

(Traffic Study):  
Stamp required  
without disclaimer.  
Regardless of  
application type, all  
submitted traffic  
studies shall be  
considered final.

# Riverfront Park Filing No. 2 Traffic Impact Study



**Date:** July 25, 2025

**Submitted To:**

Four Points Surveying and Engineering  
410 South Lincoln Avenue, Suite #15  
Steamboat Springs, CO 80477

**Submitted By:**

Fox Tuttle Transportation Group, LLC  
1580 Logan Street, 6<sup>th</sup> Floor  
Denver, CO 80203

**FOX TUTTLE** →

---

**TABLE OF CONTENTS**

**1.0 Introduction ..... 1**

**2.0 Project Description ..... 1**

**3.0 Study Considerations ..... 2**

    3.1 Data Collection..... 2

    3.2 Relevant Studies ..... 2

    3.3 Evaluation Methodology..... 2

    3.4 Level of Service Definitions..... 2

**4.0 Existing Conditions ..... 3**

    4.1 Roadways..... 3

    4.2 Intersections ..... 3

    4.3 Pedestrian and Bicycle Facilities ..... 3

    4.4 Transit ..... 4

    4.5 Existing Intersection Capacity Analysis ..... 4

**5.0 Future Traffic Conditions ..... 4**

    5.1 Annual Growth Factor and Future Volume Methodology..... 4

    5.2 Future Roadway Improvements ..... 5

    5.3 Future Multi-Modal Improvements..... 6

    5.4 Year 2028 Background Intersection Capacity Analysis ..... 7

**6.0 Proposed Development Traffic ..... 7**

    6.1 Trip Generation..... 7

    6.2 Trip Distribution and Assignment ..... 8

**7.0 Future Traffic Conditions with Site Development..... 8**

    7.1 Year 2028 Background + Project Intersection Capacity Analysis..... 8

**8.0 Conclusion ..... 9**



**LIST OF TABLES**

Table 1 – Peak Hour Intersection Level of Service Summary ..... 11  
Table 2 - Peak Hour 95<sup>th</sup> Percentile Queue Summary..... 12  
Table 3 – Trip Generation Summary ..... 13

**LIST OF FIGURES**

Figure 1 – Vicinity Map ..... 14  
Figure 2 – Conceptual Site Plan ..... 15  
Figure 3 – Year 2025 Existing Traffic Volumes ..... 16  
Figure 4 – Year 2028 Background Traffic Volumes ..... 17  
Figure 5 – Trip Distribution and Site-Generated Trips ..... 18  
Figure 6 – Year 2028 Background + Project Traffic Volumes ..... 19

**APPENDIX**

Traffic Impact Study - Scope Approval Form  
Level of Service Definitions  
Intersection Capacity Worksheets



---

## RIVERFRONT PARK FILING NO. 2

### TRAFFIC IMPACT STUDY

#### 1.0 INTRODUCTION

The Fox Tuttle Transportation Group prepared this traffic impact study for the proposed Riverfront Park Filing No. 2 in Steamboat Springs, CO. The project proposes to construct four (4) multi-family buildings with townhome units. Currently, the site includes live/work units, gymnastic/dance/martial art studios, an electrical supply distributor, and small offices. **Figure 1** includes a vicinity map for the proposed development.

The purpose of this study is to assist in identifying potential traffic impacts within the study area as a result of this project. The traffic study addresses existing and short-term (Year 2028) peak hour intersection conditions in the study area with and without the project generated traffic. The information contained in this study is anticipated to be used by the City of Steamboat Springs staff in identifying any intersection or roadway deficiencies and potential improvements for future conditions. This study focused on the weekday AM and PM peak hours which are typically the highest traffic volumes for the proposed type of land use. The study includes an assessment of queue lengths and auxiliary lane needs.

The traffic impact study is consistent with the requirements of the City of Steamboat Springs' Engineering Standards (2023). A copy of the approved Traffic Impact Study Scope Approval Form is attached in the **Appendix** for reference.

#### 2.0 PROJECT DESCRIPTION

The Riverfront Park Filing No. 2 development proposes to construct 24 townhomes (18 one-bedroom and 6 three-bedroom) within the vacant property of Riverfront Park. Access to the property is on Bridge Lane with full movement and the crossing of the Yampa River Core Trail. Bridge Lane leads to Shield Drive to access the highway and other areas of the City. The driveway will continue to provide one inbound lane and one outbound lane with side-street stop-controlled. There are no auxiliary lanes at the access or at Shield Drive. **Figure 2** includes a conceptual site plan and access for the project.

---

### 3.0 STUDY CONSIDERATIONS

#### 3.1 Data Collection

Intersection turning movement volumes were collected in January 2025 at the intersection of Shield Drive and Bridge Lane during the weekday AM and PM peak hours.

Daily volumes were gathered along US 40 and Elk River Road within the vicinity of the project site from CDOT’s Traffic Count Database System. The existing traffic volumes are illustrated on **Figure 3**. The existing intersection geometry and traffic control are also shown in this figure. Count data sheets are provided in the **Appendix**.

#### 3.2 Relevant Studies

Other studies reviewed for this analysis included the following:

- *Steamboat Springs Area Community Plan Update*. Felsburg Holt & Ullevig. October 2003.
- *Steamboat Springs Transportation & Mobility Plan*. Toole Design Group and Kimley-Horn. July 2021.
- *Riverfront Park Trip Generation and Parking Study*. Fox Tuttle Transportation Group. September 2023.

#### 3.3 Evaluation Methodology

The traffic operations analysis addressed the unsignalized intersection operations using the procedures and methodologies set forth by the *Highway Capacity Manual (HCM)*<sup>1</sup>. Existing Peak Hour Factor (PHF) were applied to the intersections for the existing and short-term scenarios. The study intersection was evaluated using Synchro software (v12).

#### 3.4 Level of Service Definitions

A level of service analysis was conducted to determine the existing and future performance of the study intersections and to determine the most appropriate traffic control device and need for auxiliary lanes.

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as “Level of Service” (LOS) that is defined by the HCM. LOS characterizes the operational conditions of an intersection’s traffic flow, ranging from LOS A

---

<sup>1</sup> [Highway Capacity Manual](#), Highway Research Board Special Report 209, Transportation Research Board, National Research Council, 7<sup>th</sup> Edition (2022).

---

(indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with traveling through the intersections. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement. A more detailed discussion of the LOS methodology is contained in the **Appendix** for reference.

The City of Steamboat Springs considers LOS A through C to be good for the overall intersection operations with LOS D as acceptable in peak hours. For individual movements, LOS E and F may be acceptable for left turns or minor streets where queuing or safety are not an issue.

## 4.0 EXISTING CONDITIONS

### 4.1 Roadways

The study area boundaries are based on the amount of traffic to be generated by the project and potential impact to the existing roadway network. The primary public roadways that serve the project site are discussed in the following text and illustrated on **Figure 1**.

