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County Road 14

Traffic Impact Study

Routt County, Colorado

August 6, 2024

UT24-2741

COLORADO LICENSED
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08/06/2024
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EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with proposed projects along County Road 14 (CR-14) located in Routt County, Colorado. The developments are located south of CR-14 along CR-16.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2024) and opening day (2040) conditions with and without the proposed projects and to recommend mitigation measures as needed. The morning and evening peak hour level of service (LOS) results are shown in Table ES-1. Recommended storage lengths are shown in Table ES-2. An exhibit of the proposed mitigated roadway network is shown in Figure ES-1.

Table ES-1: Peak Hour Level of Service Results

	Intersection	Level of Service							
		Existing (2024)		Opening Day (2040)					
		Background		Background		Plus Project		Plus Project Mitigated	
		AM	PM	AM	PM	AM	PM	AM	PM
1	CR-14 / CO-131 (North)	b	a	c	b	f	f	f	f
2	CR-14C / CR-14	a	a	b	a	c	d	c	d
3	CR-14D / CR-14	a	a	a	a	a	a	a	a
4	CR-14A & CR-14B / CR-14	b	a	b	b	d	f	d	f
5	CR-18 / CR- 14	a	a	a	a	c	d	c	d
6	CR-16 / CR-14	a	b	b	b	f	f	C	D
7	CR-14 / CO-131 (South)	b	b	b	b	f	f	d	f

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)

Source: Hales Engineering, August 2024

Table ES-2: Recommended Storage Lengths

	Intersection	Recommended Storage Lengths (feet)															
		Northbound				Southbound				Eastbound				Westbound			
		LT		RT		LT		RT		LT		RT		LT		RT	
		E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
1	CR-14 / CO-131 (North)	-	-	-	100	-	-	-	-	-	-	650	-	500	-	-	-
4	CR-14A & CR-14B / CR-14	-	100	-	-	-	100	-	-	-	-	-	-	-	-	-	-
5	CR-18 / CR- 14	-	-	-	-	140	-	-	-	-	-	-	-	-	-	-	-
6	CR-16 / CR-14	-	-	-	225	-	-	-	-	-	-	-	100	120	350	-	-
7	CR-14 / CO-131 (South)	-	-	-	100	-	100	-	-	-	-	-	-	-	-	-	150

1. Storage lengths are based on 2040 95th percentile queue lengths and do not include required deceleration / taper distances
2. E = Existing storage length (approximate), if applicable; P = proposed storage length for new turn lanes or changes to existing turn lanes, if applicab

Source: Hales Engineering, August 2024

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions

- Multiple projects are planned to be built south of CR-14 along CR-16, including additional private homes, two subdivisions, and a ski resort
- The projects are anticipated to generate a total of approximately 15,621 new weekday daily trips, including 1,150 trips in the morning peak hour, and 1,521 trips in the evening peak hour

2024	Background
Findings	• Acceptable LOS

2040	Background	Plus Project
Assumptions	• 2% annual growth	• Full build of proposed developments
Findings	• Acceptable LOS	• Poor LOS at CR-14 / CO-131 (North), CR-14AB / CR-14, CR-16 / CR-14, and CR-14 / CO-131 (South) • Excessive NB queues at CR-14 / CO-131 (North) and CR-16 / CR-14 and excessive WB queues at CR-14 / CO-131 (South)

Mitigations	• None	• **CR-14 / CO-131 (North):**
		  ○ Install NB LT acceleration lane
		  ○ Install separate NB LT and RT lanes with a channelized RT lane
		• **CR-14AB / CR-14:** Install NB and SB left-turn lanes
		• **CR-16 / CR-14:**
		  ○ Install NB-to-WB LT acceleration lane
		  ○ Install channelized EB RT lane with SB receiving lane
		  ○ Install separate NB LT and RT lanes
		  ○ Increase storage length of WB LT lane
		  ○ Eventually install traffic signal with high-T design
		• **CR-14 / CO-131 (South):**
		  ○ Install separate WB LT and RT lanes
		  ○ Install WB-to-SB LT acceleration lane
		  ○ Install a NB RT lane
		  ○ Install a SB LT lane
		• Alternatively, if another connection besides CR-16 is made to the area south of Stagecoach Reservoir (e.g. via CR-18), some of the above improvements may not be needed.

