exhibit 2B** outlines the parking/curbside operations within the study area. Pertinent comments regarding land-uses in the site vicinity and transportation components, both vehicular and non-auto mobility include:

### ***Roadway Inventory***

#### Main Street

- Main Street is an east-west route and is under the jurisdiction of the City of Evanston.
- Main Street is classified as a “Major Collector” on the Illinois Department of Transportation (IDOT) functional classification map, with a posted speed limit of 25-miles per hour (mph).
- Main Street is currently under construction in the site vicinity. Planned improvements include enhanced pedestrian crossings at Sherman Avenue and mid-block between Sherman Avenue and Custer Avenue.

#### Sherman Avenue

- Sherman Avenue is a north-south local route and is under the jurisdiction of the City of Evanston.
- Sherman Avenue has a posted speed limit of 25-mph.

#### Custer Avenue

- Custer Avenue is a north-south local route and is under the jurisdiction of the City of Evanston.
- Custer Avenue has a posted speed limit of 25-mph.

#### Public Alleyway

- The public alleyway is located immediately west and south of the Site and provides access to Custer Avenue and Sherman Avenue via a public parking lot maintained by the City of Evanston.
- The public alleyway is approximately 20-feet wide and operates with two-way circulation.

#### Non-Motorized Mobility

- Pace operates bus route #213 along Chicago Avenue with stops at the intersection of Main Street. Additionally, Pace operates bus routes #201 and #206 along Ridge Avenue, with stops at Main Street.
- Pedestrian crosswalks are striped on all major approaches at each study area intersection.
- Sidewalks are provided on both sides of the street for all streets in the site vicinity, with the exception of the east side of Custer Avenue due to the railroad tracks.
- Main Street and Sherman Avenue are both signed bicycle routes.
- The CTA Purple Line runs parallel to Chicago Avenue with its Main Street stop about 500-600 feet southeast of the site.
- The Metra UP-N line runs parallel to Custer Avenue and has its Main Street stop located about 300 feet southeast of the site.

*Discussion Point.* The Main Street reconstruction and beatification project will enhance pedestrian mobility throughout the corridor, encouraging more non-auto trips to restaurants and local shops.

## Project Traffic Characteristics

### Existing Traffic

Due to construction along Main Street, no new traffic data was collected for this study. However, Gewalt Hamilton Associates (GHA) completed a TIS dated December 2, 2020, for the Vouge Fabrics mixed-use development at 718 Main Street. Additionally, Kenig, Lindgren, O’Hara, Aboona, Inc. (KLOA) completed a TIS dated November 16, 2018, (pre-Covid) for a then proposed townhome development at the same property as this development. FTG referenced both the GHA and KLOA TIS’s and utilized the 2024 full build-out, or “total”, traffic volumes as the baseline existing traffic volumes for this report. It should be noted the traffic associated with the previously proposed townhome development The existing traffic volumes are depicted on **Exhibit 3**.

### Crash Analysis

Crash data was obtained from the IDOT Division of Transportation and Safety for the last five calendar years, 2019 through 2023. A summary of the crash data is provided in **Table 1** with the locations mapped on the exhibit contained in Appendix.

**Table 1. Crash Summary (2019-2023) <sup>A</sup>**

| Location   | No. of Crashes | Severity <sup>B</sup> |                 |          |          |          | Crash Type <sup>D</sup> |          |          |          |          |          | Percent During Wet/Icy Conditions |
|--|----------------|-----------------------|-----------------|----------|----------|----------|-------------------------|----------|----------|----------|----------|----------|-----------------------------------|
|  |                | PD                    | PI <sup>C</sup> |          |          | F        | CM                      | FTR      | PMV      | SSD      | FO       | Ped      |                                   |
|  |                |                       | A               | B        | C        |          |                         |          |          |          |          |          |                                   |
| <b>Intersections - Crashes within 200' of intersection</b> |                |                       |                 |          |          |          |                         |          |          |          |          |          |                                   |
| Sherman Ave / Lee St                                       | 1              | 1                     | -               | -        | -        | -        | -                       | -        | -        | 1        | -        | -        | 0%                                |
| Sherman Ave / Main St                                      | 7              | 7                     | -               | -        | -        | -        | 2                       | 3        | 2        | -        | -        | -        | 14%                               |
| Main St / Custer Ave                                       | 5              | 2                     |                 | 1        | 2        |          |                         |          | 1        | 1        | 2        | 1        | 20%                               |
| <b>Segments</b>  |                |                       |                 |          |          |          |                         |          |          |          |          |          |                                   |
| Along Main St between Sherman Ave and Custer Ave           | 4              | 3                     | -               | -        | 1        | -        | -                       | -        | 2        | 1        | 1        | -        | 0%                                |
| Along Sherman Ave between Main St and Lee St               | 2              | 2                     | -               | -        | -        | -        | -                       | -        | 2        | -        | -        | -        | 0%                                |
| Along Custer Ave north of Main St                          | 3              | 3                     | -               | -        | -        | -        | -                       | -        | 3        | -        | -        | -        | 33%                               |
| <b>Total (2019-23)</b>                                     | <b>17</b>      | <b>13</b>             | <b>0</b>        | <b>1</b> | <b>3</b> | <b>0</b> | <b>2</b>                | <b>3</b> | <b>5</b> | <b>3</b> | <b>3</b> | <b>1</b> | <b>12%</b>                        |

<sup>A</sup> Source: IDOT Division of Transportation Safety for the 2019-2023 calendar years.

<sup>B</sup> PD = property damage only; PI = personal injury; F = fatality.

<sup>C</sup> Type A (incapacitating injury); Type B (non-incapacitating injury); Type C (possible injury).

<sup>D</sup> CM = cross movement/angle; FTR = front to rear; RTF = rear to front; PMV = Parked Motor Vehicle; SSD = Sideswipe Same Direction; FO = fixed object; Ped = pedestrian.

As shown in Table 1, the intersection of Main Street and Sherman Avenue has experienced the highest number of crashes within the study area over the five-year analyses period, with an average of approximately one-two crashes per year. 100 percent (7 of 7) of the crashes involved property damage only and approximately 43 percent (3 of 7) were rear-end type crashes within 200 feet of the intersection. There was one crash at the Main Street and Custer Avenue intersection over the five-year analysis period that involved a pedestrian.

## Project Traffic Characteristics

### Site Plan

Per the site plan prepared by Catapult Real Estate Solutions + City Pads dated February 14, 2024, which is provided in the appendix, the existing light industrial building approximately 350 feet north of Main Street on the west side of Custer Avenue is to be razed. A 5-story 228-unit multifamily residential building would replace it. This development is planned to provide 50 outdoor at-grade parking spaces split between two parking lots, one 12-space lot to the north of the building and one 38-space to the south of the building.

Access to the south parking lot is provided via a full access driveway at Custer Avenue. Access to the north parking lot is also provided via a full access driveway at Custer Avenue, as well as a connection to the public alleyway that wraps the building on the west and south sides and provides connection to both Custer Avenue and Sherman Avenue via a public parking lot maintained by the City of Evanston. A drop-off/pick-up zone will be provided via a porte cochere that has one-way counter-clockwise circulation with its entrance off Custer Avenue and exit into the south parking.

### Traffic Generation and Trip Distribution

In order to calculate the trips generated by the proposed site, data was referenced from the Institute of Transportation Engineers (ITE) manual titled Trip Generation, Eleventh Edition. Trip generation rates for the ITE Land Use Code (LUC) corresponding to the proposed redevelopment uses are shown in **Table 2**.

*Discussion Pint.* ITE LUC 221 – Multifamily Housing (Mid-Rise) – Not Close to Rail Transit was chosen despite this development being located with 1/4-mile of multiple rail transit stops. **This was done to provide a conservative analysis scenario.** A copy of the ITE data is provided in the appendix.

**Table 2. ITE Trip Generation Data**

| ITE Land Use   | Unit (X)          | Weekday                            |                                    |                                   |
|--|-------------------|------------------------------------|------------------------------------|-----------------------------------|
|  |                   | Daily                              | AM Peak Hour                       | PM Peak Hour                      |
| Multifamily Housing (Mid-Rise) – Not Close to Rail Transit | Per Dwelling Unit | T= 4.77(X)-46.46<br>50% in/50% out | T= 0.44(X)-11.61<br>23% in/77% out | T= 0.39(X)+0.34<br>61% in/39% out |

T = number of trips                      X=Dwelling Units

Based on the ITE data, site-generated traffic projections for the proposed redevelopment are displayed in **Table 3**.

**Table 3. Site-Generated Traffic Projections**

| Land Use                       | Size      | Daily <sup>1</sup> | Weekday      |           |           |              |           |           |
|--------------------------------|-----------|--------------------|--------------|-----------|-----------|--------------|-----------|-----------|
|                                |           |                    | AM Peak Hour |           |           | PM Peak Hour |           |           |
|                                |           |                    | In           | Out       | Total     | In           | Out       | Total     |
| Multifamily Housing (Mid-Rise) | 228 Units | 1,040              | 20           | 69        | 89        | 54           | 35        | 89        |
| <b>Net New Site Trips</b>      |           | <b>1,040</b>       | <b>20</b>    | <b>69</b> | <b>89</b> | <b>54</b>    | <b>35</b> | <b>89</b> |

<sup>1</sup>In/Out volumes are rounded to the nearest multiple of ten.

It should be noted the trip generations do not reflect the various non-auto travel mode alternatives that are in abundance near 912 Custer Avenue. US Census data for census tracts surrounding the site indicate that about 30% of trips are non-auto oriented. This is due to the close proximity of the CTA Purple Line, Metra UP-N Line, Pace bus routes, and signed bicycle routes. No reduction to the trips was applied in order to provide a conservative analysis scenario.

The estimated distribution of site-generated traffic on the surrounding roadway network as it approaches and departs the site is a function of several variables, such as the nature of the surrounding land uses, prevailing traffic volumes/patterns, characteristics of the street system. The anticipated directional distributions are outlined in **Table 4**.

**Table 4. Estimated Trip Distribution**

| Traveling to/from       | Estimated Trip Distribution |
|-------------------------|-----------------------------|
| North on Sherman Avenue | 15%                         |
| South on Sherman Avenue | 5%                          |
| West of Main Street     | 35%                         |
| East on Main Street     | 40%                         |
| South on Custer Avenue  | 5%                          |
| Total                   | 100%                        |

## Traffic Evaluation

### *Traffic Assignments*

Site traffic was assigned to the adjacent streets based on the project characteristics (see Tables 3-4) and is illustrated in **Exhibit 4**.

### *Future Background (without Multifamily) Traffic Projections*

Background traffic volumes unassociated with any planned development in the area were estimated using data referenced from the KLOA TIS provided by the Chicago Metropolitan Agency for Planning (CMAP). Based on the information from the KLOA TIS, an annual compounded growth rate of 0.5% was applied to the entire study area for a period of 5-years (2030) after construction of the development, which is assumed to be completed in 2025. This represents a build plus five-years scenario, which is consistent with Illinois Department of Transportation guidelines. Future Background (without Multifamily) Traffic Projections for 2030 are presented in **Exhibit 5**.

### *Future (with Multifamily) Traffic Projections*

To develop Future (with Multifamily) Traffic Projections, site-generated traffic (Exhibit 4) was added to the Future Background (without Multifamily) Traffic Projections (Exhibit 5). The resulting Future (with Multifamily) Traffic Projections for 2030 are illustrated in **Exhibit 6**.

### *Intersection Capacity and Queue Analysis*

Capacity analyses were conducted to assess conditions at the study intersections during the weekday peak hours. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from

A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The lowest LOS grade typically accepted by jurisdictional transportation agencies in Northeastern Illinois is LOS D.

The LOS grades shown below, which are provided in the Transportation Research Board’s Highway Capacity Manual (HCM), quantify and categorize the driver’s discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 5**.

**Table 5. Level of Service Grading Descriptions<sup>1</sup>**

| Level of Service | Description  |
|------------------|--|
| A                | Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.                                   |
| B                | Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream. |
| C                | Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.  |
| D                | Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.                 |
| E                | High control delay; average travel speed no more than 33 percent of free flow speed.   |
| F                | Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.   |

<sup>1</sup>Highway Capacity Manual, 6th Edition.

The range of control delay for each rating (as detailed in the HCM) is shown in **Table 6**. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, note that higher delays are tolerated for the corresponding LOS ratings.

**Table 6. Level of Service Grading Criteria<sup>1</sup>**

| Level of Service | Average Control Delay (s/veh) at: |                          |
|------------------|-----------------------------------|--------------------------|
|                  | Unsignalized Intersections        | Signalized Intersections |
| A                | 0 – 10                            | 0 – 10                   |
| B                | > 10 – 15                         | > 10 – 20                |
| C                | > 15 – 25                         | > 20 – 35                |
| D                | > 25 – 35                         | > 35 – 55                |
| E                | > 35 – 50                         | > 55 – 80                |
| F <sup>2</sup>   | > 50                              | > 80                     |

<sup>1</sup>Highway Capacity Manual, 6<sup>th</sup> Edition

<sup>2</sup>All movements with a Volume to Capacity (v/C) ratio greater than 1 receive a rating of LOS F.

Based on these standards, capacity results were identified for the study intersections under existing and future conditions on the following pages.

The results of the capacity analysis for existing conditions are summarized in **Table 7**. In this table, operation on each approach is quantified according to the average delay per vehicle and the corresponding level of service. The results are based on Synchro’s HCM 7th Edition. Copies of the Synchro reports are provided in the appendix.

**Table 7. Existing (2024) Levels of Service**

| Intersection                    | Weekday AM Peak |          | Weekday PM Peak |          |
|---------------------------------|-----------------|----------|-----------------|----------|
|                                 | Delay (s/veh)   | LOS      | Delay (s/veh)   | LOS      |
| Sherman Avenue / Alley          | △               |          |                 |          |
| Westbound                       | 10+             | B        | 10-             | A        |
| Sherman Avenue / Lee Street     | ▲               |          |                 |          |
| Eastbound                       | 8               | A        | 7               | A        |
| Northbound                      | 9               | A        | 8               | A        |
| Southbound                      | 8               | A        | 8               | A        |
| Sherman Avenue / Sherman Access | △               |          |                 |          |
| Westbound                       | 11              | B        | 10-             | A        |
| Main Street / Sherman Avenue    | ★               |          |                 |          |
| Eastbound                       | 10-             | A        | 10+             | B        |
| Westbound                       | 9               | A        | 9               | A        |
| Northbound                      | 17              | B        | 13              | B        |
| Southbound                      | 16              | B        | 19              | B        |
| <i>Intersection</i>             | <i>11</i>       | <i>B</i> | <i>11</i>       | <i>B</i> |
| Main Street / Custer Avenue     | △               |          |                 |          |
| Eastbound Left-Turn             | 8               | A        | -               | A        |
| Westbound Left-Turn             | 10-             | A        | 2               | A        |
| Northbound                      | 38              | E        | 30              | D        |
| Southbound                      | 12              | B        | 19              | C        |

★ - Signalized Intersection      ▲ - All-Way Stop-Controlled Intersection      △ - Minor-Leg Stop-Controlled Intersection

**Sherman Avenue Unsignalized Intersections/Access Drives**

The unsignalized intersections and access drives along Sherman Avenue operate well with all movements operating at LOS B or better. All 95<sup>th</sup> percentile queues are less than one vehicle during both peak hours.

**Main Street/Sherman Avenue Intersection**

The signalized Main Street/Sherman Avenue intersection operates acceptably at LOS B during both peak hours. The eastbound 95<sup>th</sup> percentile queue is 6-7 vehicles during the morning and evening peak hours. This queue may extend beyond the access drive located approximately 120 feet west of the intersection, occasionally blocking access. The westbound 95<sup>th</sup> percentile queue is 4-5 vehicles during the peak hours and may extend beyond the City of Evanston Parking Lot 24 entrance/exit located approximately 70 feet east of the intersection. The southbound 95<sup>th</sup> percentile queue is 2-4 vehicles during the peak hours and may extend beyond the access drive located immediately north of the intersection.

### Main Street/Custer Avenue Intersection

The northbound stop-controlled approach to the Main Street/Custer Avenue intersection operates at LOS E during the morning peak hour. The 95<sup>th</sup> percentile queue extends 2-4 vehicle lengths. This is common for minor street approaches, and particularly for left-turn movements under stop control at major streets as they must yield right-of-way in both directions before completing their turn. It should be noted that the capacity analyses do not account for gaps in traffic created by the changing traffic signal phases at the Main Street/Sherman Avenue intersection. Generally, motorists completing such minor-leg left-turn movements wait for gaps in the traffic flow along the major street that are created upstream by changing phases of nearby traffic signals.

The results of the capacity analysis for Future Background (without Multifamily) are summarized in **Table 8**.

**Table 8. Future (2030) Background (without Multifamily) Levels of Service**

| Intersection   | Weekday AM Peak |          | Weekday PM Peak |          |
|--|-----------------|----------|-----------------|----------|
|  | Delay (s/veh)   | LOS      | Delay (s/veh)   | LOS      |
| Sherman Avenue / Alley <span style="float:right">△</span>          |                 |          |                 |          |
| Westbound  | 11              | B        | 10-             | A        |
| Sherman Avenue / Lee Street <span style="float:right">▲</span>     |                 |          |                 |          |
| Eastbound  | 8               | A        | 7               | A        |
| Northbound   | 9               | A        | 8               | A        |
| Southbound   | 8               | A        | 8               | A        |
| Sherman Avenue / Sherman Access <span style="float:right">△</span> |                 |          |                 |          |
| Westbound  | 11              | B        | 10-             | A        |
| Main Street / Sherman Avenue <span style="float:right">★</span>    |                 |          |                 |          |
| Eastbound  | 10-             | A        | 11              | B        |
| Westbound  | 9               | A        | 9               | A        |
| Northbound   | 17              | A        | 13              | B        |
| Southbound   | 16              | A        | 19              | B        |
| <i>Intersection</i>  | <i>11</i>       | <i>B</i> | <i>12</i>       | <i>B</i> |
| Main Street / Custer Avenue <span style="float:right">△</span>     |                 |          |                 |          |
| Eastbound Left-Turn  | 9               | A        | 8               | A        |
| Westbound Left-Turn  | 10-             | A        | 10-             | A        |
| Northbound   | 42              | E        | 32              | D        |
| Southbound   | 12              | B        | 20              | C        |

★ -Signalized Intersection      ▲ - All-Way Stop-Controlled Intersection      △ -Minor-Leg Stop-Controlled Intersection

### Sherman Avenue Unsignalized Intersections/Access Drives

The unsignalized intersections and access drives along Sherman Avenue continue to operate at acceptable levels, with all movements projected at LOS B or better. The morning peak hour northbound queue at the Sherman Avenue/Lee Street intersection is projected at 1 vehicle. All other 95<sup>th</sup> percentile queues are projected to be less than one vehicle.