*Shield Drive* is a north-south, two-lane roadway that connects Lincoln Avenue (US 40) to 13<sup>th</sup> Street. This roadway provides direct access to the City and County Combined Law Enforcement offices and Community Center, Routt County Courthouse, commercial businesses, retail services, restaurants, light industrial, and the residential units at Riverfront Park. Shield Drive was estimated to service approximately 2,750 vehicles per day (vpd) north of Bridge Lane. The posted speed limit on the highway is 40 miles per hour (mph) within the vicinity of the study area. Shield Drive is approximately 32 feet in width adjacent to the project site, with 12-foot travel lanes and 6-foot paved shoulders.

### 4.2 Intersections

The study area includes the one (1) existing intersection at Shield Drive and Bridge Lane, which currently is side-street stop-controlled. The existing lane configuration at each of the study locations is illustrated on **Figure 3**.

### 4.3 Pedestrian and Bicycle Facilities

There are currently non-continuous sidewalks on both sides of Shield Drive. There are paved shoulders on Shield Drive that are used by pedestrians and cyclists. The roadway is sharrow markings that indicate cyclists are directed to ride in the travel lanes and share with vehicles.

---

Along the east and west sides of the Riverfront Park property is the Yampa River Core Trail. It extends approximately seven (7) miles between Dougherty Road (east end of town) and Lagoon Court. This highly utilized trail provides access to downtown, various parks, and connects to many other trails. The Yampa River Core Trail connects to Shield Drive, which leads to the bike lanes and multi-use path along Elk River Road.

#### 4.4 Transit

The Steamboat Springs Transit (SST) provides a free transit service throughout the City of Steamboat Springs that links downtown, the ski town area, and the west area. The routes and frequencies change per summer and winter seasons. The closest bus stops to the Riverfront Park Filing No. 2 are on Curve County and Shield Drive, north of the subject property. The residents of the proposed project can take advantage of the transit service with the nearby bus stops being serviced by local and regional routes. The Main Line and Night Line circulate through the entire City from the west end, through downtown, to the ski area. The Regional Line connects Steamboat Springs to nearby cities of Hayden, Milner, and Craig. Transit services link the residential areas to the ski resort, commercial centers, hospital, recreational areas, schools, and business offices.

#### 4.5 Existing Intersection Capacity Analysis

The existing volumes, lane configuration, and traffic control are illustrated on **Figure 3**. The results of the LOS calculations for the study intersections are summarized in **Table 1**. The 95<sup>th</sup> percentile queues are shown on **Table 2** per movement. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

The access intersection on US 40 was estimated to **operate overall at LOS A in both peak hours and all approaches operate at LOS A/B in both peak hours**. The 95<sup>th</sup> percentile queue for the access approach was estimated to extend up to 10 feet (one vehicle). The minimal delays, queues, and volumes do not trigger the need for auxiliary lanes.

### 5.0 FUTURE TRAFFIC CONDITIONS

#### 5.1 Annual Growth Factor and Future Volume Methodology

CDOT maintains a database of 20-year projected growth factors for all roadway segments that make up the state highway system in Colorado. In theory, these growth factors should include the additional traffic for developments, which may be partially or fully completed within the next 20 years. For this project, CDOT's traffic growth factors for US 40 in this area were reviewed. The resulting 20-year traffic growth factors used for this study (that ultimately include the project's traffic) are listed on the next page.

US 40 west of Elk River Road: 1.22 = 1.0% annual growth rate  
 US 40 east of Elk River Road: 1.22 = 1.0% annual growth rate  
 US 40 east of 13<sup>th</sup> Street 1.19 = 0.9% annual growth rate  
**Average: 1.21 = 1.0% annual growth rate**

The historical data on Elk River Road south of US 40 indicated a 2-5% annual growth rate. On Shield Drive, historical data was not found. Based on the available data in the area, an annual growth rate of 3% was applied to the through traffic on Shield Drive (matches the City’s default growth rate) to provide a conservative forecast. The side-street movements, inbound and outbound, were not grown since these are not through roads and would need a development or change in land use to increase traffic volumes.

Using these assumptions, the Year 2028 background traffic is summarized on **Figure 4**.

## 5.2 Future Roadway Improvements

For the future conditions, it is understood that there will be additional connectivity in West Steamboat Springs as well as access control along US 40. These will adjust volumes within the study area could reduce movements at the access. The City of Steamboat Springs’ *Transportation and Mobility Plan (2021)* identifies the following future improvements to the study intersections and roadways:

- **Curve Area Connectors:** Construct new roadways as identified in the West Steamboat Springs US 40 Access Plan to enhance the street network to provide parallel connectivity to the highway.
- **Intersection Upgrade at Shield Drive and 13<sup>th</sup> Street (Project #S20):** Improve the intersection for safety and operations.

These future improvements are shown on **Map 1** (Source: *Transportation and Mobility Plan, 2021*).



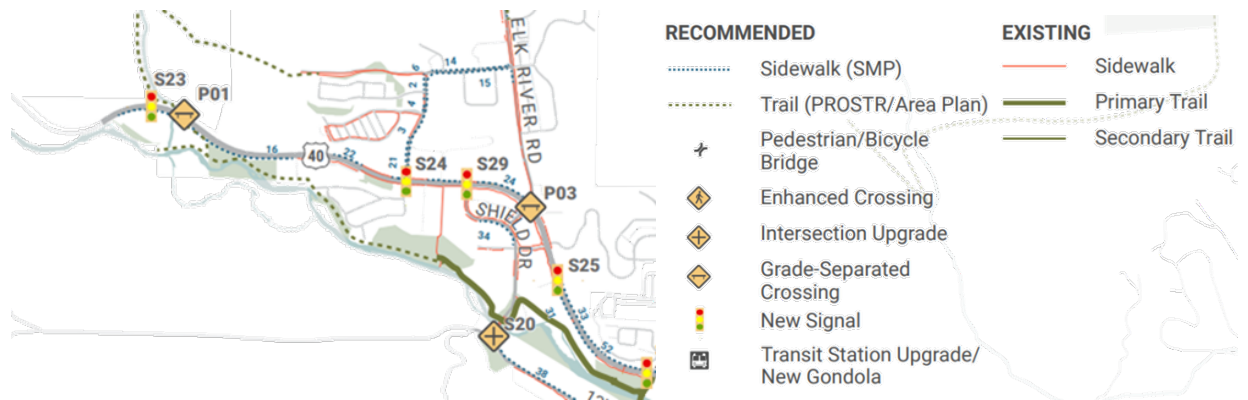
**Map 1. Recommended Street Network (Source: City’s TMP)**

### 5.3 Future Multi-Modal Improvements

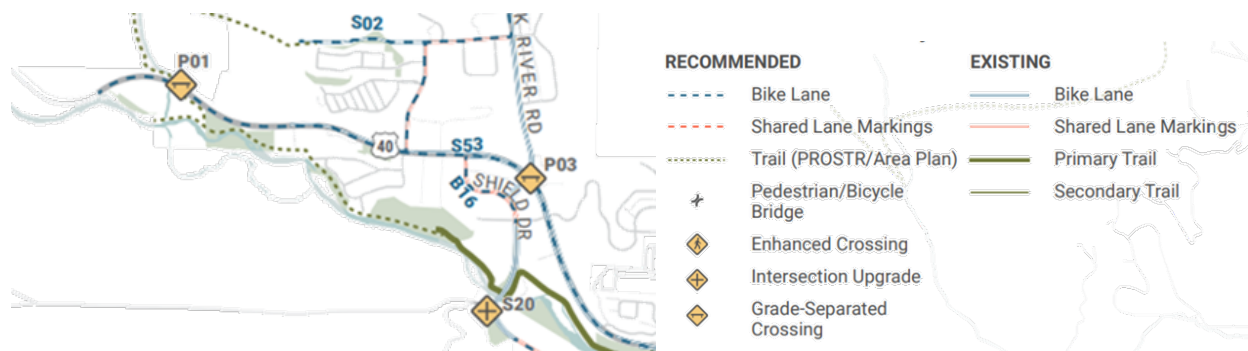
The City has been studying the multi-modal network to determine where there are missing links, safety concerns, and need for connectivity. The City of Steamboat Springs' *Transportation and Mobility Plan (2021)* identifies the following future multi-modal enhancements:

- **Extend Yampa River Trail:** Construct a multi-use trail from the existing end point in West Steamboat Springs to the Sleepy Bear Mobile Home Park on the west end of the City.
- **Add Sidewalks:** Construct sidewalks along Shield Drive and 13<sup>th</sup> Street to complete the sidewalk network and connect to trails and paths within the area.
- **Add Bike Lanes:** Construct or restripe to provide bike lanes along Shield Drive and 13<sup>th</sup> Street to enhance the safety for cyclists and connect to existing bike facilities within the area.

These future improvements are shown on **Map 2** and **Map 3** (Source: *Transportation and Mobility Plan, 2021*).



**Map 2. Recommended Pedestrian Network (Source: City's TMP)**



**Map 3. Recommended Bicycle Network (Source: City's TMP)**

---

## 5.4 Year 2028 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the Year 2028 background scenario and to identify any capacity constraints associated with background traffic. The short-term background volumes, lane configuration, and traffic control are illustrated on **Figure 4**.

The level of service criteria discussed previously was applied to the study intersections to determine the impacts with the short-term background volumes. The results of the LOS calculations for the intersections are summarized in **Table 1**. The 95<sup>th</sup> percentile queues are summarized in **Table 2**. The intersection level of service worksheets and queue reports are attached in the **Appendix**. The Year 2028 background analysis assumed the existing lane configuration and traffic control would remain the same at the study intersections.

The intersection of Shield Drive and Bridge Lane was estimated to operate **overall at LOS A in both peak hours, with all movements continuing to operate LOS A/B in both peak hours**. The 95<sup>th</sup> percentile queue for all approaches was estimated to extend up to 10 feet (one vehicle). The minimal delays, queues, and volumes do not trigger the need for auxiliary lanes.

## 6.0 PROPOSED DEVELOPMENT TRAFFIC

### 6.1 Trip Generation

A trip generation estimate was performed to determine the traffic characteristics of the Riverfront Park Filing No. 2 development. The trip rates contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*<sup>2</sup> for land uses #215 “Single-Family Attached Homes” were applied to estimate the traffic associated with the proposed townhomes. The site is expected to experience to have the following trip types as discussed below:

Primary Trips. These trips are made specifically to visit the site and are considered “new” trips. Primary trips would not have been made if the proposed project did not exist. Therefore, this is the only trip type that increases the total number of trips made on a regional basis. It is expected that the proposed project will experience mostly primary trips.

Non-Auto Trips. These trips are those that are completed by walking, bicycling, or riding transit. The existing transit, pedestrian, and bicycle amenities will encourage residents and visitors to

---

<sup>2</sup> Trip Generation 11<sup>th</sup> Edition, Institute of Transportation Engineers, 2021.

---

make non-auto trips to/from the condominiums. Although there are multi-modal facilities and a bus stop nearby, a non-auto reduction was not applied for a conservative evaluation.

The trip generation estimates using these rates are summarized in **Table 3**. It is projected that the Riverfront Park Filing No. 2 development will **generate approximately 173 automobile trips per day, with 12 trips occurring in the morning peak hour and 14 trips occurring in the PM peak hour.**

## 6.2 Trip Distribution and Assignment

The estimated trip volumes presented in **Table 3** were distributed onto the study roadway network based on existing traffic characteristics of the existing condos on the property, existing and future land uses, and the relationship of this project to the greater Steamboat Springs community. The assumed trip distribution and trip assignment are summarized on **Figure 5**.

## 7.0 FUTURE TRAFFIC CONDITIONS WITH SITE DEVELOPMENT

This section projects the future traffic conditions with the completion of the proposed Riverfront Park Filing No. 2.

### 7.1 Year 2028 Background + Project Intersection Capacity Analysis

This section discusses impacts associated with the proposed Riverfront Park Filing No. 2 development trips in the build out scenario with the project fully built out and occupied. The site-generated volumes were added to the projected Year 2028 background volumes and are illustrated on **Figure 6**. The results of the LOS calculations for the intersections are summarized in **Table 1**. The 95<sup>th</sup> percentile queues are provided in **Table 2**. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

As shown on the Level of Service summary table (**Table 1**), **the project trips result in insignificant increases in the delays and queuing on the intersection and approaches.** The levels of service were calculate to remain the same as existing and background conditions. The 95<sup>th</sup> percentile queues were estimated to remain at one (1) vehicle. The minimal delays, queues, and volumes do not trigger the need for auxiliary lanes.

---

## 8.0 CONCLUSION

The Riverfront Park Filing No. 2 proposes to construct approximately 24 townhomes. Access to the site is planned to continue to use the existing access on Shield Drive at Bridge Lane and maintain full movement with side-street stop-control. Vehicular traffic volumes associated with the Riverfront Park Filing No. 2 project have been analyzed for the existing and short-term (Year 2028) scenarios. Using ITE trip generation rates, the residential project is anticipated to generate approximately 173 automobile trips per day, with 12 trips occurring in the morning peak hour and 14 trips occurring in the PM peak hour.

The intersection of Shield Drive and Bridge Lane was found to continue to operate acceptably (LOS A/B) with additional traffic associated with the proposed townhomes. **It was determined that the existing roadways can accommodate the estimated traffic volumes for buildout conditions.**

---

# ***Tables and Figures:***

*Table 1 – Peak Hour Intersection Level of Service Summary*

*Table 2 - Peak Hour 95<sup>th</sup> Percentile Queue Summary*

*Table 3 – Trip Generation Summary*

*Figure 1 – Vicinity Map*

*Figure 2 – Conceptual Site Plan*

*Figure 3 – Year 2025 Existing Traffic Volumes*

*Figure 4 – Year 2028 Background Traffic Volumes*

*Figure 6 – Trip Distribution and Site-Generated Trips*

*Figure 7 – Year 2028 Background + Project Traffic Volumes*

Table 1 - Peak Hour Intersection Level of Service Summary

Intersection and Lanes Groups	Existing (Year 2025)				Year 2028 Background				Year 2028 Bkgrd + Project			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
<b>Stop-Controlled</b>												
<b>1. Shield Drive at Bridge Lane</b>	<b>2</b>	<b>A</b>	<b>4</b>	<b>A</b>	<b>2</b>	<b>A</b>	<b>3</b>	<b>A</b>	<b>2</b>	<b>A</b>	<b>4</b>	<b>A</b>
Eastbound Left+Through+Right	11	B	11	B	11	B	11	B	11	B	11	B
Westbound Left+Through+Right	9	A	10	A	10	A	10	A	10	A	10	A
Northbound Left+Through+Right	0	A	0	A	0	A	8	A	0	A	0	A
Southbound Left+Through+Right	8	A	8	A	8	A	0	A	8	A	8	A

Note: Delay represented in average seconds per vehicle.