Safety Analysis

- The following safety improvements are recommended in the study area:
  - **CR-14D / CR-14**: Increase the curve radius and eliminate one of the dirt roads connecting to CR-14C (already being considered by County).
  - **CR-14AB / CR-14**: Move electrical boxes and widen shoulders.
  - **CR-16 / CR-14:** Install signage to notify drivers of the upcoming intersection. Install a NB-to-WB LT acceleration lane.
  - **CR-14 / CO-131 (South):** Install WB-to-SB LT acceleration lane.
  - **Crash area on CR-14 between CR-14AB and CR-18:** Extend shoulders and increase radius of each curve. Install NB speed advisory signs before the curves.
  - **Crash area just east of the CR-14 / CO-131 (South) intersection**: Install a guardrail with chevrons on the south side of CR-14. Install speed advisory signs in both directions before the curve
  - **Entire Corridor:** Install rumble strips on the corridor.

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Mitigate Roadway Network

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Figure ES-1

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I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with proposed projects along County Road 14 (CR-14) located in Routt County, Colorado. The proposed projects are located south of CR-14 along CR-16. Figure 1 shows a vicinity map of the study area.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2024) and opening day (2040) conditions with and without the proposed projects and to recommend mitigation measures as needed.

Figure 1: Vicinity map showing the project location in Routt County, Colorado

B. Scope

The study area was defined based on conversations with Routt County. This study was scoped to evaluate the traffic operational performance impacts of the projects on the following intersections:

1. CR-14 / CO-131 (North)
2. CR-14C / CR-14
3. CR-14D / CR-14
4. CR-14A & CR-14B / CR-14
5. CR-18 / CR-14
6. CR-16 / CR-14
7. CR-14 / CO-131 (South)

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with "state-of-the-practice" professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro software, which follows the HCM methodology, the peak hour LOS was computed for each study intersection. The detailed LOS reports are provided in Appendix B.

Many of the figures in this report are printouts of the Synchro model. These figures are not meant to be a design exhibit for exact lane striping and design, due to the limitations of the Synchro software. Instead, the purpose of these figures is to show assumed peak hour turning movement volumes and the conceptual travel lane configuration of the study roadway network.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with "state-of-the-practice" traffic engineering principles for urbanized areas.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 7th Edition, 2022 Methodology (Transportation Research Board)

II. EXISTING (2024) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the proposed projects are described below:

CO-131 – is a state-maintain roadway (classified by CDOT as a Minor Arterial). The roadway has one travel lane in each direction. The posted speed limit is 65 mph in the north part of the study area and 50 mph in the south part of the study area.

CR-14 – is a county-maintained roadway classified as a main collector according to Routt County's Road Maintenance Classes. The roadway has one travel lane in each direction. The posted speed limit ranges from 30-45 mph in the study area.

CR-16 – is a county-maintained roadway classified as a main collector according to Routt County's Road Maintenance Classes. The roadway has one travel lane in each direction. The posted speed limit is 40 in the study area.

C. Traffic Volumes

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersections:

1. CR-14 / CO-131 (North)
2. CR-14C / CR-14
3. CR-14D / CR-14
4. CR-14A & CR-14B / CR-14
5. CR-18 / CR-14
6. CR-16 / CR-14
7. CR-14 / CO-131 (South)

The counts were performed on Thursday, April 18, 2024, per direction of County staff in order to capture peak travel while ski resorts were open nearby. The morning peak hour was determined to be between 7:00 and 8:00 a.m., and the evening peak hour was determined to be between 4:45 and 5:45 p.m. The morning peak hour volumes were approximately 5% higher than the evening peak hour volumes. Both the morning and evening peak hour volumes were used in the analysis. Detailed count data are included in Appendix A.