### Main Street/Sherman Avenue Intersection

The signalized Main Street/Sherman Avenue intersection continues to operate acceptably at LOS B during both peak hours. The 95<sup>th</sup> percentile queues for this intersection are projected to remain the same with the addition of background traffic growth.

### Main Street/Custer Avenue Intersection

The northbound stop-controlled approach to the Main Street/Custer Avenue intersection operates at LOS E during the morning peak hour and LOS D during the evening peak hour. The northbound 95<sup>th</sup> percentile queue extends 4 vehicle lengths during the morning peak hour and 2 vehicle lengths during the evening peak hour. This is common for minor street approaches, and particularly for left-turn movements under stop control at major streets as they must yield right-of-way in both directions before completing their turn.

The results of the capacity analysis for Future (with Multifamily) are summarized in **Table 9**.

**Table 9. Future (2030) with Multifamily Levels of Service**

| Intersection   | Weekday AM Peak |     | Weekday PM Peak |     |
|--|-----------------|-----|-----------------|-----|
|  | Delay (s/veh)   | LOS | Delay (s/veh)   | LOS |
| Sherman Avenue / Alley <span style="float: right;">△</span>          |                 |     |                 |     |
| Westbound  | 11              | B   | 10-             | A   |
| Sherman Avenue / Lee Street <span style="float: right;">▲</span>     |                 |     |                 |     |
| Eastbound  | 8               | A   | 7               | A   |
| Northbound   | 9               | A   | 8               | A   |
| Southbound   | 8               | A   | 8               | A   |
| Sherman Avenue / Sherman Access <span style="float: right;">△</span> |                 |     |                 |     |
| Westbound  | 13              | B   | 11              | B   |
| Main Street / Sherman Avenue <span style="float: right;">★</span>    |                 |     |                 |     |
| Eastbound  | 10+             | B   | 11              | B   |
| Westbound  | 9               | A   | 9               | A   |
| Northbound   | 17              | B   | 13              | B   |
| Southbound   | 15              | B   | 19              | B   |
| <i>Intersection</i>  | 11              | B   | 12              | B   |
| Main Street / Custer Avenue <span style="float: right;">△</span>     |                 |     |                 |     |
| Eastbound Left-Turn  | 9               | A   | 8               | A   |
| Westbound Left-Turn  | 10-             | A   | 10-             | A   |
| Northbound   | 44              | E   | 34              | D   |
| Southbound   | 30              | D   | 25              | C   |

★ - Signalized Intersection

▲ - All-Way Stop-Controlled Intersection

△ - Minor-Leg Stop-Controlled Intersection

### Sherman Avenue Unsignalized Intersections / Access Drives

The unsignalized intersections and access drives along Sherman Avenue continue to operate at LOS B with the addition of site traffic. The 95<sup>th</sup> percentile queues are projected to remain the same with the addition of site-generated traffic.

### **Main Street/Sherman Avenue Intersection**

The signalized Main Street/Sherman Avenue intersection continues to operate acceptably at LOS B during both peak hours. The 95<sup>th</sup> percentile queues for this intersection are projected to remain the same with the addition of site-generated traffic.

### **Main Street/Custer Avenue Intersection**

The northbound stop-controlled approach to the Main Street/Custer Avenue intersection continues to operate at LOS E and LOS D during the morning and evening peak hours, respectively. The 95<sup>th</sup> percentile queues remain 4 vehicle lengths during the morning peak hour and 2 vehicle lengths during the evening peak hour with the addition of site traffic. The southbound approach operates at LOS D during the morning peak hour and LOS C during the evening peak hour. This is likely due to the increase in southbound left-turn vehicles and is common for minor street approaches, and particularly for left-turn movements under stop control at major streets as they must yield right-of-way in both directions before completing their turn.

### ***Traffic Impact Discussion***

The residential development traffic will represent the following volumes traveling through the Main Street intersection with Custer Avenue:

- During the weekday morning peak hour (see **Exhibit 6**), there are projected to be about 959 vehicles or about 16 vehicles per minute. The development would add 89 trips, which is 1-2 trips every minute.
- During the weekday evening peak hour, there are projected to be about 979 vehicles or about 16 vehicles per minute. The development would add 89 trips, which is 1-2 trips every minute.

***Key Finding.*** Based on the above, it can be concluded that no street or intersection capacity improvements (e.g. separate turn lanes) would be needed to specifically accommodate site traffic.

## **Conclusion and Recommendations**

Based on the proposed residential development's operating characteristics and analysis presented in the report, the traffic generated should not negatively impact the surrounding roadway network. It should not be understated that the location of this development will heavily lend itself to non-motorized trips, such as walking, biking, or transit.

The following recommendations related to on-site planning elements (e.g. access operations and parking) focus on enhancing pedestrian and bicycle mobility.

### ***On-Site Planning Recommendations***

- Exiting site traffic should operate under stop control with a stop sign and stop bar at both the north and south parking lots. In addition to this, vehicles exiting the pick-up/drop-off porte cochere into the drive aisle of the south parking lot should operate under stop control with a stop sign and stop bar.

- Crosswalks should be striped across the three proposed driveways (north parking lot, porte cochere entrance, south parking lot) along Custer Avenue.
- Bicycle parking for residents and visitors should be provided on-site in accordance with Evanston's Code of Ordinances.
- Any disrupted sidewalk along Custer Avenue should be replaced.

## Exhibits and Appendix

The following *Exhibits* and *Appendices* were previously referenced. They provide technical support for our observations, findings, and recommendations discussed in the text.

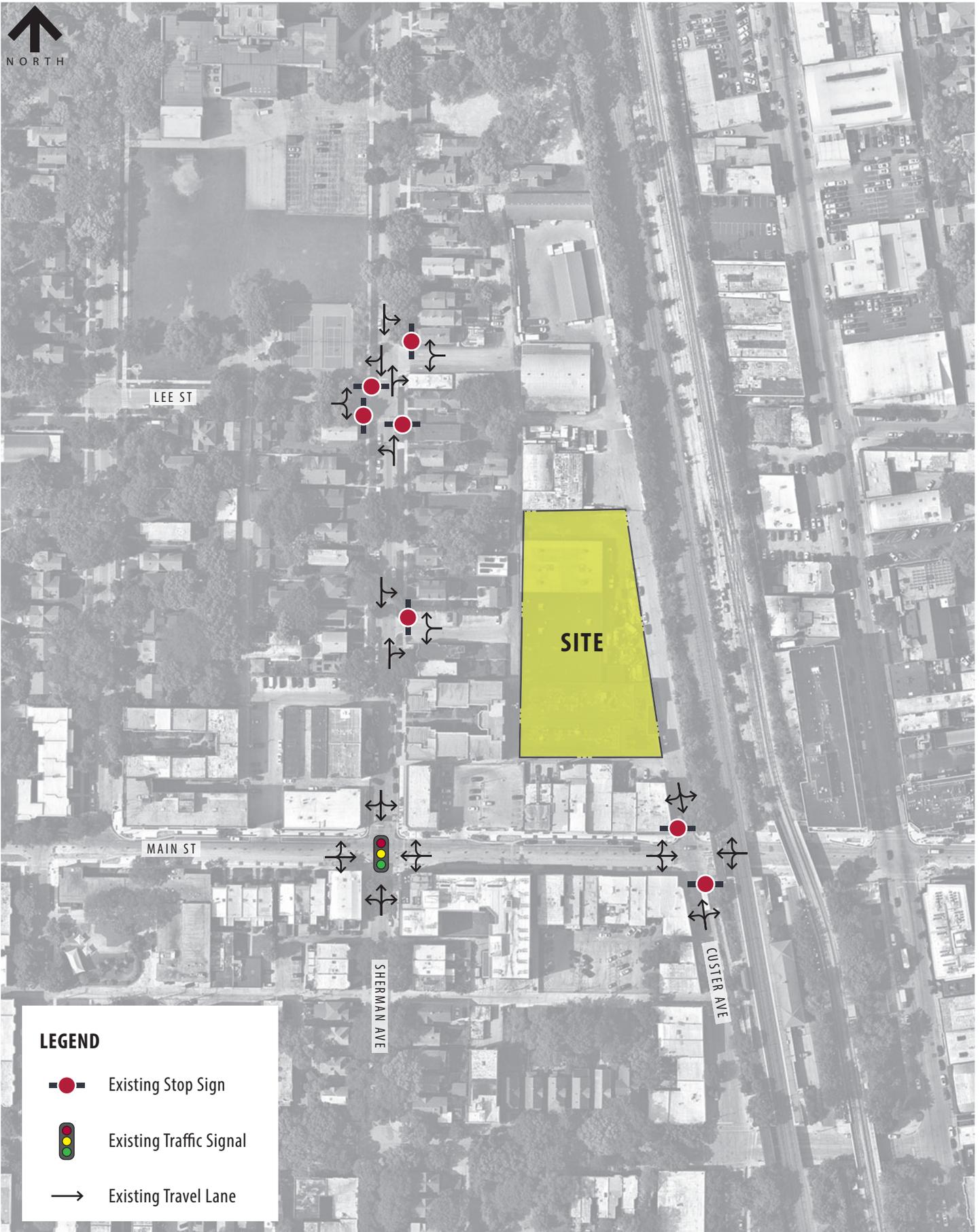
### Exhibits

1. Site Location Map
- 2A. Existing Street Characteristics
- 2B. Existing Parking Characteristics
3. Existing (2024) Traffic Volumes
4. Site Trip Assignment
5. Future (2030) Background without Multifamily Development Traffic Projections
6. Future (2030) with Multifamily Development Traffic Projections

### Appendices

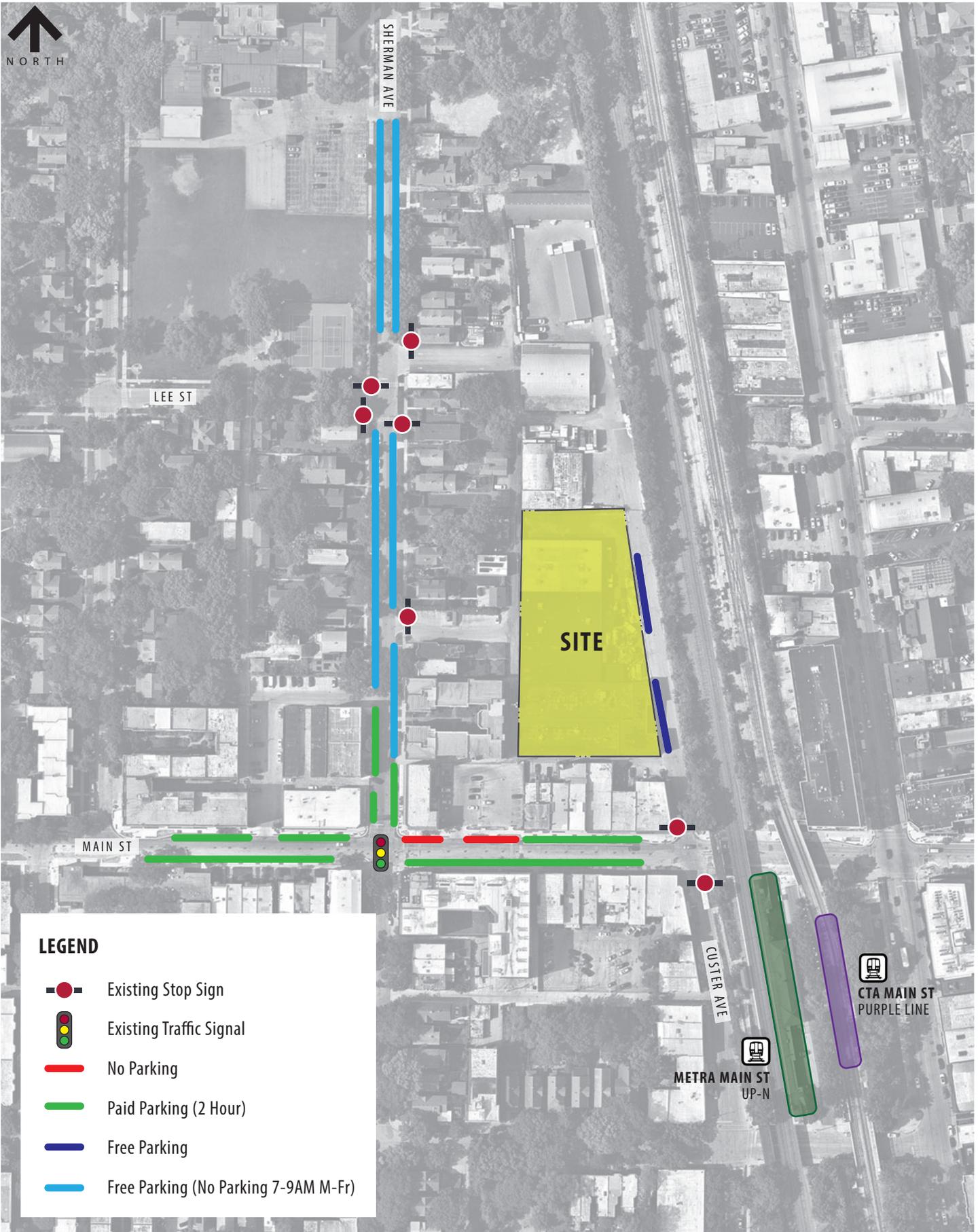
- Crash Map
- ITE Trip Generation Excerpts
- Capacity Analysis Worksheets