Table 2 - Peak Hour 95th Percentile Queue Summary

Intersection and Lanes Groups	Existing Storage	Existing (Year 2025)		Year 2028 Background		Year 2028 Bkgrd + Project	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
<b>1. Shield Drive at Bridge Lane</b>		<i>Side-Street Stop</i>		<i>Side-Street Stop</i>		<i>Side-Street Stop</i>	
Eastbound Left+Through+Right	-	0'	3'	0'	3'	0'	3'
Westbound Left+Through+Right	-	3'	10'	3'	10'	5'	10'
Northbound Left+Through+Right	-	0'	0'	0'	0'	0'	0'
Southbound Left+Through+Right	-	3'	3'	3'	3'	3'	3'

**Table 3 - Trip Generation Summary**

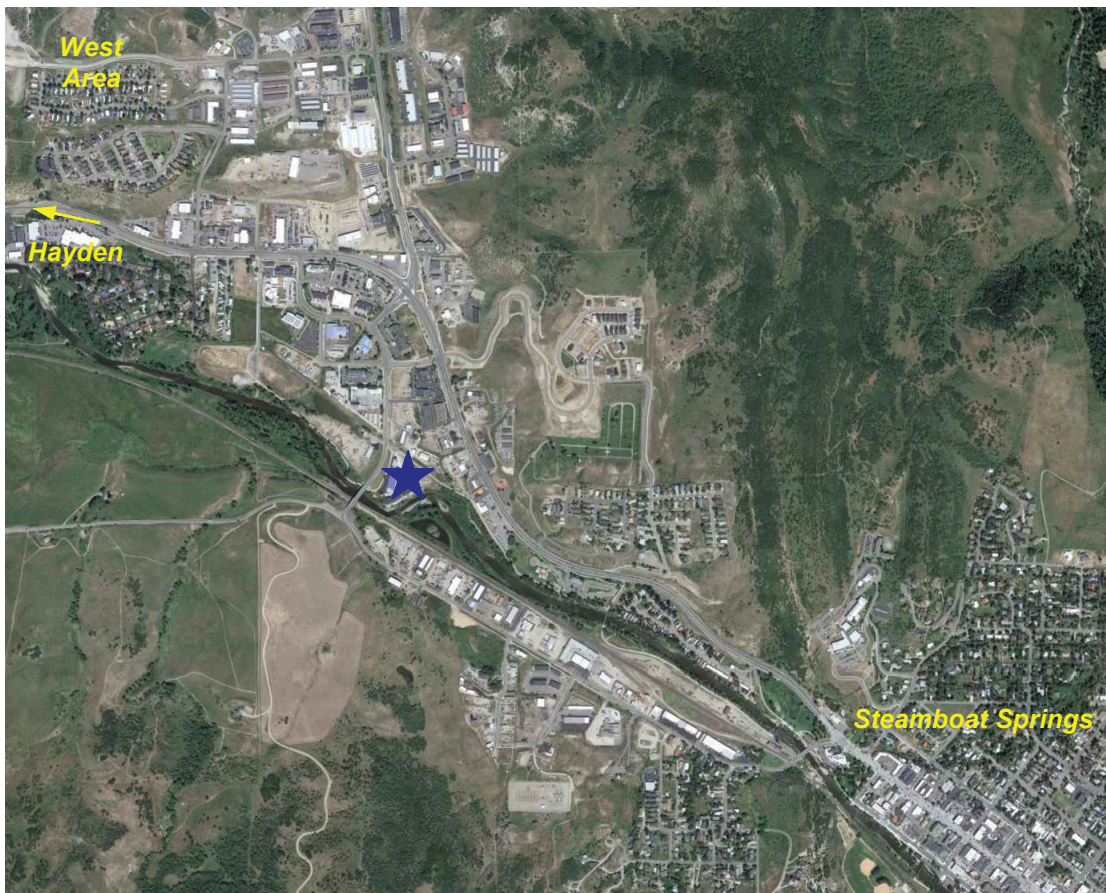
Land Use	Size	Unit	Average Daily Trips				AM Peak Hour Trips				PM Peak Hour Trips			
			Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
#215 - Single-Family Attached Housing	24	du	7.20	173	87	86	0.48	12	3	9	0.57	14	8	6
<b>Total New Vehicle Trips</b>			<b>173</b>	<b>87</b>	<b>86</b>	<b>12</b>	<b>3</b>	<b>9</b>	<b>14</b>	<b>8</b>	<b>6</b>			

Source : ITE Trip Generation 11th Edition, 2021.