Figure 2 shows the existing morning and evening peak hour volumes as well as intersection geometry at the study intersections.

D. Level of Service Analysis

Hales Engineering determined that all study intersections are currently operating at acceptable levels of service during the morning and evening peak hours, as shown in Table 2. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2024) conditions.

Table 2: Existing (2024) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
CR-14 / CO-131 (North)	NB Stop	b (12) / NBL	a (9.2) / NBL
CR-14C / CR-14	WB Stop	a (0.0)	a (9.9) WBT
CR-14D / CR-14	EB Stop	a (8.6) / EBR	a (0.0)
CR-14A & CR-14B / CR-14	EB/WB Stop	b (10.6) / EBL	a (9.1) / WBL
CR-18 / CR-14	WB Stop	a (7.9) / SBL	a (9.5) / NBL
CR-16 / CR-14	NB Stop	a (9.8) / NBL	b (10) / NBL
CR-14 / CO-131 (South)	WB Stop	b (10.3) / WBL	b (10.1) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

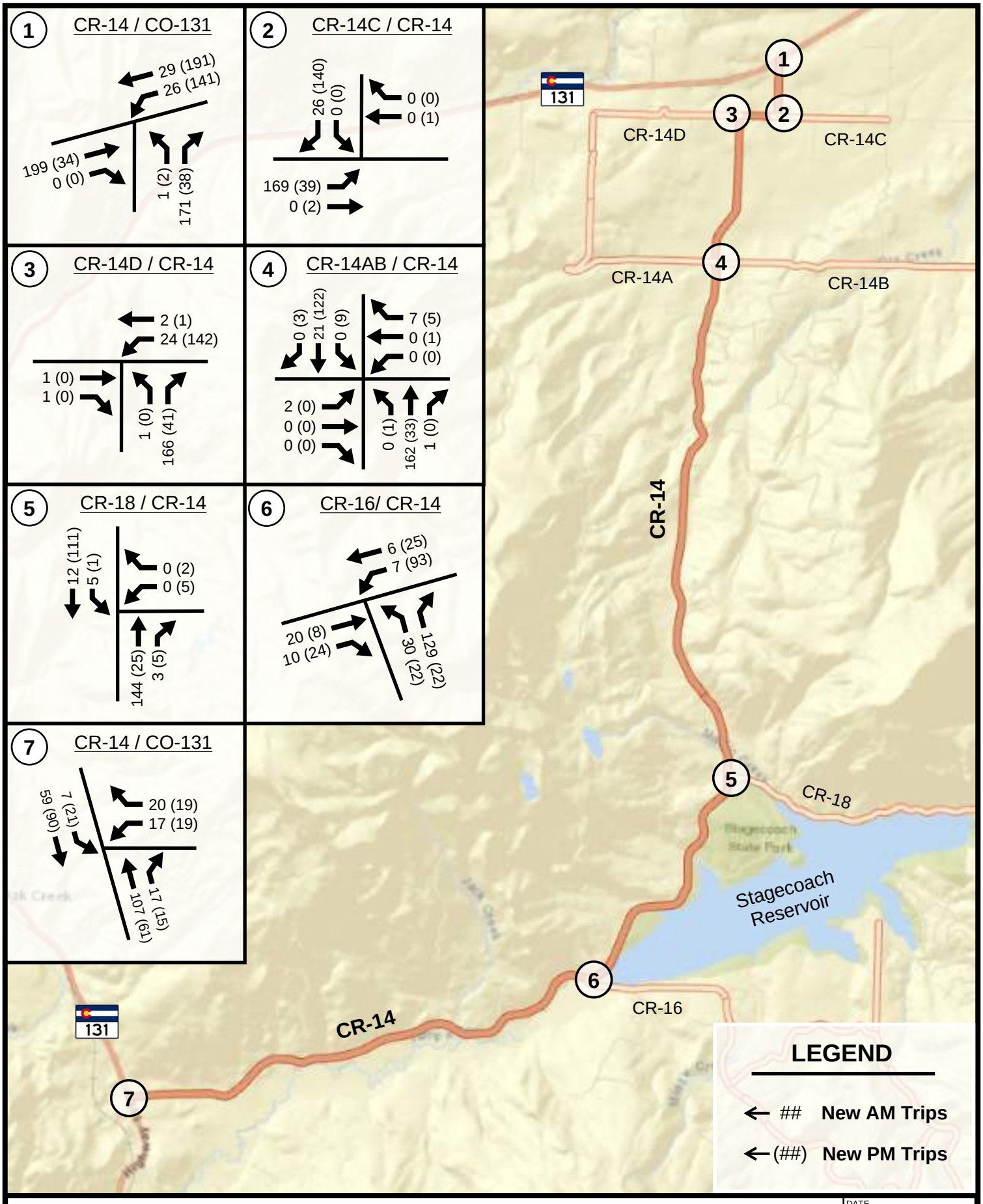
Source: Hales Engineering, August 2024

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing was observed during the morning and evening peak hours.

F. Mitigation Measures

No mitigation measures are recommended.



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Existing (2024) Background Peak Hour Volumes

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Figure 2

G. Safety Evaluation

Hales Engineering obtained crash data from CDOT for the years 2021 to 2023 in the study area. Of the intersections analyzed, three had reported crashes as summarized in Table 3 and Figure 3. There were two crashes along the corridor that didn't occur close to an intersection. Below is a description of each severe crash that occurred along CR-14:

- August 2021 Crash
  - Approximately one mile south of the CR-14AB / CR-14 intersection, a vehicle heading northbound ran off the right side of the road as it curved left. It occurred when it was dark. A tree was hit, and alcohol and marijuana were suspected.
- March 2023 Crash
  - Just south of the CR-16 / CR-14 intersection, a vehicle ran off the left side of the road where the guardrail ended. It occurred during the day in clear weather.
- September 2023 Crash
  - Approximately 0.7 miles east of the CR-14 / CO-131 (South) intersection, a vehicle headed eastbound ran off the right side of the road as it curved left. It occurred at dusk and was reported as a rollover. A tree and fence were hit.

Table 3: Crash Data Summary by Intersection

Intersection	Crash Severity					Total Crashes at Intersection
	Fatal	Suspected Serious Injury	Suspected Minor Injury	Possible Injury	Property Damage Only	
CR-14 / CO-131 (North)	0	0	0	0	0	**0**
CR-14C / CR-14	0	0	0	1	0	**1**
CR-14D / CR-14	0	0	0	0	0	**0**
CR-14A & CR-14B / CR-14	0	0	0	0	0	**0**
CR-18 / CR-14	0	0	0	0	0	**0**
CR-16 / CR-14	0	1	0	0	0	**1**
CR-14 / CO-131 (South)	0	0	2	0	4	**6**
TOTAL	0	1	2	1	4	**8**

Source: CDOT, August 2024

Hales Engineering conducted a site visit on May 23, 2024, to evaluate safety at each intersection along with some areas of interest related to crash history. Based on the crash history and the site observations, Hales Engineering proposed various safety mitigation measures that should be considered.