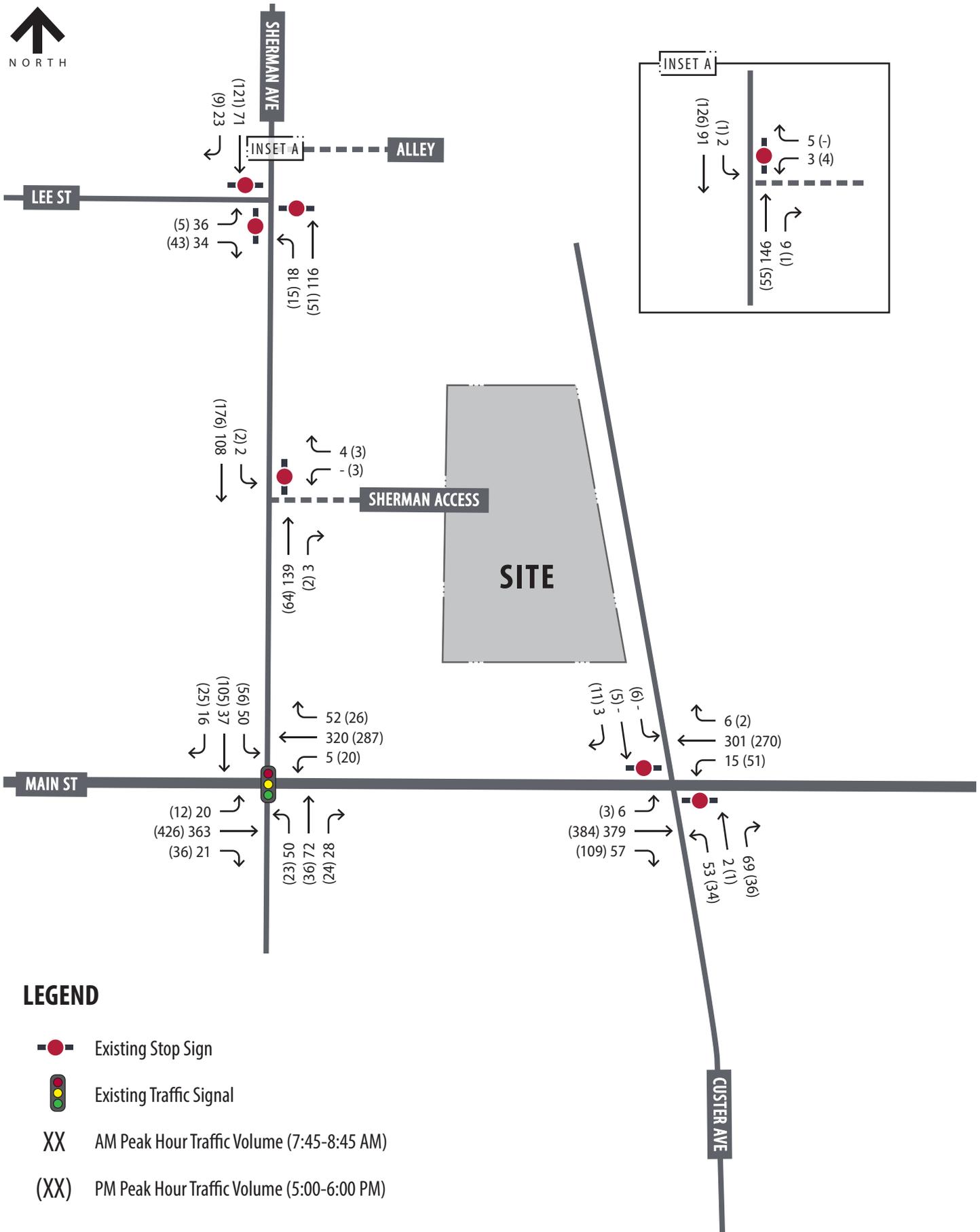
**LEGEND**

- Existing Stop Sign
- 🚦 Existing Traffic Signal
- Existing Travel Lane



**LEGEND**

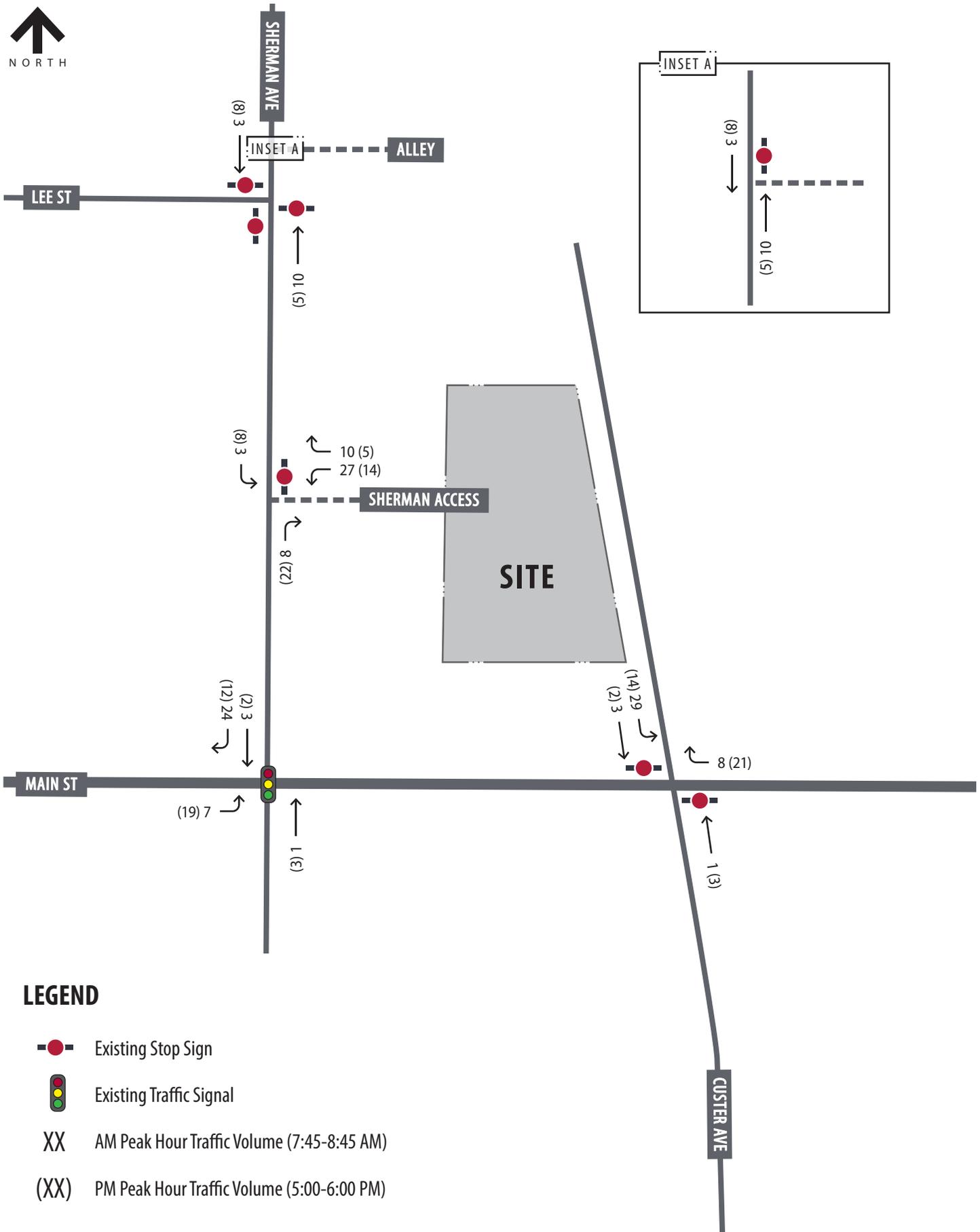
-  Existing Stop Sign
-  Existing Traffic Signal
-  No Parking
-  Paid Parking (2 Hour)
-  Free Parking
-  Free Parking (No Parking 7-9AM M-Fr)



**LEGEND**

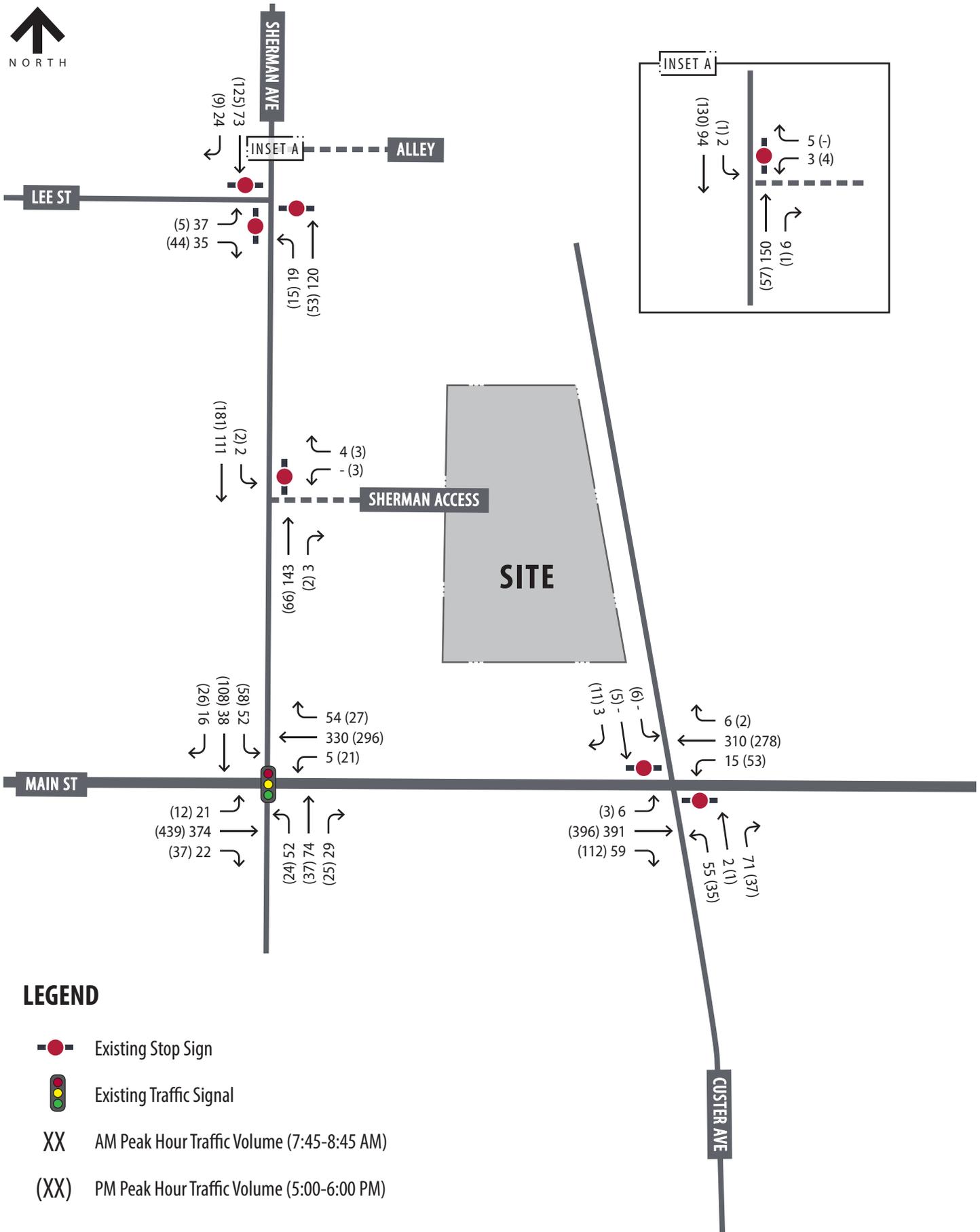
- Existing Stop Sign
- Existing Traffic Signal
- XX AM Peak Hour Traffic Volume (7:45-8:45 AM)
- (XX) PM Peak Hour Traffic Volume (5:00-6:00 PM)





**LEGEND**

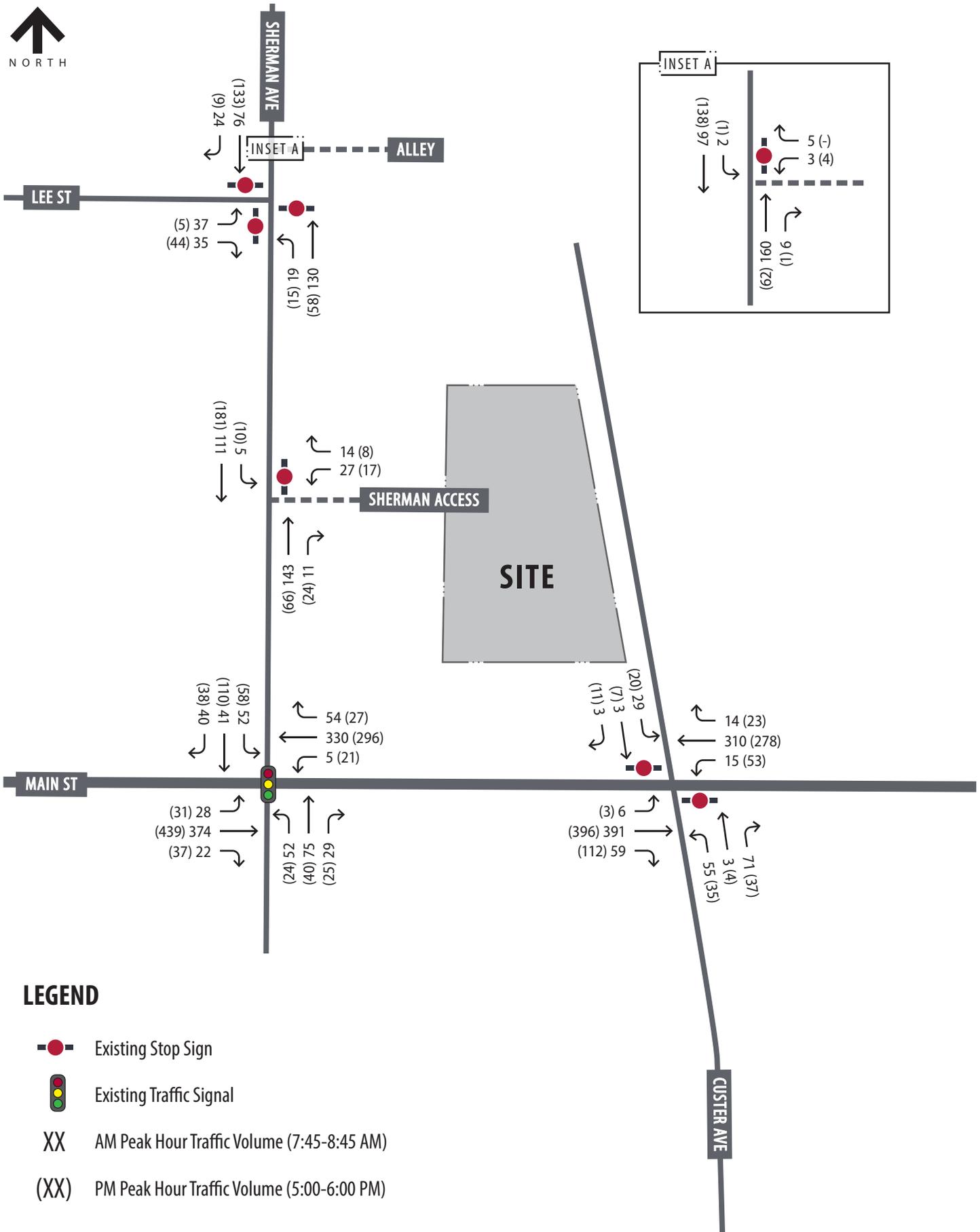
-  Existing Stop Sign
-  Existing Traffic Signal
- XX AM Peak Hour Traffic Volume (7:45-8:45 AM)
- (XX) PM Peak Hour Traffic Volume (5:00-6:00 PM)



**LEGEND**

- Existing Stop Sign
- Existing Traffic Signal
- XX AM Peak Hour Traffic Volume (7:45-8:45 AM)
- (XX) PM Peak Hour Traffic Volume (5:00-6:00 PM)





**LEGEND**

-  Existing Stop Sign
-  Existing Traffic Signal
- XX AM Peak Hour Traffic Volume (7:45-8:45 AM)
- (XX) PM Peak Hour Traffic Volume (5:00-6:00 PM)



## **Appendix**

Legend

● Site Crashes



# Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

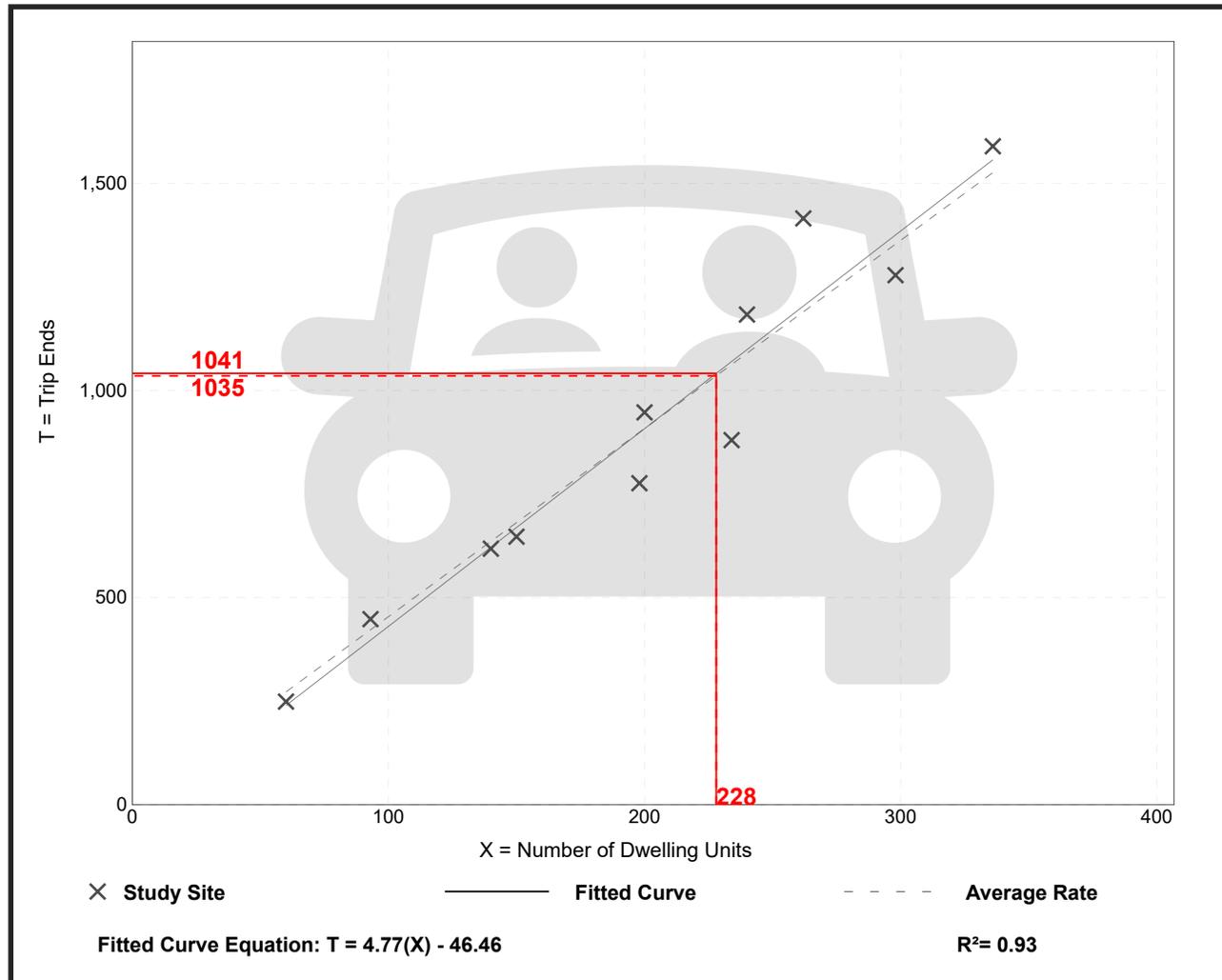
Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 11  
Avg. Num. of Dwelling Units: 201  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 4.54         | 3.76 - 5.40    | 0.51               |