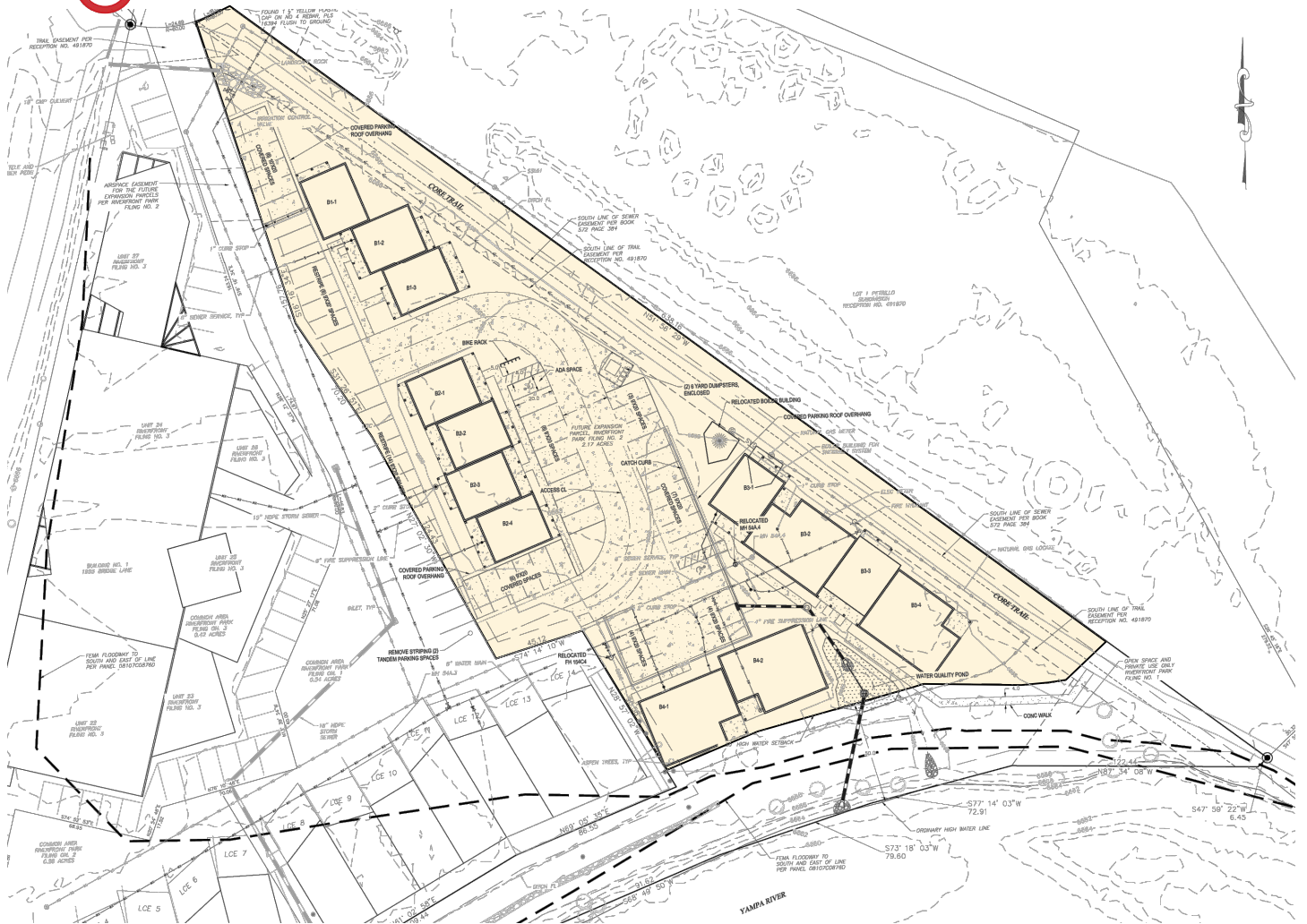
**Project Property**



**Location within Steamboat Springs**



**EXISTING ACCESS**  
 Full Movement; Side-street  
 stop-control

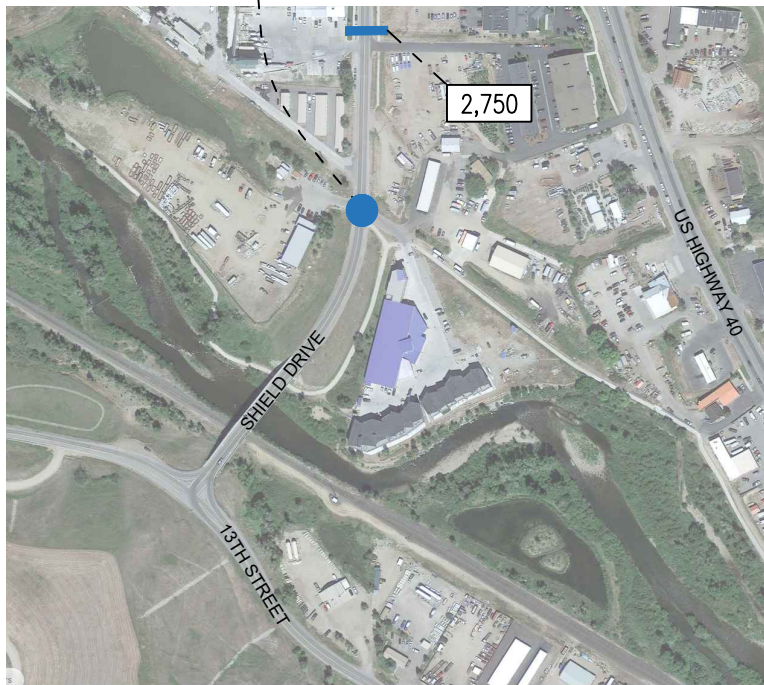
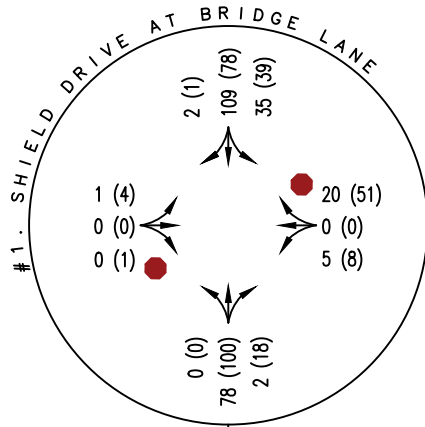


**PRELIMINARY SITE PLAN**  
 Refer to the site plan documents for more  
 current design and details.



RIVERFRONT PARK FILING NO. 2 TRAFFIC IMPACT STUDY  
 PROPOSED SITE PLAN AND ACCESS

FT #	25002	Original Scale	NTS	Date	7/25/2025	Drawn by	CRS	Figure #	2
------	-------	----------------	-----	------	-----------	----------	-----	----------	---



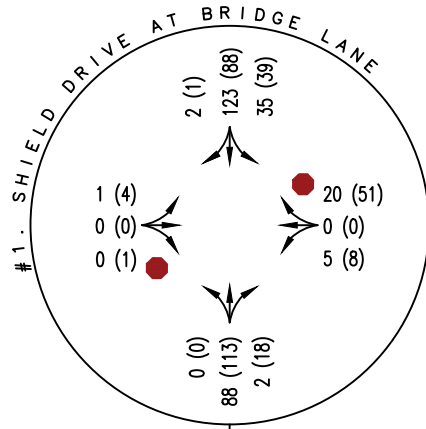
**KEY**

- XX (XX) AM (PM) PEAK HOUR TRAFFIC VOLUME
- XXX AVERAGE DAILY TRAFFIC VOLUME
- EXISTING LANE CONFIGURATION



RIVERFRONT FILING NO. 2 TRAFFIC IMPACT STUDY  
YEAR 2025 EXISTING TRAFFIC VOLUMES

FT #	25002	Original Scale	NTS	Date	7/25/2025	Drawn by	CRS	Figure #	3
------	-------	----------------	-----	------	-----------	----------	-----	----------	---



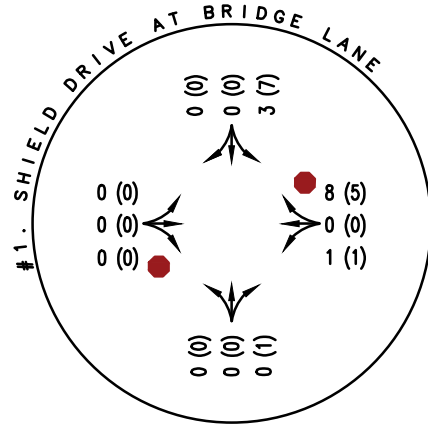
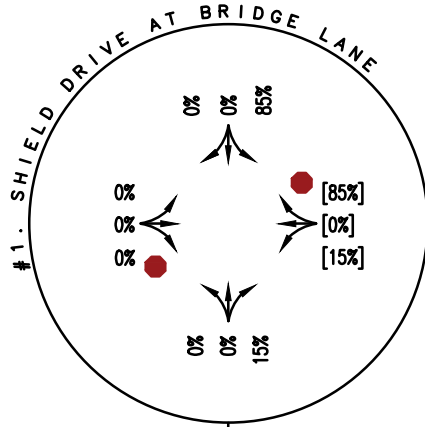
**KEY**