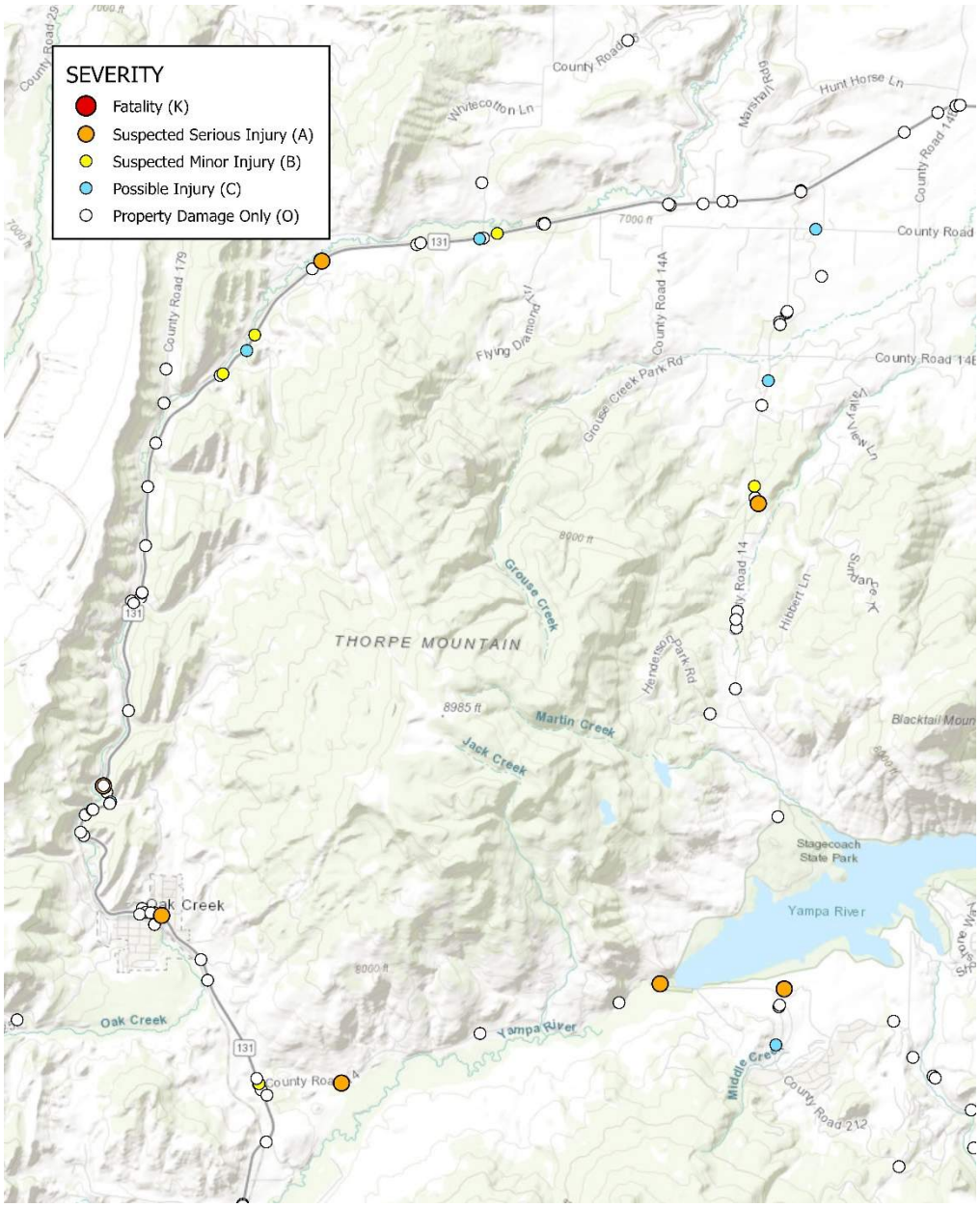


Figure 3: Crash locations in study area

Below is a description of the safety context at each observed location along with proposed improvements. Note that some of the suggested improvements may already be resolved in the proposed plans to improve CR-14.

3. CR-14C / CR-14
    - Safety Context: Lacking sight distance due to sharp curve and rolling terrain. Two dirt roads give vehicles multiple ways to enter and exit CR-14C.
    - Proposed Improvement: Increase the curve radius and eliminate one of the dirt roads connecting to CR-14C. This is already being considered by the County.