## Data Plot and Equation



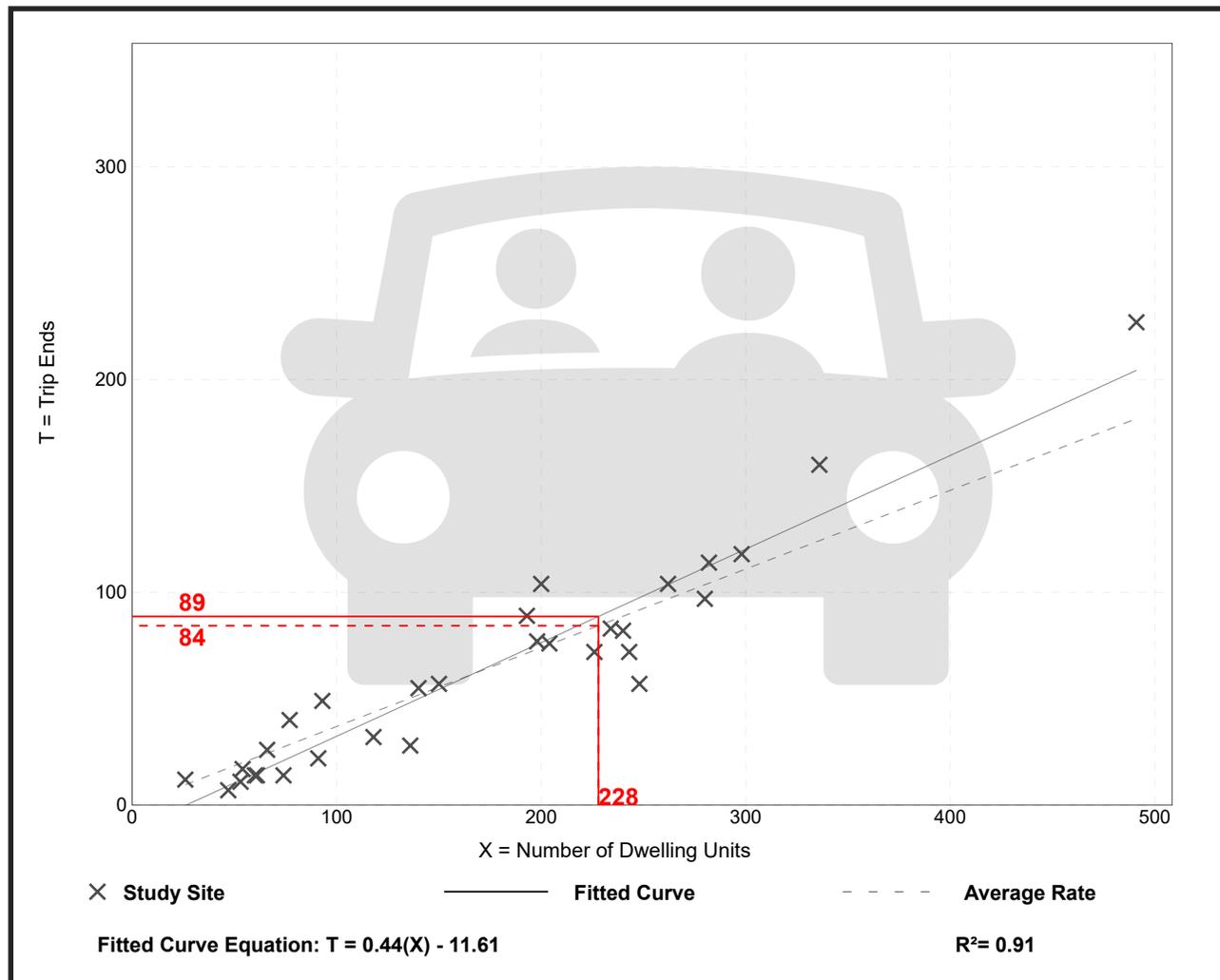
## Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

**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: 30  
 Avg. Num. of Dwelling Units: 173  
 Directional Distribution: 23% entering, 77% exiting

### Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.37         | 0.15 - 0.53    | 0.09               |

### Data Plot and Equation



## Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

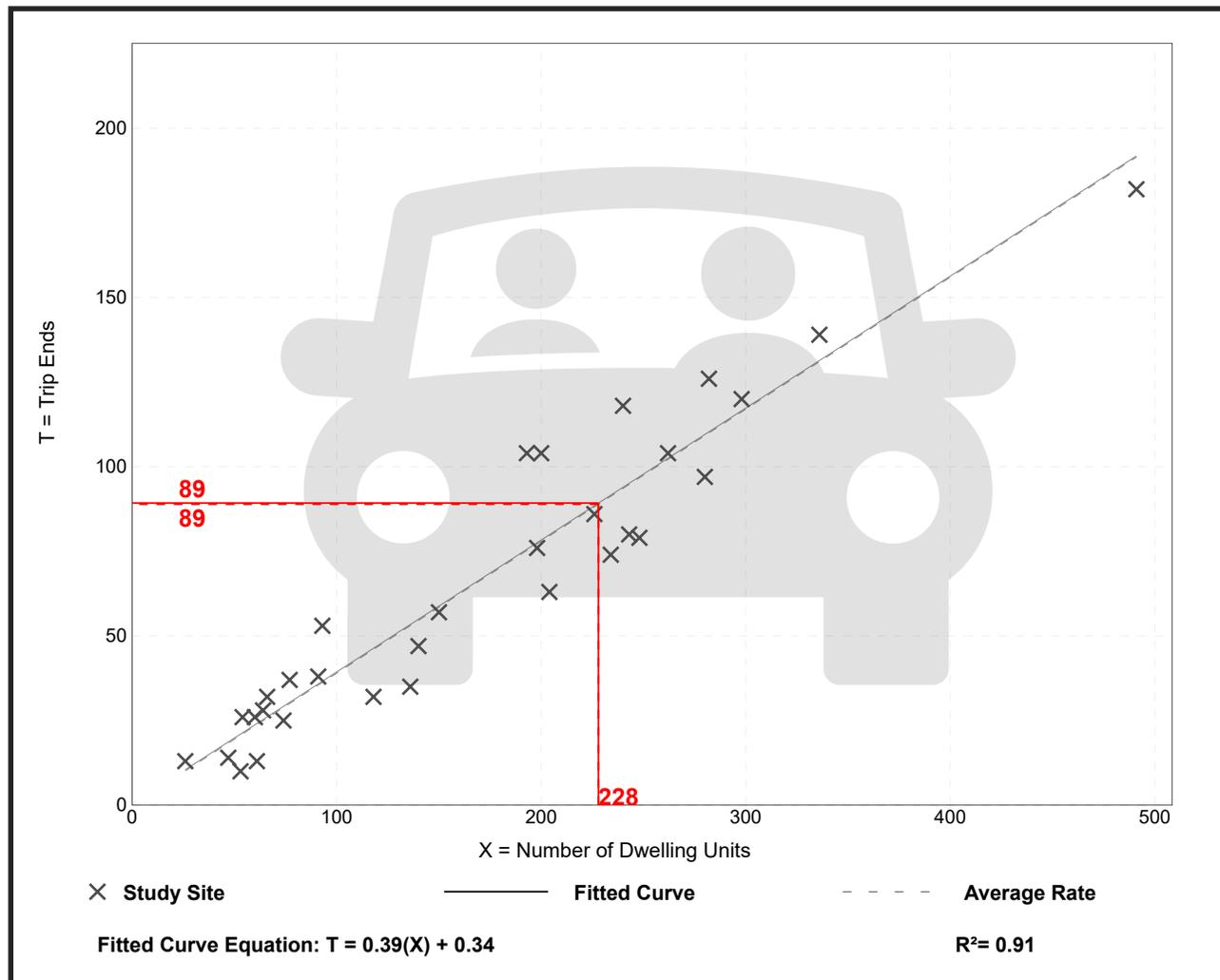
**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**

**Setting/Location: General Urban/Suburban**  
 Number of Studies: 31  
 Avg. Num. of Dwelling Units: 169  
 Directional Distribution: 61% entering, 39% exiting

### Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.39         | 0.19 - 0.57    | 0.08               |

### Data Plot and Equation



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 3    | 5    | 146  | 6    | 2    | 91   |
| Future Vol, veh/h        | 3    | 5    | 146  | 6    | 2    | 91   |
| Conflicting Peds, #/hr   | 83   | 0    | 0    | 4    | 4    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 68   | 68   | 68   | 68   | 68   | 68   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 4    | 7    | 215  | 9    | 3    | 134  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 446    | 223    | 0      | 0 | 228   | 0 |
| Stage 1              | 223    | -      | -      | - | -     | - |
| Stage 2              | 223    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 570    | 816    | -      | - | 1341  | - |
| Stage 1              | 814    | -      | -      | - | -     | - |
| Stage 2              | 814    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - |       | - |
| Mov Cap-1 Maneuver   | 522    | 813    | -      | - | 1336  | - |
| Mov Cap-2 Maneuver   | 522    | -      | -      | - | -     | - |
| Stage 1              | 811    | -      | -      | - | -     | - |
| Stage 2              | 748    | -      | -      | - | -     | - |

| Approach                    | WB | NB | SB   |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v10.45 |    | 0  | 0.17 |
| HCM LOS                     | B  |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 672   | 39    |
| HCM Lane V/C Ratio        | -   | -        | 0.017 | 0.002 |
| HCM Control Delay (s/veh) | -   | -        | 10.4  | 7.7   |
| HCM Lane LOS              | -   | -        | B     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0.1   | 0     |

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 8.4 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | W    |      |      | 4    | 4    |      |
| Traffic Vol, veh/h  | 36   | 34   | 18   | 116  | 71   | 23   |
| Future Vol, veh/h   | 36   | 34   | 18   | 116  | 71   | 23   |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 3    | 2    | 2    | 3    | 2    |
| Mvmt Flow           | 53   | 50   | 26   | 171  | 104  | 34   |
| Number of Lanes     | 1    | 0    | 0    | 1    | 1    | 0    |

| Approach                   | EB  | NB  | SB  |
|----------------------------|-----|-----|-----|
| Opposing Approach          |     | SB  | NB  |
| Opposing Lanes             | 0   | 1   | 1   |
| Conflicting Approach Left  | SB  | EB  |     |
| Conflicting Lanes Left     | 1   | 1   | 0   |
| Conflicting Approach Right | NB  |     | EB  |
| Conflicting Lanes Right    | 1   | 0   | 1   |
| HCM Control Delay, s/veh   | 8.2 | 8.7 | 8.1 |
| HCM LOS                    | A   | A   | A   |

| Lane                     | NBLn1 | EBLn1 | SBLn1 |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 13%   | 51%   | 0%    |
| Vol Thru, %              | 87%   | 0%    | 76%   |
| Vol Right, %             | 0%    | 49%   | 24%   |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 134   | 70    | 94    |
| LT Vol                   | 18    | 36    | 0     |
| Through Vol              | 116   | 0     | 71    |
| RT Vol                   | 0     | 34    | 23    |
| Lane Flow Rate           | 197   | 103   | 138   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.239 | 0.128 | 0.163 |
| Departure Headway (Hd)   | 4.358 | 4.485 | 4.253 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 830   | 801   | 846   |
| Service Time             | 2.358 | 2.503 | 2.268 |
| HCM Lane V/C Ratio       | 0.237 | 0.129 | 0.163 |
| HCM Control Delay, s/veh | 8.7   | 8.2   | 8.1   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.9   | 0.4   | 0.6   |

HCM 7th TWSC  
3000: Sherman Ave & Sherman Access

08/14/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 0    | 4    | 139  | 3    | 2    | 108  |
| Future Vol, veh/h        | 0    | 4    | 139  | 3    | 2    | 108  |
| Conflicting Peds, #/hr   | 0    | 3    | 0    | 123  | 123  | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 0    | 6    | 193  | 4    | 3    | 150  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 474    | 321    | 0      | 0 | 320   | 0 |
| Stage 1              | 318    | -      | -      | - | -     | - |
| Stage 2              | 156    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 549    | 720    | -      | - | 1240  | - |
| Stage 1              | 737    | -      | -      | - | -     | - |
| Stage 2              | 873    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - | -     | - |
| Mov Cap-1 Maneuver   | 484    | 634    | -      | - | 1094  | - |
| Mov Cap-2 Maneuver   | 484    | -      | -      | - | -     | - |
| Stage 1              | 651    | -      | -      | - | -     | - |
| Stage 2              | 870    | -      | -      | - | -     | - |

| Approach                    | WB | NB | SB   |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v10.73 |    | 0  | 0.15 |
| HCM LOS                     | B  |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 634   | 33    |
| HCM Lane V/C Ratio        | -   | -        | 0.009 | 0.003 |
| HCM Control Delay (s/veh) | -   | -        | 10.7  | 8.3   |
| HCM Lane LOS              | -   | -        | B     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0     | 0     |

HCM 7th TWSC  
5000: Custer Ave & Main St

08/14/2024

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | +    |      |      | +    |      |      | +    |      |      | +    |      |
| Traffic Vol, veh/h       | 6    | 379  | 57   | 15   | 301  | 6    | 53   | 2    | 69   | 0    | 0    | 3    |
| Future Vol, veh/h        | 6    | 379  | 57   | 15   | 301  | 6    | 53   | 2    | 69   | 0    | 0    | 3    |
| Conflicting Peds, #/hr   | 78   | 0    | 158  | 158  | 0    | 78   | 46   | 0    | 0    | 0    | 0    | 46   |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2    | 2    | 14   | 2    | 2    | 2    | 3    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 426  | 64   | 17   | 338  | 7    | 60   | 2    | 78   | 0    | 0    | 3    |

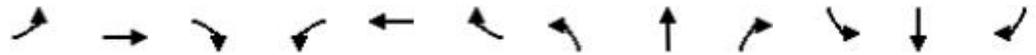
| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 423    | 0 | 0 | 648    | 0 | 0 | 1047   | 1086  | 616   | 894    | 1115  | 466   |
| Stage 1              | -      | - | - | -      | - | - | 629    | 629   | -     | 453    | 453   | -     |
| Stage 2              | -      | - | - | -      | - | - | 418    | 457   | -     | 440    | 661   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.13   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.527  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1136   | - | - | 938    | - | - | 205    | 216   | 491   | 262    | 208   | 597   |
| Stage 1              | -      | - | - | -      | - | - | 468    | 475   | -     | 586    | 570   | -     |
| Stage 2              | -      | - | - | -      | - | - | 611    | 568   | -     | 596    | 460   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1052   | - | - | 797    | - | - | 160    | 164   | 417   | 188    | 158   | 528   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 160    | 164   | -     | 188    | 158   | -     |
| Stage 1              | -      | - | - | -      | - | - | 394    | 400   | -     | 528    | 514   | -     |
| Stage 2              | -      | - | - | -      | - | - | 565    | 512   | -     | 478    | 387   | -     |

| Approach               | EB   |  |  | WB   |  |  | NB    |  |  | SB    |  |  |
|------------------------|------|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.11 |  |  | 0.45 |  |  | 37.88 |  |  | 11.86 |  |  |
| HCM LOS                |      |  |  |      |  |  | E     |  |  | B     |  |  |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 243   | 24    | -   | -   | 84    | -   | -   | 528   |
| HCM Lane V/C Ratio        | 0.572 | 0.006 | -   | -   | 0.021 | -   | -   | 0.006 |
| HCM Control Delay (s/veh) | 37.9  | 8.4   | 0   | -   | 9.6   | 0   | -   | 11.9  |
| HCM Lane LOS              | E     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh)     | 3.2   | 0     | -   | -   | 0.1   | -   | -   | 0     |

Lanes, Volumes, Timings  
4000: Sherman Ave & Main St

08/14/2024



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | +     |       |       | +     |       |       | +     |       |       | +     |       |
| Traffic Volume (vph)       | 20    | 363   | 21    | 5     | 320   | 52    | 50    | 72    | 28    | 50    | 37    | 16    |
| Future Volume (vph)        | 20    | 363   | 21    | 5     | 320   | 52    | 50    | 72    | 28    | 50    | 37    | 16    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       | 0.99  |       |       | 0.98  |       |       | 0.95  |       |       | 0.95  |       |
| Fr <sub>t</sub>            |       | 0.993 |       |       | 0.981 |       |       | 0.975 |       |       | 0.979 |       |
| Fl <sub>t</sub> Protected  |       | 0.997 |       |       | 0.999 |       |       | 0.984 |       |       | 0.976 |       |
| Satd. Flow (prot)          | 0     | 1811  | 0     | 0     | 1803  | 0     | 0     | 1743  | 0     | 0     | 1712  | 0     |
| Fl <sub>t</sub> Permitted  |       | 0.974 |       |       | 0.996 |       |       | 0.875 |       |       | 0.811 |       |
| Satd. Flow (perm)          | 0     | 1767  | 0     | 0     | 1797  | 0     | 0     | 1508  | 0     | 0     | 1387  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 7     |       |       | 21    |       |       | 20    |       |       | 16    |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |
| Link Distance (ft)         |       | 223   |       |       | 453   |       |       | 222   |       |       | 342   |       |
| Travel Time (s)            |       | 6.1   |       |       | 12.4  |       |       | 6.1   |       |       | 9.3   |       |
| Confl. Peds. (#/hr)        | 32    |       | 21    | 21    |       | 32    | 59    |       | 42    | 42    |       | 59    |
| Confl. Bikes (#/hr)        |       |       | 1     |       |       | 4     |       |       | 4     |       |       | 4     |
| 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  |
| Heavy Vehicles (%)         | 2%    | 3%    | 15%   | 20%   | 2%    | 2%    | 2%    | 2%    | 6%    | 2%    | 6%    | 6%    |
| Parking (#/hr)             | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     |
| Adj. Flow (vph)            | 22    | 390   | 23    | 5     | 344   | 56    | 54    | 77    | 30    | 54    | 40    | 17    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 435   | 0     | 0     | 405   | 0     | 0     | 161   | 0     | 0     | 111   | 0     |
| Enter Blocked Intersection | No    |
| Lane Alignment             | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Turn Type                  | Perm  | NA    |       |
| Protected Phases           |       | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases           | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |       |
| Minimum Split (s)          | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (s)            | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (%)            | 62.5% | 62.5% |       | 62.5% | 62.5% |       | 37.5% | 37.5% |       | 37.5% | 37.5% |       |
| Maximum Green (s)          | 33.0  | 33.0  |       | 33.0  | 33.0  |       | 18.0  | 18.0  |       | 18.0  | 18.0  |       |
| Yellow Time (s)            | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       |
| All-Red Time (s)           | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       |
| Lost Time Adjust (s)       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Total Lost Time (s)        |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |
| Lead/Lag                   |       |       |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?         |       |       |       |       |       |       |       |       |       |       |       |       |
| Walk Time (s)              | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       |
| Flash Dont Walk (s)        | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       |
| Pedestrian Calls (#/hr)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Act Effect Green (s)       |       | 33.0  |       |       | 33.0  |       |       | 18.0  |       |       | 18.0  |       |