- XX (XX) AM (PM) PEAK HOUR TRAFFIC VOLUME
- XXX AVERAGE DAILY TRAFFIC VOLUME
- EXISTING LANE CONFIGURATION



RIVERFRONT PARK FILING NO. 2 TRAFFIC IMPACT STUDY  
YEAR 2028 BACKGROUND TRAFFIC VOLUMES

FT #	25002	Original Scale	NTS	Date	7/25/2025	Drawn by	CRS	Figure #	4
------	-------	----------------	-----	------	-----------	----------	-----	----------	---



**85%**

TO/FROM THE NORTH  
VIA SHIELD DRIVE

**15%**

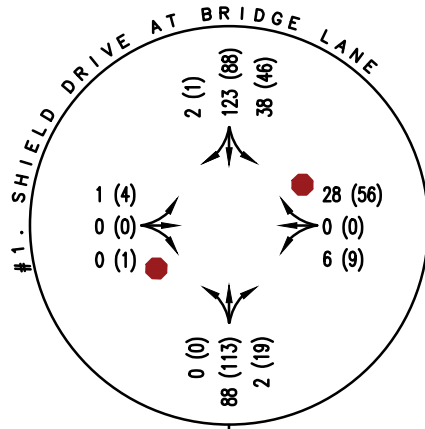
TO/FROM THE SOUTH  
VIA SHIELD DRIVE



**KEY**

- XX (XX) AM (PM) PEAK HOUR TRAFFIC VOLUME
- XX% [XX%] ENTER [EXIT] TRIP DISTRIBUTION
- EXISTING LANE CONFIGURATION





**KEY**

- XX (XX) AM (PM) PEAK HOUR TRAFFIC VOLUME
- XXX AVERAGE DAILY TRAFFIC VOLUME
- EXISTING LANE CONFIGURATION



RIVERFRONT PARK FILING NO. 2 TRAFFIC IMPACT STUDY  
 YEAR 2028 BACKGROUND + PROJECT TRAFFIC VOLUMES

FT #	25002	Original Scale	NTS	Date	7/25/2025	Drawn by	CRS	Figure #	6
------	-------	----------------	-----	------	-----------	----------	-----	----------	---

---

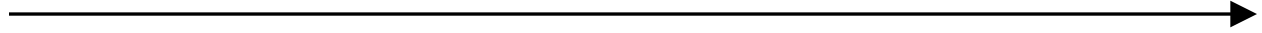
# ***Appendix:***

*Traffic Impact Study - Scope Approval Form*

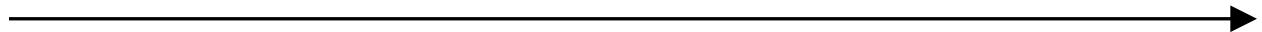
*Level of Service Definitions*

*Existing Traffic Data*

*Intersection Capacity Worksheets*



***Traffic Impact Study –  
Scope Approval Form***



CITY OF STEAMBOAT SPRINGS ENGINEERING STANDARDS  
**Attachment A**  
**TRAFFIC IMPACT STUDY – SCOPE APPROVAL FORM**

Prior to starting a traffic impact study, a Scope Approval Form must be submitted for review and signed by the City Public Works Director. It shall be included in every traffic study submittal as Attachment A. This Scope Approval Form is for City requirements only. Consultants must contact CDOT to determine requirements related to access permits and work in CDOT right-of-way.

**Project Information**

Project Name:	Bridge Lane Townhomes
Project Location:	1940 & 1960 Bridge Lane, Steamboat Springs, CO
Developer Name/ Contact Number:	Bridge Lane Reality LLC, dansky- mac69@gmail.com
Traffic Engineer Name/ Contact Number:	Cassie Slade 720-379-7162

**Study Parameters**

**Type of Study Required:**       Trip Generation Letter       Long-term Traffic Study  
 Short-term Traffic Study       Trip Evaluation Letter

**Traffic Counts**

Winter Zone                       Summer Zone      CDOT Count Station @ US 40 MP 130-567  
 Counts w/in last 2 years are available  
 New counts will be collected on \_\_\_\_\_  
 Existing counts will be estimated based on:  
 Future counts will be estimated based on a \_\_\_\_\_ growth rate.      Latest CDOT 20-yr factor

**Peak Hours Analyzed**

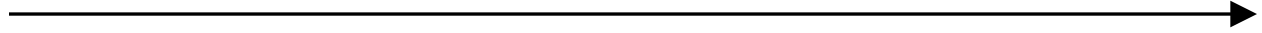
AM Peak Hour                       PM peak hour                       Other \_\_\_\_\_

**Trip Generation Rates**

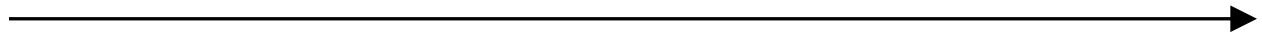
From ITE                       Other (cite) \_\_\_\_\_  
 No passby or mode split (typical)  
 Passby or mode split (describe) \_\_\_\_\_

**Trip Distribution – Attach sketch A-1**





## ***Level of Service Definitions***

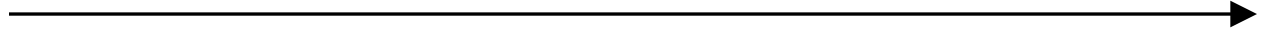


## LEVEL OF SERVICE DEFINITIONS

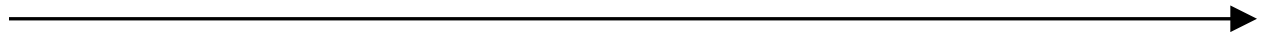
In rating roadway and intersection operating conditions with existing or future traffic volumes, “Levels of Service” (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

Level of Service Rating	Delay in seconds per vehicle (a)		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers are able to maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially, and stoppages may occur for short or long periods of time because of downstream congestion.

(a) Delay ranges based on Highway Capacity Manual (6<sup>th</sup> Edition, 2016) criteria.