4. CR-14AB / CR-14
    - Safety Context: Potential sight distance issues created by electrical boxes on southeast corner of intersection. Practically no shoulder on CR-14 south of the intersection.
    - Proposed Improvement: Move electrical boxes and widen shoulders.
6. CR-16 / CR-14
    - Safety Context: Potential sight distance issue for northbound left vehicles looking east. Location of one severe crash.
    - Proposed Improvement: Install signage to notify drivers of the upcoming intersection. Install an acceleration lane for the northbound left-turn vehicles.
7. CR-14 / CO-131 (South)
    - Safety Context: Lacking sight distance for westbound left turns due to a hill.
    - Proposed Improvement: Install an acceleration lane for the westbound left-turn vehicles.
8. Crash area on CR-14 between CR-14AB and CR-18
    - Safety Context: Location of one severe crash and some other crashes. The area is on a winding, inclined road with small shoulders.
    - Proposed Improvement: Extend shoulders and increase the radius of each curve. Installing speed advisory signs before the curves on the northbound side could also improve safety.
9. Crash area just east of the CR-14 / CO-131 (South) intersection
    - Safety Context: Location of one severe crash. There is a steep drop at the south edge of the road
    - Proposed Improvement: Install a guardrail with chevrons on the south side of CR-14. Install speed advisory signs in both directions before the curve.
10. Entire Corridor
    - Safety Context: Many areas along CR-14 have small shoulders and there are no rumble strips
    - Proposed Improvement: Install rumble strips on the corridor

III. OPENING DAY (2040) BACKGROUND CONDITIONS

A. Purpose

The purpose of the opening day (2040) background analysis is to study the intersections and roadways during the peak travel periods of the day for opening day background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified, and potential mitigation measures recommended.

B. Roadway Network

No changes were made to the roadway network for the opening day (2040) analysis.

C. Traffic Volumes

Hales Engineering obtained opening day (2040) forecasted volumes using an annual growth rate of 2% based on historical traffic volume growth in the area. Opening day (2024) background morning and evening peak hour turning movement volumes are shown in Figure 4