Lanes, Volumes, Timings  
 4000: Sherman Ave & Main St

08/14/2024

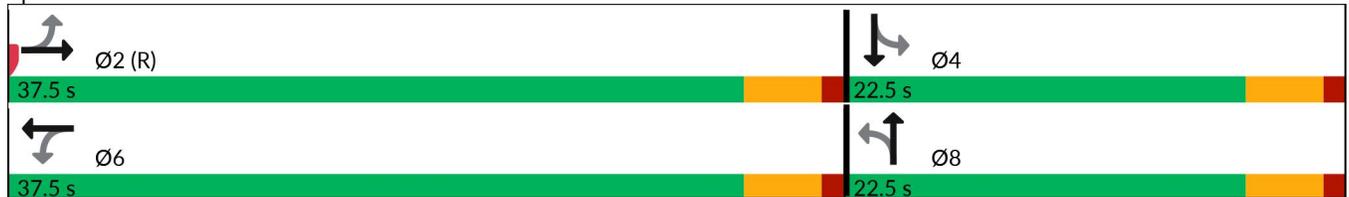


| Lane Group              | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL | NBT  | NBR | SBL | SBT  | SBR |
|-------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Actuated g/C Ratio      |     | 0.55 |     |     | 0.55 |     |     | 0.30 |     |     | 0.30 |     |
| v/c Ratio               |     | 0.44 |     |     | 0.40 |     |     | 0.34 |     |     | 0.25 |     |
| Control Delay (s/veh)   |     | 9.7  |     |     | 8.9  |     |     | 16.8 |     |     | 15.8 |     |
| Queue Delay             |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |
| Total Delay (s/veh)     |     | 9.7  |     |     | 8.9  |     |     | 16.8 |     |     | 15.8 |     |
| LOS                     |     | A    |     |     | A    |     |     | B    |     |     | B    |     |
| Approach Delay (s/veh)  |     | 9.7  |     |     | 8.9  |     |     | 16.8 |     |     | 15.9 |     |
| Approach LOS            |     | A    |     |     | A    |     |     | B    |     |     | B    |     |
| Queue Length 50th (ft)  |     | 83   |     |     | 71   |     |     | 39   |     |     | 26   |     |
| Queue Length 95th (ft)  |     | 141  |     |     | 124  |     |     | 83   |     |     | 60   |     |
| Internal Link Dist (ft) |     | 143  |     |     | 373  |     |     | 142  |     |     | 262  |     |
| Turn Bay Length (ft)    |     |      |     |     |      |     |     |      |     |     |      |     |
| Base Capacity (vph)     |     | 975  |     |     | 997  |     |     | 466  |     |     | 427  |     |
| Starvation Cap Reductn  |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Spillback Cap Reductn   |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Storage Cap Reductn     |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Reduced v/c Ratio       |     | 0.45 |     |     | 0.41 |     |     | 0.35 |     |     | 0.26 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Pretimed  
 Maximum v/c Ratio: 0.45  
 Intersection Signal Delay (s/veh): 11.1      Intersection LOS: B  
 Intersection Capacity Utilization 54.9%      ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 4000: Sherman Ave & Main St



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 4    | 0    | 55   | 1    | 1    | 126  |
| Future Vol, veh/h        | 4    | 0    | 55   | 1    | 1    | 126  |
| Conflicting Peds, #/hr   | 4    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 0    | 60   | 1    | 1    | 138  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 206    | 61     | 0      | 0 | 62    | 0 |
| Stage 1              | 61     | -      | -      | - | -     | - |
| Stage 2              | 145    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 783    | 1004   | -      | - | 1542  | - |
| Stage 1              | 962    | -      | -      | - | -     | - |
| Stage 2              | 883    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - |       |   |
| Mov Cap-1 Maneuver   | 779    | 1004   | -      | - | 1542  | - |
| Mov Cap-2 Maneuver   | 779    | -      | -      | - | -     | - |
| Stage 1              | 962    | -      | -      | - | -     | - |
| Stage 2              | 879    | -      | -      | - | -     | - |

| Approach               | WB   | NB | SB   |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 9.65 | 0  | 0.06 |
| HCM LOS                | A    |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 779   | 14    |
| HCM Lane V/C Ratio        | -   | -        | 0.006 | 0.001 |
| HCM Control Delay (s/veh) | -   | -        | 9.6   | 7.3   |
| HCM Lane LOS              | -   | -        | A     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0     | 0     |

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 7.7 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | W    |      |      | 4    | 4    |      |
| Traffic Vol, veh/h  | 5    | 43   | 15   | 51   | 121  | 9    |
| Future Vol, veh/h   | 5    | 43   | 15   | 51   | 121  | 9    |
| Peak Hour Factor    | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 5    | 47   | 16   | 56   | 133  | 10   |
| Number of Lanes     | 1    | 0    | 0    | 1    | 1    | 0    |

| Approach                   | EB  | NB  | SB  |
|----------------------------|-----|-----|-----|
| Opposing Approach          |     | SB  | NB  |
| Opposing Lanes             | 0   | 1   | 1   |
| Conflicting Approach Left  | SB  | EB  |     |
| Conflicting Lanes Left     | 1   | 1   | 0   |
| Conflicting Approach Right | NB  |     | EB  |
| Conflicting Lanes Right    | 1   | 0   | 1   |
| HCM Control Delay, s/veh   | 7.1 | 7.6 | 7.9 |
| HCM LOS                    | A   | A   | A   |

| Lane                     | NBLn1 | EBLn1 | SBLn1 |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 23%   | 10%   | 0%    |
| Vol Thru, %              | 77%   | 0%    | 93%   |
| Vol Right, %             | 0%    | 90%   | 7%    |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 66    | 48    | 130   |
| LT Vol                   | 15    | 5     | 0     |
| Through Vol              | 51    | 0     | 121   |
| RT Vol                   | 0     | 43    | 9     |
| Lane Flow Rate           | 73    | 53    | 143   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.084 | 0.057 | 0.16  |
| Departure Headway (Hd)   | 4.181 | 3.883 | 4.04  |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 852   | 928   | 886   |
| Service Time             | 2.229 | 1.883 | 2.077 |
| HCM Lane V/C Ratio       | 0.086 | 0.057 | 0.161 |
| HCM Control Delay, s/veh | 7.6   | 7.1   | 7.9   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.3   | 0.2   | 0.6   |

HCM 7th TWSC  
 3000: Sherman Ave & Sherman Access

08/14/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | L    |
| Traffic Vol, veh/h       | 3    | 3    | 64   | 2    | 2    | 176  |
| Future Vol, veh/h        | 3    | 3    | 64   | 2    | 2    | 176  |
| Conflicting Peds, #/hr   | 0    | 3    | 0    | 46   | 46   | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 96   | 96   | 96   | 96   | 96   | 96   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 3    | 3    | 67   | 2    | 2    | 183  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 301    | 117    | 0      | 0 | 115   | 0 |
| Stage 1              | 114    | -      | -      | - | -     | - |
| Stage 2              | 188    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 690    | 935    | -      | - | 1474  | - |
| Stage 1              | 911    | -      | -      | - | -     | - |
| Stage 2              | 844    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - |       | - |
| Mov Cap-1 Maneuver   | 659    | 892    | -      | - | 1410  | - |
| Mov Cap-2 Maneuver   | 659    | -      | -      | - | -     | - |
| Stage 1              | 871    | -      | -      | - | -     | - |
| Stage 2              | 843    | -      | -      | - | -     | - |

| Approach               | WB   | NB | SB   |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 9.79 | 0  | 0.08 |
| HCM LOS                | A    |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 758   | 20    |
| HCM Lane V/C Ratio        | -   | -        | 0.008 | 0.001 |
| HCM Control Delay (s/veh) | -   | -        | 9.8   | 7.6   |
| HCM Lane LOS              | -   | -        | A     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0     | 0     |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | +    |      |      | +    |      |      | +    |      |      | +    |      |
| Traffic Vol, veh/h       | 3    | 384  | 109  | 51   | 270  | 2    | 34   | 1    | 36   | 6    | 5    | 11   |
| Future Vol, veh/h        | 3    | 384  | 109  | 51   | 270  | 2    | 34   | 1    | 36   | 6    | 5    | 11   |
| Conflicting Peds, #/hr   | 58   | 0    | 140  | 140  | 0    | 58   | 60   | 0    | 0    | 0    | 0    | 60   |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 14   | 2    | 2    | 2    | 3    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 404  | 115  | 54   | 284  | 2    | 36   | 1    | 38   | 6    | 5    | 12   |

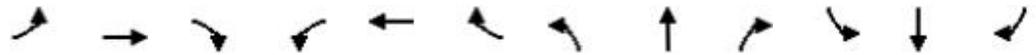
| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 344    | 0 | 0 | 659    | 0 | 0 | 1062   | 1060  | 602   | 862    | 1116  | 403   |
| Stage 1              | -      | - | - | -      | - | - | 608    | 608   | -     | 451    | 451   | -     |
| Stage 2              | -      | - | - | -      | - | - | 454    | 452   | -     | 411    | 665   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.13   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.527  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1215   | - | - | 929    | - | - | 200    | 224   | 500   | 275    | 208   | 647   |
| Stage 1              | -      | - | - | -      | - | - | 481    | 486   | -     | 588    | 571   | -     |
| Stage 2              | -      | - | - | -      | - | - | 584    | 571   | -     | 618    | 458   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1148   | - | - | 805    | - | - | 143    | 168   | 433   | 216    | 156   | 577   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 143    | 168   | -     | 216    | 156   | -     |
| Stage 1              | -      | - | - | -      | - | - | 415    | 419   | -     | 512    | 497   | -     |
| Stage 2              | -      | - | - | -      | - | - | 491    | 496   | -     | 560    | 395   | -     |

| Approach               | EB   |  |  | WB   |  |  | NB   |  |  | SB    |  |  |
|------------------------|------|--|--|------|--|--|------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.05 |  |  | 1.55 |  |  | 30.1 |  |  | 19.07 |  |  |
| HCM LOS                |      |  |  |      |  |  | D    |  |  | C     |  |  |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 217   | 10    | -   | -   | 284   | -   | -   | 279   |
| HCM Lane V/C Ratio        | 0.345 | 0.003 | -   | -   | 0.067 | -   | -   | 0.083 |
| HCM Control Delay (s/veh) | 30.1  | 8.1   | 0   | -   | 9.8   | 0   | -   | 19.1  |
| HCM Lane LOS              | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh)     | 1.5   | 0     | -   | -   | 0.2   | -   | -   | 0.3   |

Lanes, Volumes, Timings  
4000: Sherman Ave & Main St

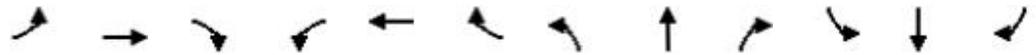
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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | +     |       |       | +     |       |       | +     |       |       | +     |       |
| Traffic Volume (vph)       | 12    | 426   | 36    | 20    | 287   | 26    | 23    | 36    | 24    | 56    | 105   | 25    |
| Future Volume (vph)        | 12    | 426   | 36    | 20    | 287   | 26    | 23    | 36    | 24    | 56    | 105   | 25    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       | 0.99  |       |       | 0.99  |       |       | 0.96  |       |       | 0.96  |       |
| Fr <sub>t</sub>            |       | 0.990 |       |       | 0.989 |       |       | 0.961 |       |       | 0.982 |       |
| Fl <sub>t</sub> Protected  |       | 0.999 |       |       | 0.997 |       |       | 0.986 |       |       | 0.985 |       |
| Satd. Flow (prot)          | 0     | 1830  | 0     | 0     | 1822  | 0     | 0     | 1720  | 0     | 0     | 1780  | 0     |
| Fl <sub>t</sub> Permitted  |       | 0.990 |       |       | 0.964 |       |       | 0.899 |       |       | 0.891 |       |
| Satd. Flow (perm)          | 0     | 1812  | 0     | 0     | 1759  | 0     | 0     | 1550  | 0     | 0     | 1581  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 11    |       |       | 11    |       |       | 25    |       |       | 13    |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |
| Link Distance (ft)         |       | 223   |       |       | 453   |       |       | 222   |       |       | 342   |       |
| Travel Time (s)            |       | 6.1   |       |       | 12.4  |       |       | 6.1   |       |       | 9.3   |       |
| Confl. Peds. (#/hr)        | 48    |       | 38    | 38    |       | 48    | 36    |       | 41    | 41    |       | 36    |
| Confl. Bikes (#/hr)        |       |       | 3     |       |       | 2     |       |       | 2     |       |       | 10    |
| Peak Hour Factor           | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  |
| Parking (#/hr)             | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     |
| Adj. Flow (vph)            | 13    | 444   | 38    | 21    | 299   | 27    | 24    | 38    | 25    | 58    | 109   | 26    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 495   | 0     | 0     | 347   | 0     | 0     | 87    | 0     | 0     | 193   | 0     |
| Enter Blocked Intersection | No    |
| Lane Alignment             | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Turn Type                  | Perm  | NA    |       |
| Protected Phases           |       | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases           | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |       |
| Minimum Split (s)          | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (s)            | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (%)            | 62.5% | 62.5% |       | 62.5% | 62.5% |       | 37.5% | 37.5% |       | 37.5% | 37.5% |       |
| Maximum Green (s)          | 33.0  | 33.0  |       | 33.0  | 33.0  |       | 18.0  | 18.0  |       | 18.0  | 18.0  |       |
| Yellow Time (s)            | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       |
| All-Red Time (s)           | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       |
| Lost Time Adjust (s)       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Total Lost Time (s)        |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |
| Lead/Lag                   |       |       |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?         |       |       |       |       |       |       |       |       |       |       |       |       |
| Walk Time (s)              | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       |
| Flash Dont Walk (s)        | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       |
| Pedestrian Calls (#/hr)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Act Effct Green (s)        |       | 33.0  |       |       | 33.0  |       |       | 18.0  |       |       | 18.0  |       |
| Actuated g/C Ratio         |       | 0.55  |       |       | 0.55  |       |       | 0.30  |       |       | 0.30  |       |

Lanes, Volumes, Timings  
 4000: Sherman Ave & Main St

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| Lane Group              | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL | NBT  | NBR | SBL | SBT | SBR  |
|-------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|------|
| v/c Ratio               |     | 0.49 |     |     | 0.35 |     |     | 0.18 |     |     |     | 0.39 |
| Control Delay (s/veh)   |     | 10.2 |     |     | 8.6  |     |     | 13.0 |     |     |     | 18.5 |
| Queue Delay             |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |     |     | 0.0  |
| Total Delay (s/veh)     |     | 10.2 |     |     | 8.6  |     |     | 13.0 |     |     |     | 18.5 |
| LOS                     |     | B    |     |     | A    |     |     | B    |     |     |     | B    |
| Approach Delay (s/veh)  |     | 10.3 |     |     | 8.6  |     |     | 13.1 |     |     |     | 18.6 |
| Approach LOS            |     | B    |     |     | A    |     |     | B    |     |     |     | B    |
| Queue Length 50th (ft)  |     | 97   |     |     | 61   |     |     | 16   |     |     |     | 51   |
| Queue Length 95th (ft)  |     | 163  |     |     | 107  |     |     | 45   |     |     |     | 101  |
| Internal Link Dist (ft) |     | 143  |     |     | 373  |     |     | 142  |     |     |     | 262  |
| Turn Bay Length (ft)    |     |      |     |     |      |     |     |      |     |     |     |      |
| Base Capacity (vph)     |     | 1001 |     |     | 972  |     |     | 482  |     |     |     | 483  |
| Starvation Cap Reductn  |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Spillback Cap Reductn   |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Storage Cap Reductn     |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Reduced v/c Ratio       |     | 0.49 |     |     | 0.36 |     |     | 0.18 |     |     |     | 0.40 |

Intersection Summary

|                                    |  |
|------------------------------------|--|
| Area Type:                         | Other  |
| Cycle Length:                      | 60   |
| Actuated Cycle Length:             | 60   |
| Offset:                            | 0 (0%), Referenced to phase 2:EBTL, Start of Green |
| Natural Cycle:                     | 60   |
| Control Type:                      | Pretimed   |
| Maximum v/c Ratio:                 | 0.49   |
| Intersection Signal Delay (s/veh): | 11.4   |
| Intersection LOS:                  | B  |
| Intersection Capacity Utilization: | 50.9%  |
| ICU Level of Service:              | A  |
| Analysis Period (min):             | 15   |

Splits and Phases: 4000: Sherman Ave & Main St



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 3    | 5    | 150  | 6    | 2    | 94   |
| Future Vol, veh/h        | 3    | 5    | 150  | 6    | 2    | 94   |
| Conflicting Peds, #/hr   | 83   | 0    | 0    | 4    | 4    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 68   | 68   | 68   | 68   | 68   | 68   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 4    | 7    | 221  | 9    | 3    | 138  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 456    | 229    | 0      | 0 | 233   | 0 |
| Stage 1              | 229    | -      | -      | - | -     | - |
| Stage 2              | 227    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 562    | 810    | -      | - | 1334  | - |
| Stage 1              | 809    | -      | -      | - | -     | - |
| Stage 2              | 811    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - |       |   |
| Mov Cap-1 Maneuver   | 515    | 807    | -      | - | 1329  | - |
| Mov Cap-2 Maneuver   | 515    | -      | -      | - | -     | - |
| Stage 1              | 806    | -      | -      | - | -     | - |
| Stage 2              | 745    | -      | -      | - | -     | - |

| Approach                    | WB | NB | SB   |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v10.51 |    | 0  | 0.16 |
| HCM LOS                     | B  |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 665   | 38    |
| HCM Lane V/C Ratio        | -   | -        | 0.018 | 0.002 |
| HCM Control Delay (s/veh) | -   | -        | 10.5  | 7.7   |
| HCM Lane LOS              | -   | -        | B     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0.1   | 0     |