***Existing  
Traffic Data***





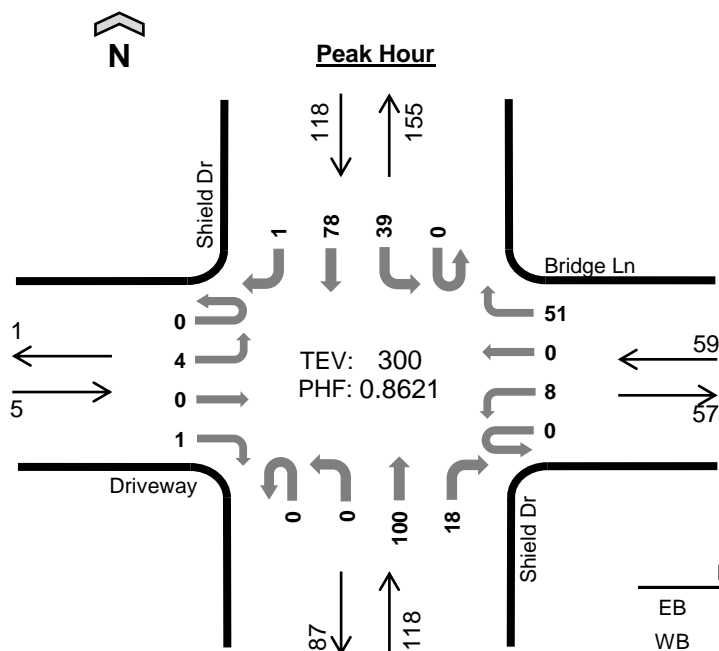
Count Summaries - All Vehicles																			
Interval Start	Driveway				Bridge Ln				Shield Dr				Shield Dr				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	0	0	0	0	0	4	0	0	10	2	0	1	11	0	28	0	
7:15 AM	0	0	0	0	0	0	0	1	0	0	10	0	0	4	11	0	26	0	
7:30 AM	0	0	0	0	0	1	0	3	0	0	18	1	0	2	28	0	53	0	
<b>7:45 AM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>38</b>	<b>0</b>	<b>68</b>	<b>175</b>	
8:00 AM	0	0	0	0	0	2	0	4	0	0	13	1	0	10	28	0	58	205	
8:15 AM	0	1	0	0	0	0	0	7	0	0	16	0	0	14	27	1	66	245	
8:30 AM	0	0	0	0	0	2	0	7	0	0	26	1	0	8	16	1	61	253	
8:45 AM	0	0	0	0	0	1	0	7	0	0	25	0	0	6	21	1	61	246	
Count Total	0	1	0	0	0	7	0	35	0	0	141	5	1	48	180	3	421		
Pk Hr	All	0	1	0	0	0	5	0	20	0	0	78	2	1	35	109	2	253	
	HV	0	0	0	0	0	0	0	0	0	0	14	0	0	1	4	0	19	
	HV%	-	0%	-	-	-	0%	-	0%	-	-	18%	0%	0%	3%	4%	0%	8%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	0	4	1	5	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	6	4	10	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	4	2	6	0	0	0	0	0	0	0	0	0	0
<b>7:45 AM</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
8:00 AM	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	4	1	5	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	5	1	6	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	33	13	46	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	14	5	19	0	0	0	0	0	0	0	0	0	0

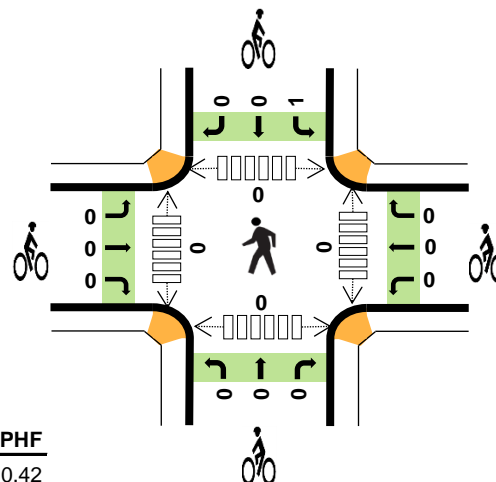
<b>Count Summaries - Heavy Vehicles</b>																		
Interval Start	Driveway				Bridge Ln				Shield Dr				Shield Dr				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	6	0
<b>7:45 AM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>27</b>
8:00 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	26
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0	4	20
8:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5	19
8:45 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	6	19
Count Total	0	0	0	0	0	0	0	0	0	0	33	0	0	1	11	1	46	
<b>Pk Hr Heavy</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>19</b>	

<b>Count Summaries - Bikes</b>																		
Interval Start	Driveway				Bridge Ln				Shield Dr				Shield Dr				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>7:45 AM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Pk Hr Bike</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

# Shield Dr Bridge Ln



Date: 1/14/2025  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:00 PM to 5:00 PM



	HV%	PHF
EB	0%	0.42
WB	0%	0.64
NB	3%	0.87
SB	7%	0.82
TOTAL	4%	0.86

## Peak Hour Count Summaries

Peak Hour Interval Start	Driveway				Bridge Ln				Shield Dr				Shield Dr				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	1	0	0	0	4	0	19	0	0	25	2	0	12	23	1	87	0	
4:15 PM	0	0	0	1	0	0	0	6	0	0	24	1	0	8	17	0	57	0	
4:30 PM	0	0	0	0	0	2	0	9	0	0	26	6	0	11	17	0	71	0	
4:45 PM	0	3	0	0	0	2	0	17	0	0	25	9	0	8	21	0	85	300	
Pk Hr	All	0	4	0	1	0	8	0	51	0	0	100	18	0	39	78	1	300	
	HV	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	12	
	HV%	-	0%	-	0%	-	0%	-	0%	-	-	4%	0%	-	0%	10%	0%	4%	

Note: For complete count summary (all intervals), see following pages.

\*\* Heavy Vehicle Classifications include FHWA Classes 4-13.

\*\* Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0
4:30 PM	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	4	8	12	0	0	0	1	1	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start	Driveway				Bridge Ln				Shield Dr				Shield Dr				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	1	0	0	0	4	0	19	0	0	25	2	0	12	23	1	87	0	
4:15 PM	0	0	0	1	0	0	0	6	0	0	24	1	0	8	17	0	57	0	
4:30 PM	0	0	0	0	0	2	0	9	0	0	26	6	0	11	17	0	71	0	
4:45 PM	0	3	0	0	0	2	0	17	0	0	25	9	0	8	21	0	85	300	
5:00 PM	0	0	0	0	0	7	0	22	0	0	24	1	0	10	23	0	87	300	
5:15 PM	0	0	0	0	0	1	0	3	0	0	23	0	0	1	13	0	41	284	
5:30 PM	0	0	0	0	0	0	0	1	0	0	15	5	0	5	8	0	34	247	
5:45 PM	0	0	0	0	0	3	0	14	0	0	6	2	0	17	7	0	49	211	
Count Total	0	4	0	1	0	19	0	91	0	0	168	26	0	72	129	1	511		
Pk Hr	All	0	4	0	1	0	8	0	51	0	0	100	18	0	39	78	1	300	
	HV	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	12	
	HV%	-	0%	-	0%	-	0%	-	0%	-	-	4%	0%	-	0%	10%	0%	4%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0
4:30 PM	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	5	13	18	0	0	0	1	1	0	0	0	0	0
Peak Hour	0	0	4	8	12	0	0	0	1	1	0	0	0	0	0

<b>Count Summaries - Heavy Vehicles</b>																		
Interval Start	Driveway				Bridge Ln				Shield Dr				Shield Dr				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	12
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	12
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	12
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
Count Total	0	0	0	0	0	0	0	0	0	0	5	0	0	0	13	0	18	
Pk Hr Heavy	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	12	

<b>Count Summaries - Bikes</b>																		
Interval Start	Driveway				Bridge Ln				Shield Dr				Shield Dr				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	



# ***Intersection Capacity Worksheets: Existing***



Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	5	0	20	0	78	2	35	109	2
Future Vol, veh/h	1	0	0	5	0	20	0	78	2	35	109	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	69	69	69	74	74	74	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	18	0	0	3	0
Mvmt Flow	4	0	0	7	0	29	0	105	3	40	124	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	310	313	125	310	312	107	126	0	0	108	0	0
Stage 1	205	205	-	107	107	-	-	-	-	-	-	-
Stage 2	105	108	-	203	206	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	646	606	931	646	606	953	1473	-	-	1495	-	-
Stage 1	802	736	-	904	811	-	-	-	-	-	-	-
Stage 2	905	810	-	803	735	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	609	588	931	628	589	953	1473	-	-	1495	-	-
Mov Cap-2 Maneuver	609	588	-	628	589	-	-	-	-	-	-	-
Stage 1	779	715	-	904	811	-	-	-	-	-	-	-
Stage 2	878	810	-	780	714	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v10.95			9.35		0		1.79	
HCM LOS	B		A					