D. Level of Service Analysis

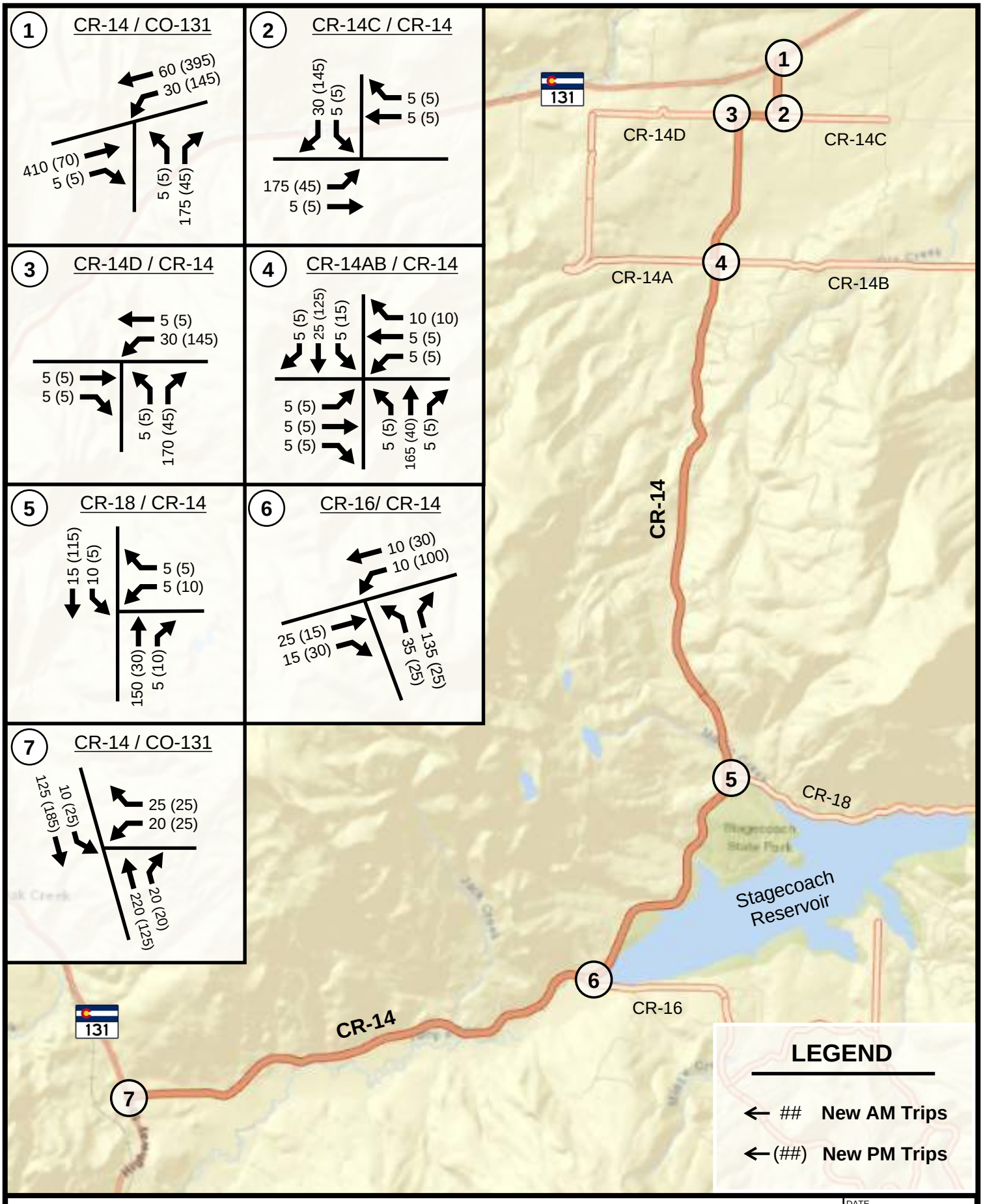
Hales Engineering determined that all study intersections are anticipated to operate at acceptable levels of service during the morning and evening peak hours in opening day (2040) background conditions, as shown in Table 4. These results serve as a baseline condition for the impact analysis of the proposed development for opening day (2040) conditions.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing is anticipated during the morning and evening peak hours.

F. Mitigation Measures

No mitigation measures are recommended.



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Future 2040 Background Peak Hour Volumes

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Figure 4

Table 4: Opening Day (2040) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
CR-14 / CO-131 (North)	NB Stop	c (17.8) / NBL	b (10.1) / NBL
CR-14C / CR-14	WB Stop	b (10.4) / WBT	a (9.5) / WBT
CR-14D / CR-14	EB Stop	a (8.6) / EBR	a (8.6) / EBR
CR-14A & CR-14B / CR-14	EB/WB Stop	b (10.7) / WBL	b (10.4) / EBL
CR-18 / CR-14	WB Stop	a (10) / WBL	a (9.7) / WBL
CR-16 / CR-14	NB Stop	b (10.1) / NBL	b (10.3) / NBL
CR-14 / CO-131 (South)	WB Stop	b (12.7) / WBL	b (11.7) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, August 2024

IV. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Descriptions

After discussions with Routt County, four proposed developments were identified to be used in this study. The planned developments are listed below, and the proposed land use for each development has been identified in Table 5.

New Homes - are expected to be built in the area throughout the coming years. There are currently 240 vacant lots that have connections to water and sewer, and there are 423 lots where a Sanitary Vault can be installed and a well can be drilled. Routt County estimated that approximately 25% of existing homes are secondary homes and suspects this trend to remain the same. With that information, it was assumed that 497 lots will have primary dwelling units and 166 lots will have secondary dwelling units by opening day.

Landaulet View Subdivision - is a development located south of Stagecoach Reservoir along CR-16. The development will consist of 5 single-family homes, 8 duplex homes, and 66 multi-family homes with a north and south access on CR-16.