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 8.5 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | W    |      |      | 4    | 4    |      |
| Traffic Vol, veh/h  | 37   | 35   | 19   | 120  | 73   | 24   |
| Future Vol, veh/h   | 37   | 35   | 19   | 120  | 73   | 24   |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 3    | 2    | 2    | 3    | 2    |
| Mvmt Flow           | 54   | 51   | 28   | 176  | 107  | 35   |
| Number of Lanes     | 1    | 0    | 0    | 1    | 1    | 0    |

| Approach                   | EB  | NB  | SB  |
|----------------------------|-----|-----|-----|
| Opposing Approach          |     | SB  | NB  |
| Opposing Lanes             | 0   | 1   | 1   |
| Conflicting Approach Left  | SB  | EB  |     |
| Conflicting Lanes Left     | 1   | 1   | 0   |
| Conflicting Approach Right | NB  |     | EB  |
| Conflicting Lanes Right    | 1   | 0   | 1   |
| HCM Control Delay, s/veh   | 8.2 | 8.8 | 8.2 |
| HCM LOS                    | A   | A   | A   |

| Lane                     | NBLn1 | EBLn1 | SBLn1 |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 14%   | 51%   | 0%    |
| Vol Thru, %              | 86%   | 0%    | 75%   |
| Vol Right, %             | 0%    | 49%   | 25%   |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 139   | 72    | 97    |
| LT Vol                   | 19    | 37    | 0     |
| Through Vol              | 120   | 0     | 73    |
| RT Vol                   | 0     | 35    | 24    |
| Lane Flow Rate           | 204   | 106   | 143   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.248 | 0.133 | 0.169 |
| Departure Headway (Hd)   | 4.374 | 4.51  | 4.267 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 826   | 796   | 842   |
| Service Time             | 2.374 | 2.53  | 2.285 |
| HCM Lane V/C Ratio       | 0.247 | 0.133 | 0.17  |
| HCM Control Delay, s/veh | 8.8   | 8.2   | 8.2   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 1     | 0.5   | 0.6   |

HCM 7th TWSC  
 3000: Sherman Ave & Sherman Access

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| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 0    | 4    | 143  | 3    | 2    | 111  |
| Future Vol, veh/h        | 0    | 4    | 143  | 3    | 2    | 111  |
| Conflicting Peds, #/hr   | 0    | 3    | 0    | 123  | 123  | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 0    | 6    | 199  | 4    | 3    | 154  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 483    | 327    | 0      | 0 | 326   | 0 |
| Stage 1              | 324    | -      | -      | - | -     | - |
| Stage 2              | 160    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 542    | 715    | -      | - | 1234  | - |
| Stage 1              | 733    | -      | -      | - | -     | - |
| Stage 2              | 869    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - |       | - |
| Mov Cap-1 Maneuver   | 477    | 629    | -      | - | 1089  | - |
| Mov Cap-2 Maneuver   | 477    | -      | -      | - | -     | - |
| Stage 1              | 647    | -      | -      | - | -     | - |
| Stage 2              | 867    | -      | -      | - | -     | - |

| Approach                    | WB | NB | SB   |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v10.77 |    | 0  | 0.15 |
| HCM LOS                     | B  |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 629   | 32    |
| HCM Lane V/C Ratio        | -   | -        | 0.009 | 0.003 |
| HCM Control Delay (s/veh) | -   | -        | 10.8  | 8.3   |
| HCM Lane LOS              | -   | -        | B     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0     | 0     |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | +    |      |      | +    |      |      | +    |      |      | +    |      |
| Traffic Vol, veh/h       | 6    | 391  | 59   | 15   | 310  | 6    | 55   | 2    | 71   | 0    | 0    | 3    |
| Future Vol, veh/h        | 6    | 391  | 59   | 15   | 310  | 6    | 55   | 2    | 71   | 0    | 0    | 3    |
| Conflicting Peds, #/hr   | 78   | 0    | 158  | 158  | 0    | 78   | 46   | 0    | 0    | 0    | 0    | 46   |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2    | 2    | 14   | 2    | 2    | 2    | 3    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 439  | 66   | 17   | 348  | 7    | 62   | 2    | 80   | 0    | 0    | 3    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 433    | 0 | 0 | 664    | 0 | 0 | 1072   | 1111  | 630   | 917    | 1140  | 476   |
| Stage 1              | -      | - | - | -      | - | - | 644    | 644   | -     | 463    | 463   | -     |
| Stage 2              | -      | - | - | -      | - | - | 428    | 467   | -     | 454    | 677   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.13   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.527  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1127   | - | - | 925    | - | - | 197    | 209   | 481   | 253    | 201   | 589   |
| Stage 1              | -      | - | - | -      | - | - | 460    | 468   | -     | 579    | 564   | -     |
| Stage 2              | -      | - | - | -      | - | - | 603    | 562   | -     | 586    | 452   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1043   | - | - | 786    | - | - | 154    | 159   | 409   | 179    | 152   | 521   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 154    | 159   | -     | 179    | 152   | -     |
| Stage 1              | -      | - | - | -      | - | - | 387    | 394   | -     | 521    | 508   | -     |
| Stage 2              | -      | - | - | -      | - | - | 557    | 506   | -     | 464    | 381   | -     |

| Approach               | EB   |  |  | WB   |  |  | NB    |  |  | SB    |  |  |
|------------------------|------|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.11 |  |  | 0.44 |  |  | 41.79 |  |  | 11.95 |  |  |
| HCM LOS                |      |  |  |      |  |  | E     |  |  | B     |  |  |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 235   | 23    | -   | -   | 81    | -   | -   | 521   |
| HCM Lane V/C Ratio        | 0.612 | 0.006 | -   | -   | 0.021 | -   | -   | 0.006 |
| HCM Control Delay (s/veh) | 41.8  | 8.5   | 0   | -   | 9.7   | 0   | -   | 11.9  |
| HCM Lane LOS              | E     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh)     | 3.6   | 0     | -   | -   | 0.1   | -   | -   | 0     |

Lanes, Volumes, Timings  
4000: Sherman Ave & Main St

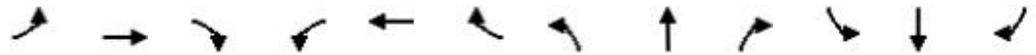
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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | +     |       |       | +     |       |       | +     |       |       | +     |       |
| Traffic Volume (vph)       | 21    | 374   | 22    | 5     | 330   | 54    | 52    | 74    | 29    | 52    | 38    | 16    |
| Future Volume (vph)        | 21    | 374   | 22    | 5     | 330   | 54    | 52    | 74    | 29    | 52    | 38    | 16    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       | 0.99  |       |       | 0.98  |       |       | 0.95  |       |       | 0.95  |       |
| Frt                        |       | 0.993 |       |       | 0.981 |       |       | 0.975 |       |       | 0.980 |       |
| Flt Protected              |       | 0.997 |       |       | 0.999 |       |       | 0.984 |       |       | 0.976 |       |
| Satd. Flow (prot)          | 0     | 1811  | 0     | 0     | 1803  | 0     | 0     | 1744  | 0     | 0     | 1715  | 0     |
| Flt Permitted              |       | 0.972 |       |       | 0.996 |       |       | 0.873 |       |       | 0.806 |       |
| Satd. Flow (perm)          | 0     | 1763  | 0     | 0     | 1797  | 0     | 0     | 1505  | 0     | 0     | 1381  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 8     |       |       | 21    |       |       | 20    |       |       | 15    |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |
| Link Distance (ft)         |       | 223   |       |       | 453   |       |       | 222   |       |       | 342   |       |
| Travel Time (s)            |       | 6.1   |       |       | 12.4  |       |       | 6.1   |       |       | 9.3   |       |
| Confl. Peds. (#/hr)        | 32    |       | 21    | 21    |       | 32    | 59    |       | 42    | 42    |       | 59    |
| Confl. Bikes (#/hr)        |       |       | 1     |       |       | 4     |       |       | 4     |       |       | 4     |
| 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  |
| Heavy Vehicles (%)         | 2%    | 3%    | 15%   | 20%   | 2%    | 2%    | 2%    | 2%    | 6%    | 2%    | 6%    | 6%    |
| Parking (#/hr)             | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     |
| Adj. Flow (vph)            | 23    | 402   | 24    | 5     | 355   | 58    | 56    | 80    | 31    | 56    | 41    | 17    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 449   | 0     | 0     | 418   | 0     | 0     | 167   | 0     | 0     | 114   | 0     |
| Enter Blocked Intersection | No    |
| Lane Alignment             | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Turn Type                  | Perm  | NA    |       |
| Protected Phases           |       | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases           | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |       |
| Minimum Split (s)          | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (s)            | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (%)            | 62.5% | 62.5% |       | 62.5% | 62.5% |       | 37.5% | 37.5% |       | 37.5% | 37.5% |       |
| Maximum Green (s)          | 33.0  | 33.0  |       | 33.0  | 33.0  |       | 18.0  | 18.0  |       | 18.0  | 18.0  |       |
| Yellow Time (s)            | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       |
| All-Red Time (s)           | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       |
| Lost Time Adjust (s)       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Total Lost Time (s)        |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |
| Lead/Lag                   |       |       |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?         |       |       |       |       |       |       |       |       |       |       |       |       |
| Walk Time (s)              | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       |
| Flash Dont Walk (s)        | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       |
| Pedestrian Calls (#/hr)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Act Effct Green (s)        |       | 33.0  |       |       | 33.0  |       |       | 18.0  |       |       | 18.0  |       |

Lanes, Volumes, Timings  
 4000: Sherman Ave & Main St

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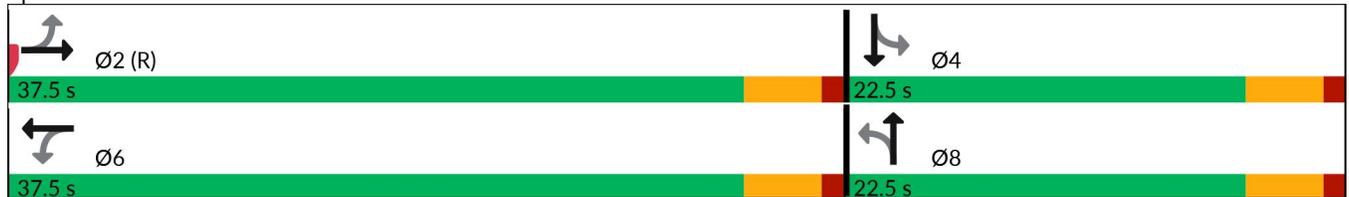


| Lane Group              | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL | NBT  | NBR | SBL | SBT  | SBR |
|-------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Actuated g/C Ratio      |     | 0.55 |     |     | 0.55 |     |     | 0.30 |     |     | 0.30 |     |
| v/c Ratio               |     | 0.46 |     |     | 0.41 |     |     | 0.35 |     |     | 0.26 |     |
| Control Delay (s/veh)   |     | 9.9  |     |     | 9.0  |     |     | 17.1 |     |     | 16.1 |     |
| Queue Delay             |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |
| Total Delay (s/veh)     |     | 9.9  |     |     | 9.0  |     |     | 17.1 |     |     | 16.1 |     |
| LOS                     |     | A    |     |     | A    |     |     | B    |     |     | B    |     |
| Approach Delay (s/veh)  |     | 9.9  |     |     | 9.1  |     |     | 17.1 |     |     | 16.1 |     |
| Approach LOS            |     | A    |     |     | A    |     |     | B    |     |     | B    |     |
| Queue Length 50th (ft)  |     | 86   |     |     | 74   |     |     | 41   |     |     | 27   |     |
| Queue Length 95th (ft)  |     | 147  |     |     | 129  |     |     | 86   |     |     | 62   |     |
| Internal Link Dist (ft) |     | 143  |     |     | 373  |     |     | 142  |     |     | 262  |     |
| Turn Bay Length (ft)    |     |      |     |     |      |     |     |      |     |     |      |     |
| Base Capacity (vph)     |     | 973  |     |     | 997  |     |     | 465  |     |     | 424  |     |
| Starvation Cap Reductn  |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Spillback Cap Reductn   |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Storage Cap Reductn     |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Reduced v/c Ratio       |     | 0.46 |     |     | 0.42 |     |     | 0.36 |     |     | 0.27 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Pretimed  
 Maximum v/c Ratio: 0.46  
 Intersection Signal Delay (s/veh): 11.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 56.3%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 4000: Sherman Ave & Main St



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 4    | 0    | 57   | 1    | 1    | 130  |
| Future Vol, veh/h        | 4    | 0    | 57   | 1    | 1    | 130  |
| Conflicting Peds, #/hr   | 4    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 0    | 63   | 1    | 1    | 143  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 212    | 63     | 0      | 0 | 64    | 0 |
| Stage 1              | 63     | -      | -      | - | -     | - |
| Stage 2              | 149    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 776    | 1001   | -      | - | 1539  | - |
| Stage 1              | 959    | -      | -      | - | -     | - |
| Stage 2              | 879    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - | -     | - |
| Mov Cap-1 Maneuver   | 772    | 1001   | -      | - | 1539  | - |
| Mov Cap-2 Maneuver   | 772    | -      | -      | - | -     | - |
| Stage 1              | 959    | -      | -      | - | -     | - |
| Stage 2              | 875    | -      | -      | - | -     | - |

| Approach               | WB   | NB | SB   |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 9.69 | 0  | 0.06 |
| HCM LOS                | A    |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 772   | 14    |
| HCM Lane V/C Ratio        | -   | -        | 0.006 | 0.001 |
| HCM Control Delay (s/veh) | -   | -        | 9.7   | 7.3   |
| HCM Lane LOS              | -   | -        | A     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0     | 0     |

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 7.7 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | W    |      |      | 4    | 4    |      |
| Traffic Vol, veh/h  | 5    | 44   | 15   | 53   | 125  | 9    |
| Future Vol, veh/h   | 5    | 44   | 15   | 53   | 125  | 9    |
| Peak Hour Factor    | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 5    | 48   | 16   | 58   | 137  | 10   |
| Number of Lanes     | 1    | 0    | 0    | 1    | 1    | 0    |

| Approach                   | EB  | NB  | SB  |
|----------------------------|-----|-----|-----|
| Opposing Approach          |     | SB  | NB  |
| Opposing Lanes             | 0   | 1   | 1   |
| Conflicting Approach Left  | SB  | EB  |     |
| Conflicting Lanes Left     | 1   | 1   | 0   |
| Conflicting Approach Right | NB  |     | EB  |
| Conflicting Lanes Right    | 1   | 0   | 1   |
| HCM Control Delay, s/veh   | 7.1 | 7.6 | 7.9 |
| HCM LOS                    | A   | A   | A   |

| Lane                     | NBLn1 | EBLn1 | SBLn1 |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 22%   | 10%   | 0%    |
| Vol Thru, %              | 78%   | 0%    | 93%   |
| Vol Right, %             | 0%    | 90%   | 7%    |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 68    | 49    | 134   |
| LT Vol                   | 15    | 5     | 0     |
| Through Vol              | 53    | 0     | 125   |
| RT Vol                   | 0     | 44    | 9     |
| Lane Flow Rate           | 75    | 54    | 147   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.087 | 0.058 | 0.165 |
| Departure Headway (Hd)   | 4.185 | 3.896 | 4.045 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 851   | 925   | 884   |
| Service Time             | 2.234 | 1.896 | 2.083 |
| HCM Lane V/C Ratio       | 0.088 | 0.058 | 0.166 |
| HCM Control Delay, s/veh | 7.6   | 7.1   | 7.9   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.3   | 0.2   | 0.6   |

HCM 7th TWSC  
 3000: Sherman Ave & Sherman Access

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| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 3    | 3    | 66   | 2    | 2    | 181  |
| Future Vol, veh/h        | 3    | 3    | 66   | 2    | 2    | 181  |
| Conflicting Peds, #/hr   | 0    | 3    | 0    | 46   | 46   | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 96   | 96   | 96   | 96   | 96   | 96   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 3    | 3    | 69   | 2    | 2    | 189  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 309    | 119    | 0      | 0 | 117   | 0 |
| Stage 1              | 116    | -      | -      | - | -     | - |
| Stage 2              | 193    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 684    | 933    | -      | - | 1472  | - |
| Stage 1              | 909    | -      | -      | - | -     | - |
| Stage 2              | 840    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - | -     | - |
| Mov Cap-1 Maneuver   | 653    | 890    | -      | - | 1407  | - |
| Mov Cap-2 Maneuver   | 653    | -      | -      | - | -     | - |
| Stage 1              | 869    | -      | -      | - | -     | - |
| Stage 2              | 839    | -      | -      | - | -     | - |

| Approach               | WB   | NB | SB   |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 9.82 | 0  | 0.08 |
| HCM LOS                | A    |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 753   | 20    |
| HCM Lane V/C Ratio        | -   | -        | 0.008 | 0.001 |
| HCM Control Delay (s/veh) | -   | -        | 9.8   | 7.6   |
| HCM Lane LOS              | -   | -        | A     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0     | 0     |

HCM 7th TWSC  
5000: Custer Ave & Main St

08/14/2024

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | +    |      |      | +    |      |      | +    |      |      | +    |      |
| Traffic Vol, veh/h       | 3    | 396  | 112  | 53   | 278  | 2    | 35   | 1    | 37   | 6    | 5    | 11   |
| Future Vol, veh/h        | 3    | 396  | 112  | 53   | 278  | 2    | 35   | 1    | 37   | 6    | 5    | 11   |
| Conflicting Peds, #/hr   | 58   | 0    | 140  | 140  | 0    | 58   | 60   | 0    | 0    | 0    | 0    | 60   |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 14   | 2    | 2    | 2    | 3    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 417  | 118  | 56   | 293  | 2    | 37   | 1    | 39   | 6    | 5    | 12   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 353    | 0 | 0 | 675    | 0 | 0 | 1089   | 1086  | 616   | 887    | 1144  | 412   |
| Stage 1              | -      | - | - | -      | - | - | 622    | 622   | -     | 463    | 463   | -     |
| Stage 2              | -      | - | - | -      | - | - | 467    | 464   | -     | 424    | 681   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.13   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.527  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1206   | - | - | 916    | - | - | 192    | 216   | 491   | 265    | 200   | 640   |
| Stage 1              | -      | - | - | -      | - | - | 473    | 479   | -     | 579    | 564   | -     |
| Stage 2              | -      | - | - | -      | - | - | 574    | 563   | -     | 608    | 450   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1139   | - | - | 794    | - | - | 136    | 161   | 425   | 206    | 149   | 570   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 136    | 161   | -     | 206    | 149   | -     |
| Stage 1              | -      | - | - | -      | - | - | 408    | 413   | -     | 501    | 488   | -     |
| Stage 2              | -      | - | - | -      | - | - | 481    | 488   | -     | 549    | 389   | -     |

| Approach               | EB   |  |  | WB   |  |  | NB    |  |  | SB    |  |  |
|------------------------|------|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.05 |  |  | 1.57 |  |  | 32.11 |  |  | 19.67 |  |  |
| HCM LOS                |      |  |  |      |  |  | D     |  |  | C     |  |  |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)          | 208   | 10    | -   | -   | 286  | -   | -   | 269   |
| HCM Lane V/C Ratio        | 0.369 | 0.003 | -   | -   | 0.07 | -   | -   | 0.086 |
| HCM Control Delay (s/veh) | 32.1  | 8.2   | 0   | -   | 9.9  | 0   | -   | 19.7  |
| HCM Lane LOS              | D     | A     | A   | -   | A    | A   | -   | C     |
| HCM 95th %tile Q(veh)     | 1.6   | 0     | -   | -   | 0.2  | -   | -   | 0.3   |