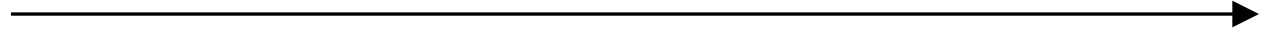
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1473	-	-	609	863	430	-	-
HCM Lane V/C Ratio	-	-	-	0.007	0.042	0.027	-	-
HCM Control Delay (s/veh)	0	-	-	11	9.4	7.5	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0.1	-	-

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	1	8	0	51	0	100	18	39	78	1
Future Vol, veh/h	4	0	1	8	0	51	0	100	18	39	78	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	42	42	42	64	64	64	87	87	87	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	7	0
Mvmt Flow	10	0	2	13	0	80	0	115	21	48	95	1

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	306	326	96	316	317	125	96	0	0	136	0	0
Stage 1	191	191	-	125	125	-	-	-	-	-	-	-
Stage 2	115	136	-	190	191	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	651	595	966	641	603	931	1510	-	-	1461	-	-
Stage 1	816	746	-	884	796	-	-	-	-	-	-	-
Stage 2	895	788	-	816	746	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	574	575	966	617	582	931	1510	-	-	1461	-	-
Mov Cap-2 Maneuver	574	575	-	617	582	-	-	-	-	-	-	-
Stage 1	788	721	-	884	796	-	-	-	-	-	-	-
Stage 2	818	788	-	786	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v10.87		9.62	0	2.49
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1510	-	-	625	871	593	-	-
HCM Lane V/C Ratio	-	-	-	0.019	0.106	0.033	-	-
HCM Control Delay (s/veh)	0	-	-	10.9	9.6	7.5	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-



## ***Intersection Capacity Worksheets: Year 2028 Background***



Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	5	0	20	0	88	2	35	123	2
Future Vol, veh/h	1	0	0	5	0	20	0	88	2	35	123	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	69	69	69	74	74	74	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	18	0	0	3	0
Mvmt Flow	4	0	0	7	0	29	0	119	3	40	140	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	339	342	141	340	342	120	142	0	0	122	0	0
Stage 1	220	220	-	120	120	-	-	-	-	-	-	-
Stage 2	119	122	-	219	222	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	618	583	912	618	584	937	1453	-	-	1478	-	-
Stage 1	787	725	-	889	800	-	-	-	-	-	-	-
Stage 2	890	799	-	788	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	582	566	912	600	566	937	1453	-	-	1478	-	-
Mov Cap-2 Maneuver	582	566	-	600	566	-	-	-	-	-	-	-
Stage 1	764	703	-	889	800	-	-	-	-	-	-	-
Stage 2	863	799	-	765	703	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.23	9.47	0	1.64
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1453	-	-	582	842	392	-	-
HCM Lane V/C Ratio	-	-	-	0.007	0.043	0.027	-	-
HCM Control Delay (s/veh)	0	-	-	11.2	9.5	7.5	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0.1	-	-

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	4	0	1	8	0	51	0	113	18	39	88	1
Future Vol, veh/h	4	0	1	8	0	51	0	113	18	39	88	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	42	42	42	64	64	64	87	87	87	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	7	0
Mvmt Flow	10	0	2	13	0	80	0	130	21	48	107	1

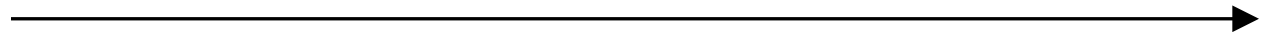
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	333	354	108	343	344	140	109	0	0	151	0	0
Stage 1	203	203	-	140	140	-	-	-	-	-	-	-
Stage 2	130	151	-	202	204	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	624	575	951	615	582	913	1495	-	-	1443	-	-
Stage 1	803	737	-	868	785	-	-	-	-	-	-	-
Stage 2	879	777	-	804	737	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	550	555	951	592	562	913	1495	-	-	1443	-	-
Mov Cap-2 Maneuver	550	555	-	592	562	-	-	-	-	-	-	-
Stage 1	775	711	-	868	785	-	-	-	-	-	-	-
Stage 2	802	777	-	774	711	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.12		9.75	0	2.31
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1495	-	-	601	851	547	-	-
HCM Lane V/C Ratio	-	-	-	0.02	0.108	0.033	-	-
HCM Control Delay (s/veh)	0	-	-	11.1	9.7	7.6	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-



***Intersection Capacity Worksheets:  
Year 2028 Background+  
Project***



Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	6	0	28	0	88	2	38	123	2
Future Vol, veh/h	1	0	0	6	0	28	0	88	2	38	123	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	69	69	69	74	74	74	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	18	0	0	3	0
Mvmt Flow	4	0	0	9	0	41	0	119	3	43	140	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	346	349	141	346	349	120	142	0	0	122	0	0
Stage 1	227	227	-	120	120	-	-	-	-	-	-	-
Stage 2	119	122	-	226	228	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	612	578	912	612	578	937	1453	-	-	1478	-	-
Stage 1	780	720	-	889	800	-	-	-	-	-	-	-
Stage 2	890	799	-	781	719	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	567	560	912	592	560	937	1453	-	-	1478	-	-
Mov Cap-2 Maneuver	567	560	-	592	560	-	-	-	-	-	-	-
Stage 1	755	697	-	889	800	-	-	-	-	-	-	-
Stage 2	852	799	-	756	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.4	9.5	0	1.75
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1453	-	-	567	849	418	-	-
HCM Lane V/C Ratio	-	-	-	0.007	0.058	0.029	-	-
HCM Ctrl Dly (s/v)	0	-	-	11.4	9.5	7.5	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	1	9	0	56	0	113	19	46	88	1
Future Vol, veh/h	4	0	1	9	0	56	0	113	19	46	88	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	42	42	42	64	64	64	87	87	87	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	7	0
Mvmt Flow	10	0	2	14	0	88	0	130	22	56	107	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	350	372	108	360	362	141	109	0	0	152	0	0
Stage 1	220	220	-	141	141	-	-	-	-	-	-	-
Stage 2	130	152	-	220	221	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	608	561	951	599	569	912	1495	-	-	1441	-	-
Stage 1	787	725	-	867	784	-	-	-	-	-	-	-
Stage 2	879	776	-	787	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	527	538	951	573	545	912	1495	-	-	1441	-	-
Mov Cap-2 Maneuver	527	538	-	573	545	-	-	-	-	-	-	-
Stage 1	754	695	-	867	784	-	-	-	-	-	-	-
Stage 2	794	776	-	753	694	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	11.35		9.85		0		2.59	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1495	-	-	579	843	612	-	-
HCM Lane V/C Ratio	-	-	-	0.021	0.12	0.039	-	-
HCM Ctrl Dly (s/v)	0	-	-	11.3	9.9	7.6	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-