Lanes, Volumes, Timings  
4000: Sherman Ave & Main St

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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | +     |       |       | +     |       |       | +     |       |       | +     |       |
| Traffic Volume (vph)       | 12    | 439   | 37    | 21    | 296   | 27    | 24    | 37    | 25    | 58    | 108   | 26    |
| Future Volume (vph)        | 12    | 439   | 37    | 21    | 296   | 27    | 24    | 37    | 25    | 58    | 108   | 26    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       | 0.99  |       |       | 0.99  |       |       | 0.96  |       |       | 0.96  |       |
| Fr <sub>t</sub>            |       | 0.990 |       |       | 0.989 |       |       | 0.961 |       |       | 0.982 |       |
| Fl <sub>t</sub> Protected  |       | 0.999 |       |       | 0.997 |       |       | 0.986 |       |       | 0.985 |       |
| Satd. Flow (prot)          | 0     | 1830  | 0     | 0     | 1822  | 0     | 0     | 1720  | 0     | 0     | 1780  | 0     |
| Fl <sub>t</sub> Permitted  |       | 0.990 |       |       | 0.962 |       |       | 0.896 |       |       | 0.890 |       |
| Satd. Flow (perm)          | 0     | 1812  | 0     | 0     | 1756  | 0     | 0     | 1545  | 0     | 0     | 1579  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 11    |       |       | 11    |       |       | 26    |       |       | 13    |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |
| Link Distance (ft)         |       | 223   |       |       | 453   |       |       | 222   |       |       | 342   |       |
| Travel Time (s)            |       | 6.1   |       |       | 12.4  |       |       | 6.1   |       |       | 9.3   |       |
| Confl. Peds. (#/hr)        | 48    |       | 38    | 38    |       | 48    | 36    |       | 41    | 41    |       | 36    |
| Confl. Bikes (#/hr)        |       |       | 3     |       |       | 2     |       |       | 2     |       |       | 10    |
| Peak Hour Factor           | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  |
| Parking (#/hr)             | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     |
| Adj. Flow (vph)            | 13    | 457   | 39    | 22    | 308   | 28    | 25    | 39    | 26    | 60    | 113   | 27    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 509   | 0     | 0     | 358   | 0     | 0     | 90    | 0     | 0     | 200   | 0     |
| Enter Blocked Intersection | No    |
| Lane Alignment             | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Turn Type                  | Perm  | NA    |       |
| Protected Phases           |       | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases           | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |       |
| Minimum Split (s)          | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (s)            | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (%)            | 62.5% | 62.5% |       | 62.5% | 62.5% |       | 37.5% | 37.5% |       | 37.5% | 37.5% |       |
| Maximum Green (s)          | 33.0  | 33.0  |       | 33.0  | 33.0  |       | 18.0  | 18.0  |       | 18.0  | 18.0  |       |
| Yellow Time (s)            | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       |
| All-Red Time (s)           | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       |
| Lost Time Adjust (s)       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Total Lost Time (s)        |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |
| Lead/Lag                   |       |       |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?         |       |       |       |       |       |       |       |       |       |       |       |       |
| Walk Time (s)              | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       |
| Flash Dont Walk (s)        | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       |
| Pedestrian Calls (#/hr)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Act Effct Green (s)        |       | 33.0  |       |       | 33.0  |       |       | 18.0  |       |       | 18.0  |       |
| Actuated g/C Ratio         |       | 0.55  |       |       | 0.55  |       |       | 0.30  |       |       | 0.30  |       |

Lanes, Volumes, Timings  
 4000: Sherman Ave & Main St

08/14/2024

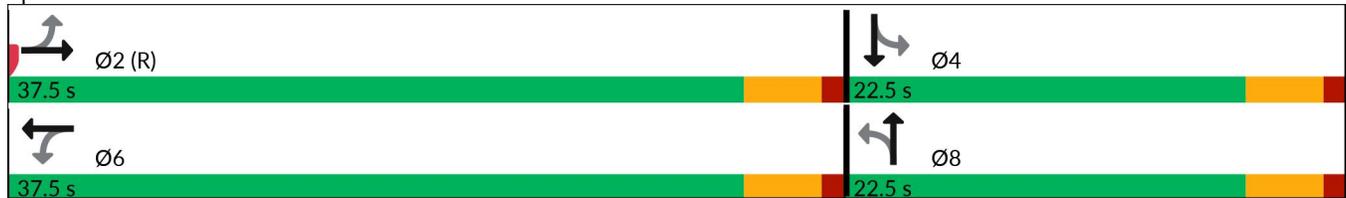


| Lane Group              | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL | NBT  | NBR | SBL | SBT | SBR  |
|-------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|------|
| v/c Ratio               |     | 0.50 |     |     | 0.36 |     |     | 0.18 |     |     |     | 0.41 |
| Control Delay (s/veh)   |     | 10.4 |     |     | 8.7  |     |     | 13.1 |     |     |     | 18.8 |
| Queue Delay             |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |     |     | 0.0  |
| Total Delay (s/veh)     |     | 10.4 |     |     | 8.7  |     |     | 13.1 |     |     |     | 18.8 |
| LOS                     |     | B    |     |     | A    |     |     | B    |     |     |     | B    |
| Approach Delay (s/veh)  |     | 10.5 |     |     | 8.7  |     |     | 13.1 |     |     |     | 18.8 |
| Approach LOS            |     | B    |     |     | A    |     |     | B    |     |     |     | B    |
| Queue Length 50th (ft)  |     | 101  |     |     | 63   |     |     | 17   |     |     |     | 53   |
| Queue Length 95th (ft)  |     | 169  |     |     | 111  |     |     | 46   |     |     |     | 104  |
| Internal Link Dist (ft) |     | 143  |     |     | 373  |     |     | 142  |     |     |     | 262  |
| Turn Bay Length (ft)    |     |      |     |     |      |     |     |      |     |     |     |      |
| Base Capacity (vph)     |     | 1001 |     |     | 970  |     |     | 481  |     |     |     | 482  |
| Starvation Cap Reductn  |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Spillback Cap Reductn   |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Storage Cap Reductn     |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Reduced v/c Ratio       |     | 0.51 |     |     | 0.37 |     |     | 0.19 |     |     |     | 0.41 |

Intersection Summary

|                                    |  |
|------------------------------------|--|
| Area Type:                         | Other  |
| Cycle Length:                      | 60   |
| Actuated Cycle Length:             | 60   |
| Offset:                            | 0 (0%), Referenced to phase 2:EBTL, Start of Green |
| Natural Cycle:                     | 60   |
| Control Type:                      | Pretimed   |
| Maximum v/c Ratio:                 | 0.51   |
| Intersection Signal Delay (s/veh): | 11.6   |
| Intersection LOS:                  | B  |
| Intersection Capacity Utilization: | 51.6%  |
| ICU Level of Service:              | A  |
| Analysis Period (min):             | 15   |

Splits and Phases: 4000: Sherman Ave & Main St



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 3    | 5    | 160  | 6    | 2    | 97   |
| Future Vol, veh/h        | 3    | 5    | 160  | 6    | 2    | 97   |
| Conflicting Peds, #/hr   | 83   | 0    | 0    | 4    | 4    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 68   | 68   | 68   | 68   | 68   | 68   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 4    | 7    | 235  | 9    | 3    | 143  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 475    | 244    | 0      | 0 | 248   | 0 |
| Stage 1              | 244    | -      | -      | - | -     | - |
| Stage 2              | 232    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 548    | 795    | -      | - | 1318  | - |
| Stage 1              | 797    | -      | -      | - | -     | - |
| Stage 2              | 807    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - |       | - |
| Mov Cap-1 Maneuver   | 502    | 792    | -      | - | 1313  | - |
| Mov Cap-2 Maneuver   | 502    | -      | -      | - | -     | - |
| Stage 1              | 794    | -      | -      | - | -     | - |
| Stage 2              | 741    | -      | -      | - | -     | - |

| Approach                    | WB | NB | SB   |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v10.63 |    | 0  | 0.16 |
| HCM LOS                     | B  |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 651   | 36    |
| HCM Lane V/C Ratio        | -   | -        | 0.018 | 0.002 |
| HCM Control Delay (s/veh) | -   | -        | 10.6  | 7.7   |
| HCM Lane LOS              | -   | -        | B     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0.1   | 0     |

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 8.6 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | W    |      |      | 4    | 4    |      |
| Traffic Vol, veh/h  | 37   | 35   | 19   | 130  | 76   | 24   |
| Future Vol, veh/h   | 37   | 35   | 19   | 130  | 76   | 24   |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 3    | 2    | 2    | 3    | 2    |
| Mvmt Flow           | 54   | 51   | 28   | 191  | 112  | 35   |
| Number of Lanes     | 1    | 0    | 0    | 1    | 1    | 0    |

| Approach                   | EB  | NB | SB  |
|----------------------------|-----|----|-----|
| Opposing Approach          |     | SB | NB  |
| Opposing Lanes             | 0   | 1  | 1   |
| Conflicting Approach Left  | SB  | EB |     |
| Conflicting Lanes Left     | 1   | 1  | 0   |
| Conflicting Approach Right | NB  |    | EB  |
| Conflicting Lanes Right    | 1   | 0  | 1   |
| HCM Control Delay, s/veh   | 8.3 | 9  | 8.2 |
| HCM LOS                    | A   | A  | A   |

| Lane                     | NBLn1 | EBLn1 | SBLn1 |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 13%   | 51%   | 0%    |
| Vol Thru, %              | 87%   | 0%    | 76%   |
| Vol Right, %             | 0%    | 49%   | 24%   |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 149   | 72    | 100   |
| LT Vol                   | 19    | 37    | 0     |
| Through Vol              | 130   | 0     | 76    |
| RT Vol                   | 0     | 35    | 24    |
| Lane Flow Rate           | 219   | 106   | 147   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.266 | 0.134 | 0.175 |
| Departure Headway (Hd)   | 4.363 | 4.552 | 4.289 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 826   | 789   | 838   |
| Service Time             | 2.38  | 2.574 | 2.307 |
| HCM Lane V/C Ratio       | 0.265 | 0.134 | 0.175 |
| HCM Control Delay, s/veh | 9     | 8.3   | 8.2   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 1.1   | 0.5   | 0.6   |

HCM 7th TWSC  
 3000: Sherman Ave & Sherman Access

08/14/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 27   | 14   | 143  | 11   | 5    | 111  |
| Future Vol, veh/h        | 27   | 14   | 143  | 11   | 5    | 111  |
| Conflicting Peds, #/hr   | 0    | 3    | 0    | 123  | 123  | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 38   | 19   | 199  | 15   | 7    | 154  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 497    | 332    | 0      | 0 | 337   |
| Stage 1              | 329    | -      | -      | - | -     |
| Stage 2              | 168    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 532    | 709    | -      | - | 1222  |
| Stage 1              | 729    | -      | -      | - | -     |
| Stage 2              | 862    | -      | -      | - | -     |
| Platoon blocked, %   |        |        | -      | - | -     |
| Mov Cap-1 Maneuver   | 467    | 625    | -      | - | 1079  |
| Mov Cap-2 Maneuver   | 467    | -      | -      | - | -     |
| Stage 1              | 644    | -      | -      | - | -     |
| Stage 2              | 856    | -      | -      | - | -     |

| Approach               | WB    | NB | SB   |
|------------------------|-------|----|------|
| HCM Control Delay, s/v | 12.93 | 0  | 0.36 |
| HCM LOS                | B     |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 511   | 78    |
| HCM Lane V/C Ratio        | -   | -        | 0.112 | 0.006 |
| HCM Control Delay (s/veh) | -   | -        | 12.9  | 8.4   |
| HCM Lane LOS              | -   | -        | B     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0.4   | 0     |

HCM 7th TWSC  
5000: Custer Ave & Main St

08/14/2024

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 7.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | +    |      |      | +    |      |      | +    |      |      | +    |      |
| Traffic Vol, veh/h       | 6    | 391  | 59   | 15   | 310  | 14   | 55   | 3    | 71   | 29   | 3    | 3    |
| Future Vol, veh/h        | 6    | 391  | 59   | 15   | 310  | 14   | 55   | 3    | 71   | 29   | 3    | 3    |
| Conflicting Peds, #/hr   | 78   | 0    | 158  | 158  | 0    | 78   | 46   | 0    | 0    | 0    | 0    | 46   |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2    | 2    | 14   | 2    | 2    | 2    | 3    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 439  | 66   | 17   | 348  | 16   | 62   | 3    | 80   | 33   | 3    | 3    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 442    | 0 | 0 | 664    | 0 | 0 | 1074   | 1120  | 630   | 922    | 1145  | 480   |
| Stage 1              | -      | - | - | -      | - | - | 644    | 644   | -     | 468    | 468   | -     |
| Stage 2              | -      | - | - | -      | - | - | 430    | 476   | -     | 454    | 677   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.13   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.527  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1118   | - | - | 925    | - | - | 197    | 207   | 481   | 251    | 200   | 586   |
| Stage 1              | -      | - | - | -      | - | - | 460    | 468   | -     | 576    | 561   | -     |
| Stage 2              | -      | - | - | -      | - | - | 602    | 557   | -     | 585    | 452   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1035   | - | - | 786    | - | - | 150    | 157   | 409   | 176    | 151   | 518   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 150    | 157   | -     | 176    | 151   | -     |
| Stage 1              | -      | - | - | -      | - | - | 387    | 394   | -     | 518    | 506   | -     |
| Stage 2              | -      | - | - | -      | - | - | 552    | 502   | -     | 463    | 381   | -     |

| Approach               | EB   |  |  | WB   |  |  | NB    |  |  | SB   |  |  |
|------------------------|------|--|--|------|--|--|-------|--|--|------|--|--|
| HCM Control Delay, s/v | 0.11 |  |  | 0.43 |  |  | 43.89 |  |  | 29.8 |  |  |
| HCM LOS                |      |  |  |      |  |  | E     |  |  | D    |  |  |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 230   | 23    | -   | -   | 79    | -   | -   | 184   |
| HCM Lane V/C Ratio        | 0.629 | 0.007 | -   | -   | 0.021 | -   | -   | 0.214 |
| HCM Control Delay (s/veh) | 43.9  | 8.5   | 0   | -   | 9.7   | 0   | -   | 29.8  |
| HCM Lane LOS              | E     | A     | A   | -   | A     | A   | -   | D     |
| HCM 95th %tile Q(veh)     | 3.8   | 0     | -   | -   | 0.1   | -   | -   | 0.8   |

Lanes, Volumes, Timings  
4000: Sherman Ave & Main St

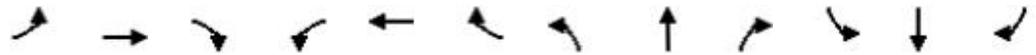
08/14/2024



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     |       |       | ↕     |       |       | ↕     |       |       | ↕     |       |
| Traffic Volume (vph)       | 28    | 374   | 22    | 5     | 330   | 54    | 52    | 75    | 29    | 52    | 41    | 40    |
| Future Volume (vph)        | 28    | 374   | 22    | 5     | 330   | 54    | 52    | 75    | 29    | 52    | 41    | 40    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       | 0.99  |       |       | 0.98  |       |       | 0.95  |       |       | 0.94  |       |
| Frt                        |       | 0.993 |       |       | 0.981 |       |       | 0.975 |       |       | 0.959 |       |
| Flt Protected              |       | 0.997 |       |       | 0.999 |       |       | 0.984 |       |       | 0.981 |       |
| Satd. Flow (prot)          | 0     | 1811  | 0     | 0     | 1803  | 0     | 0     | 1744  | 0     | 0     | 1649  | 0     |
| Flt Permitted              |       | 0.961 |       |       | 0.996 |       |       | 0.865 |       |       | 0.837 |       |
| Satd. Flow (perm)          | 0     | 1743  | 0     | 0     | 1797  | 0     | 0     | 1494  | 0     | 0     | 1379  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 7     |       |       | 21    |       |       | 19    |       |       | 37    |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |
| Link Distance (ft)         |       | 223   |       |       | 453   |       |       | 222   |       |       | 342   |       |
| Travel Time (s)            |       | 6.1   |       |       | 12.4  |       |       | 6.1   |       |       | 9.3   |       |
| Confl. Peds. (#/hr)        | 32    |       | 21    | 21    |       | 32    | 59    |       | 42    | 42    |       | 59    |
| Confl. Bikes (#/hr)        |       |       | 1     |       |       | 4     |       |       | 4     |       |       | 4     |
| 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  |
| Heavy Vehicles (%)         | 2%    | 3%    | 15%   | 20%   | 2%    | 2%    | 2%    | 2%    | 6%    | 2%    | 6%    | 6%    |
| Parking (#/hr)             | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     |
| Adj. Flow (vph)            | 30    | 402   | 24    | 5     | 355   | 58    | 56    | 81    | 31    | 56    | 44    | 43    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 456   | 0     | 0     | 418   | 0     | 0     | 168   | 0     | 0     | 143   | 0     |
| Enter Blocked Intersection | No    |
| Lane Alignment             | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Turn Type                  | Perm  | NA    |       |
| Protected Phases           |       | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases           | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |       |
| Minimum Split (s)          | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (s)            | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (%)            | 62.5% | 62.5% |       | 62.5% | 62.5% |       | 37.5% | 37.5% |       | 37.5% | 37.5% |       |
| Maximum Green (s)          | 33.0  | 33.0  |       | 33.0  | 33.0  |       | 18.0  | 18.0  |       | 18.0  | 18.0  |       |
| Yellow Time (s)            | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       |
| All-Red Time (s)           | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       |
| Lost Time Adjust (s)       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Total Lost Time (s)        |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |
| Lead/Lag                   |       |       |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?         |       |       |       |       |       |       |       |       |       |       |       |       |
| Walk Time (s)              | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       |
| Flash Dont Walk (s)        | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       |
| Pedestrian Calls (#/hr)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Act Effct Green (s)        |       | 33.0  |       |       | 33.0  |       |       | 18.0  |       |       | 18.0  |       |

Lanes, Volumes, Timings  
 4000: Sherman Ave & Main St

08/14/2024

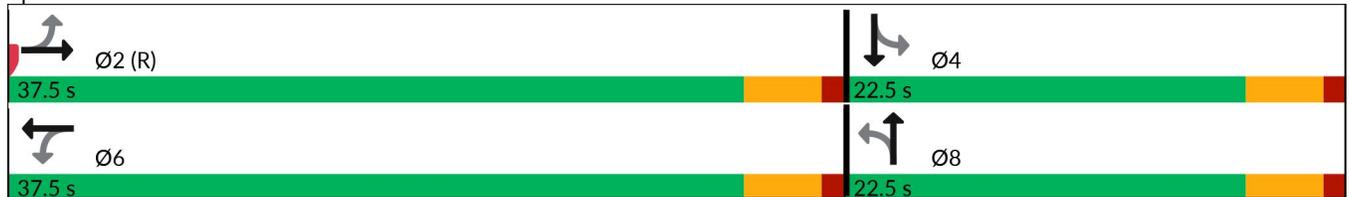


| Lane Group              | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL | NBT  | NBR | SBL | SBT  | SBR |
|-------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Actuated g/C Ratio      |     | 0.55 |     |     | 0.55 |     |     | 0.30 |     |     | 0.30 |     |
| v/c Ratio               |     | 0.47 |     |     | 0.41 |     |     | 0.36 |     |     | 0.32 |     |
| Control Delay (s/veh)   |     | 10.1 |     |     | 9.0  |     |     | 17.3 |     |     | 14.7 |     |
| Queue Delay             |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |
| Total Delay (s/veh)     |     | 10.1 |     |     | 9.0  |     |     | 17.3 |     |     | 14.7 |     |
| LOS                     |     | B    |     |     | A    |     |     | B    |     |     | B    |     |
| Approach Delay (s/veh)  |     | 10.1 |     |     | 9.1  |     |     | 17.4 |     |     | 14.7 |     |
| Approach LOS            |     | B    |     |     | A    |     |     | B    |     |     | B    |     |
| Queue Length 50th (ft)  |     | 88   |     |     | 74   |     |     | 42   |     |     | 29   |     |
| Queue Length 95th (ft)  |     | 151  |     |     | 129  |     |     | 87   |     |     | 69   |     |
| Internal Link Dist (ft) |     | 143  |     |     | 373  |     |     | 142  |     |     | 262  |     |
| Turn Bay Length (ft)    |     |      |     |     |      |     |     |      |     |     |      |     |
| Base Capacity (vph)     |     | 961  |     |     | 997  |     |     | 461  |     |     | 439  |     |
| Starvation Cap Reductn  |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Spillback Cap Reductn   |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Storage Cap Reductn     |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Reduced v/c Ratio       |     | 0.47 |     |     | 0.42 |     |     | 0.36 |     |     | 0.33 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Pretimed  
 Maximum v/c Ratio: 0.47  
 Intersection Signal Delay (s/veh): 11.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 4000: Sherman Ave & Main St



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 4    | 0    | 62   | 1    | 1    | 138  |
| Future Vol, veh/h        | 4    | 0    | 62   | 1    | 1    | 138  |
| Conflicting Peds, #/hr   | 4    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 0    | 68   | 1    | 1    | 152  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 227    | 69     | 0      | 0 | 69    | 0 |
| Stage 1              | 69     | -      | -      | - | -     | - |
| Stage 2              | 158    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 762    | 994    | -      | - | 1532  | - |
| Stage 1              | 954    | -      | -      | - | -     | - |
| Stage 2              | 871    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - |       |   |
| Mov Cap-1 Maneuver   | 758    | 994    | -      | - | 1532  | - |
| Mov Cap-2 Maneuver   | 758    | -      | -      | - | -     | - |
| Stage 1              | 954    | -      | -      | - | -     | - |
| Stage 2              | 867    | -      | -      | - | -     | - |

| Approach               | WB   | NB | SB   |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 9.78 | 0  | 0.05 |
| HCM LOS                | A    |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 758   | 13    |
| HCM Lane V/C Ratio        | -   | -        | 0.006 | 0.001 |
| HCM Control Delay (s/veh) | -   | -        | 9.8   | 7.4   |
| HCM Lane LOS              | -   | -        | A     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0     | 0     |

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 7.8 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | W    |      |      | 4    | 4    |      |
| Traffic Vol, veh/h  | 5    | 44   | 15   | 58   | 133  | 9    |
| Future Vol, veh/h   | 5    | 44   | 15   | 58   | 133  | 9    |
| Peak Hour Factor    | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 5    | 48   | 16   | 64   | 146  | 10   |
| Number of Lanes     | 1    | 0    | 0    | 1    | 1    | 0    |

| Approach                   | EB  | NB  | SB |
|----------------------------|-----|-----|----|
| Opposing Approach          |     | SB  | NB |
| Opposing Lanes             | 0   | 1   | 1  |
| Conflicting Approach Left  | SB  | EB  |    |
| Conflicting Lanes Left     | 1   | 1   | 0  |
| Conflicting Approach Right | NB  |     | EB |
| Conflicting Lanes Right    | 1   | 0   | 1  |
| HCM Control Delay, s/veh   | 7.2 | 7.7 | 8  |
| HCM LOS                    | A   | A   | A  |

| Lane                     | NBLn1 | EBLn1 | SBLn1 |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 21%   | 10%   | 0%    |
| Vol Thru, %              | 79%   | 0%    | 94%   |
| Vol Right, %             | 0%    | 90%   | 6%    |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 73    | 49    | 142   |
| LT Vol                   | 15    | 5     | 0     |
| Through Vol              | 58    | 0     | 133   |
| RT Vol                   | 0     | 44    | 9     |
| Lane Flow Rate           | 80    | 54    | 156   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.093 | 0.059 | 0.176 |
| Departure Headway (Hd)   | 4.188 | 3.928 | 4.051 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 850   | 918   | 882   |
| Service Time             | 2.243 | 1.928 | 2.092 |
| HCM Lane V/C Ratio       | 0.094 | 0.059 | 0.177 |
| HCM Control Delay, s/veh | 7.7   | 7.2   | 8     |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.3   | 0.2   | 0.6   |

HCM 7th TWSC  
 3000: Sherman Ave & Sherman Access

08/14/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 17   | 8    | 66   | 24   | 10   | 181  |
| Future Vol, veh/h        | 17   | 8    | 66   | 24   | 10   | 181  |
| Conflicting Peds, #/hr   | 0    | 3    | 0    | 46   | 46   | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 96   | 96   | 96   | 96   | 96   | 96   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 3    |
| Mvmt Flow                | 18   | 8    | 69   | 25   | 10   | 189  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 337    | 130    | 0      | 0 | 140   |
| Stage 1              | 127    | -      | -      | - | -     |
| Stage 2              | 209    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 659    | 919    | -      | - | 1444  |
| Stage 1              | 899    | -      | -      | - | -     |
| Stage 2              | 826    | -      | -      | - | -     |
| Platoon blocked, %   |        |        | -      | - | -     |
| Mov Cap-1 Maneuver   | 625    | 877    | -      | - | 1380  |
| Mov Cap-2 Maneuver   | 625    | -      | -      | - | -     |
| Stage 1              | 859    | -      | -      | - | -     |
| Stage 2              | 819    | -      | -      | - | -     |

| Approach                    | WB | NB | SB  |
|-----------------------------|----|----|-----|
| HCM Control Delay, s/v10.44 |    | 0  | 0.4 |
| HCM LOS                     | B  |    |     |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 688   | 94    |
| HCM Lane V/C Ratio        | -   | -        | 0.038 | 0.008 |
| HCM Control Delay (s/veh) | -   | -        | 10.4  | 7.6   |
| HCM Lane LOS              | -   | -        | B     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0.1   | 0     |

HCM 7th TWSC  
5000: Custer Ave & Main St

08/14/2024

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | +    |      |      | +    |      |      | +    |      |      | +    |      |
| Traffic Vol, veh/h       | 3    | 396  | 112  | 53   | 278  | 23   | 35   | 4    | 37   | 20   | 7    | 11   |
| Future Vol, veh/h        | 3    | 396  | 112  | 53   | 278  | 23   | 35   | 4    | 37   | 20   | 7    | 11   |
| Conflicting Peds, #/hr   | 58   | 0    | 140  | 140  | 0    | 58   | 60   | 0    | 0    | 0    | 0    | 60   |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 14   | 2    | 2    | 2    | 3    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 417  | 118  | 56   | 293  | 24   | 37   | 4    | 39   | 21   | 7    | 12   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 375    | 0 | 0 | 675    | 0 | 0 | 1090   | 1109  | 616   | 900    | 1155  | 423   |
| Stage 1              | -      | - | - | -      | - | - | 622    | 622   | -     | 474    | 474   | -     |
| Stage 2              | -      | - | - | -      | - | - | 468    | 486   | -     | 425    | 681   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.13   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.13   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.527  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1184   | - | - | 916    | - | - | 192    | 210   | 491   | 260    | 197   | 631   |
| Stage 1              | -      | - | - | -      | - | - | 473    | 479   | -     | 571    | 558   | -     |
| Stage 2              | -      | - | - | -      | - | - | 574    | 551   | -     | 607    | 450   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1118   | - | - | 794    | - | - | 133    | 156   | 425   | 198    | 147   | 562   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 133    | 156   | -     | 198    | 147   | -     |
| Stage 1              | -      | - | - | -      | - | - | 408    | 413   | -     | 493    | 482   | -     |
| Stage 2              | -      | - | - | -      | - | - | 477    | 476   | -     | 544    | 389   | -     |

| Approach               | EB   |  |  | WB   |  |  | NB   |  |  | SB    |  |  |
|------------------------|------|--|--|------|--|--|------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.05 |  |  | 1.48 |  |  | 33.9 |  |  | 24.35 |  |  |
| HCM LOS                |      |  |  |      |  |  | D    |  |  | C     |  |  |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)          | 203   | 10    | -   | -   | 265  | -   | -   | 226   |
| HCM Lane V/C Ratio        | 0.395 | 0.003 | -   | -   | 0.07 | -   | -   | 0.177 |
| HCM Control Delay (s/veh) | 33.9  | 8.2   | 0   | -   | 9.9  | 0   | -   | 24.3  |
| HCM Lane LOS              | D     | A     | A   | -   | A    | A   | -   | C     |
| HCM 95th %tile Q(veh)     | 1.8   | 0     | -   | -   | 0.2  | -   | -   | 0.6   |

Lanes, Volumes, Timings  
4000: Sherman Ave & Main St

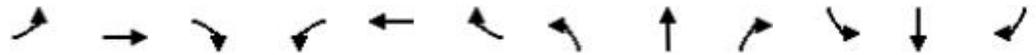
08/14/2024



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | +     |       |       | +     |       |       | +     |       |       | +     |       |
| Traffic Volume (vph)       | 31    | 439   | 37    | 21    | 296   | 27    | 24    | 40    | 25    | 58    | 110   | 38    |
| Future Volume (vph)        | 31    | 439   | 37    | 21    | 296   | 27    | 24    | 40    | 25    | 58    | 110   | 38    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       | 0.99  |       |       | 0.99  |       |       | 0.96  |       |       | 0.96  |       |
| Frt                        |       | 0.990 |       |       | 0.989 |       |       | 0.962 |       |       | 0.975 |       |
| Flt Protected              |       | 0.997 |       |       | 0.997 |       |       | 0.987 |       |       | 0.986 |       |
| Satd. Flow (prot)          | 0     | 1827  | 0     | 0     | 1822  | 0     | 0     | 1725  | 0     | 0     | 1761  | 0     |
| Flt Permitted              |       | 0.967 |       |       | 0.961 |       |       | 0.895 |       |       | 0.895 |       |
| Satd. Flow (perm)          | 0     | 1768  | 0     | 0     | 1754  | 0     | 0     | 1547  | 0     | 0     | 1572  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 11    |       |       | 11    |       |       | 26    |       |       | 20    |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |
| Link Distance (ft)         |       | 223   |       |       | 453   |       |       | 222   |       |       | 342   |       |
| Travel Time (s)            |       | 6.1   |       |       | 12.4  |       |       | 6.1   |       |       | 9.3   |       |
| Confl. Peds. (#/hr)        | 48    |       | 38    | 38    |       | 48    | 36    |       | 41    | 41    |       | 36    |
| Confl. Bikes (#/hr)        |       |       | 3     |       |       | 2     |       |       | 2     |       |       | 10    |
| Peak Hour Factor           | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  | 0.96  |
| Parking (#/hr)             | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     | 7     |       | 7     |
| Adj. Flow (vph)            | 32    | 457   | 39    | 22    | 308   | 28    | 25    | 42    | 26    | 60    | 115   | 40    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 528   | 0     | 0     | 358   | 0     | 0     | 93    | 0     | 0     | 215   | 0     |
| Enter Blocked Intersection | No    |
| Lane Alignment             | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Turn Type                  | Perm  | NA    |       |
| Protected Phases           |       | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |
| Permitted Phases           | 2     |       |       | 6     |       |       | 8     |       |       | 4     |       |       |
| Minimum Split (s)          | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (s)            | 37.5  | 37.5  |       | 37.5  | 37.5  |       | 22.5  | 22.5  |       | 22.5  | 22.5  |       |
| Total Split (%)            | 62.5% | 62.5% |       | 62.5% | 62.5% |       | 37.5% | 37.5% |       | 37.5% | 37.5% |       |
| Maximum Green (s)          | 33.0  | 33.0  |       | 33.0  | 33.0  |       | 18.0  | 18.0  |       | 18.0  | 18.0  |       |
| Yellow Time (s)            | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       | 3.5   | 3.5   |       |
| All-Red Time (s)           | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       | 1.0   | 1.0   |       |
| Lost Time Adjust (s)       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Total Lost Time (s)        |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |       | 4.5   |       |
| Lead/Lag                   |       |       |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?         |       |       |       |       |       |       |       |       |       |       |       |       |
| Walk Time (s)              | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       |
| Flash Dont Walk (s)        | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       |
| Pedestrian Calls (#/hr)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Act Effct Green (s)        |       | 33.0  |       |       | 33.0  |       |       | 18.0  |       |       | 18.0  |       |
| Actuated g/C Ratio         |       | 0.55  |       |       | 0.55  |       |       | 0.30  |       |       | 0.30  |       |

Lanes, Volumes, Timings  
 4000: Sherman Ave & Main St

08/14/2024



| Lane Group              | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL | NBT  | NBR | SBL | SBT | SBR  |
|-------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|------|
| v/c Ratio               |     | 0.54 |     |     | 0.36 |     |     | 0.19 |     |     |     | 0.44 |
| Control Delay (s/veh)   |     | 11.0 |     |     | 8.7  |     |     | 13.2 |     |     |     | 18.8 |
| Queue Delay             |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |     |     | 0.0  |
| Total Delay (s/veh)     |     | 11.0 |     |     | 8.7  |     |     | 13.2 |     |     |     | 18.8 |
| LOS                     |     | B    |     |     | A    |     |     | B    |     |     |     | B    |
| Approach Delay (s/veh)  |     | 11.0 |     |     | 8.7  |     |     | 13.3 |     |     |     | 18.8 |
| Approach LOS            |     | B    |     |     | A    |     |     | B    |     |     |     | B    |
| Queue Length 50th (ft)  |     | 107  |     |     | 63   |     |     | 18   |     |     |     | 56   |
| Queue Length 95th (ft)  |     | 182  |     |     | 111  |     |     | 47   |     |     |     | 110  |
| Internal Link Dist (ft) |     | 143  |     |     | 373  |     |     | 142  |     |     |     | 262  |
| Turn Bay Length (ft)    |     |      |     |     |      |     |     |      |     |     |     |      |
| Base Capacity (vph)     |     | 977  |     |     | 969  |     |     | 482  |     |     |     | 485  |
| Starvation Cap Reductn  |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Spillback Cap Reductn   |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Storage Cap Reductn     |     | 0    |     |     | 0    |     |     | 0    |     |     |     | 0    |
| Reduced v/c Ratio       |     | 0.54 |     |     | 0.37 |     |     | 0.19 |     |     |     | 0.44 |

Intersection Summary

|                                    |  |
|------------------------------------|--|
| Area Type:                         | Other  |
| Cycle Length:                      | 60   |
| Actuated Cycle Length:             | 60   |
| Offset:                            | 0 (0%), Referenced to phase 2:EBTL, Start of Green |
| Natural Cycle:                     | 60   |
| Control Type:                      | Pretimed   |
| Maximum v/c Ratio:                 | 0.54   |
| Intersection Signal Delay (s/veh): | 11.9   |
| Intersection LOS:                  | B  |
| Intersection Capacity Utilization: | 58.4%  |
| ICU Level of Service:              | B  |
| Analysis Period (min):             | 15   |

Splits and Phases: 4000: Sherman Ave & Main St