Stagecoach Tailwaters - is a development located south of Stagecoach Reservoir directly to the right of C.R. 18A. The development will consist of approximately 200 residential dwelling units and over 10,000 sq. ft. of commercial space. The site will have multiple access points along C.R. 18A and CR-16.

Stagecoach Mountain Resort - is a development located south of Stagecoach Reservoir and CR-14 close to the CR-16 / C.R 14 intersection. The development will consist of a ski resort, a golf course, restaurants, retail space, recreational homes, and work force housing.

C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 11th Edition, 2021. Trip generation for three of the proposed projects was done in previous TIS reports using the ITE trip generation rates. Hales Engineering used ITE trip generation rates and available parcels in the area to calculate the trips that will be generated by new residential development. Total trip generation for the expected developments is included in Table 6.

Table 5: Project Land Uses

Land Use	Intensity			
	Projected New Homes	Landaulet View Subdivision	Stagecoach Tailwaters	Stagecoach Mountain Resort
Single-family detached housing	497 Units	5 Units	46 Units	-
Single-Family Attached Housing	-	8 Units	124 Units	-
Multifamily Housing (Low-Rise)	-	66 Units	30 Units	-
Multifamily Housing (Mid-Rise)	-	-	-	50 Units
Recreational Homes	166 Units	-	-	697 Units
Convenience Store	-	-	3,500 sq. ft.	-
High-Turnover (Sit-Down) Restaurant	-	-	4,000 sq. ft.	-
Day Care Center	-	-	2,000 sq. ft.	-
Small Office Building	-	-	4,000 sq. ft.	-
Health/Fitness Club	-	-	-	16,700 sq. ft.
Strip Retail Plaza	-	-	-	16,000 sq. ft.
Fast Casual Restaurant	-	-	-	10,500 sq. ft.
Fine Dining Restaurant	-	-	-	10,500 sq. ft.
Snow Ski Area	-	-	-	6 Lifts
Golf Course	-	-	-	18 Holes

The total trip generation for the development is as follows:

- Daily Trips: 15,621
- Morning Peak Hour Trips: 1,150
- Evening Peak Hour Trips: 1,521

The traffic studies for Stagecoach Tailwaters and Stagecoach Mountain Resort had assumed internal capture percentages based on mix of land uses, knowing that many will live, work, and shop within the area. These are included in Table 6. Hales Engineering used ITE's Internal Capture estimation tool to estimate the amount of internal capture expected for the other "Expected Development" area. The tool estimated internal capture of 5% for the morning peak hour and 11% for the evening peak hour. Reductions of 5% and 10% were assumed for the morning and evening peak hours, respectively, as shown in Table 6.

Table 6: Trip Generation

Trip Generation Routt County - County Road 14 TIS						
Project	Trip Generation	Reductions	New Trips			
	Total	Internal Capture	In	Out	Total	% of Total
Weekday Daily						
Landaulet View	550	0%	276	274	550	4%
Stagecoach Tailwaters	4,778	5%	2,271	2,268	4,539	29%
Expected Development	5,002	5%	2,376	2,376	4,752	30%
Stagecoach Mountain Resort	8,480	32%	-	-	5,780	37%
TOTAL	**18,810**		**4,923**	**4,918**	**15,621**	
AM Peak Hour						
Landaulet View	34	0%	8	26	34	3%
Stagecoach Tailwaters	389	5%	169	201	370	32%
Expected Development	360	5%	100	242	342	30%
Stagecoach Mountain Resort	434	7%	284	120	404	35%
TOTAL	**1,217**		**561**	**589**	**1,150**	
PM Peak Hour						
Landaulet View	44	0%	27	17	44	3%
Stagecoach Tailwaters	367	5%	190	159	349	23%
Expected Development	500	10%	277	173	450	30%
Stagecoach Mountain Resort	948	28%	283	395	678	44%
TOTAL	**1,859**		**777**	**744**	**1,521**	
SOURCE: Hales Engineering, August 2024						

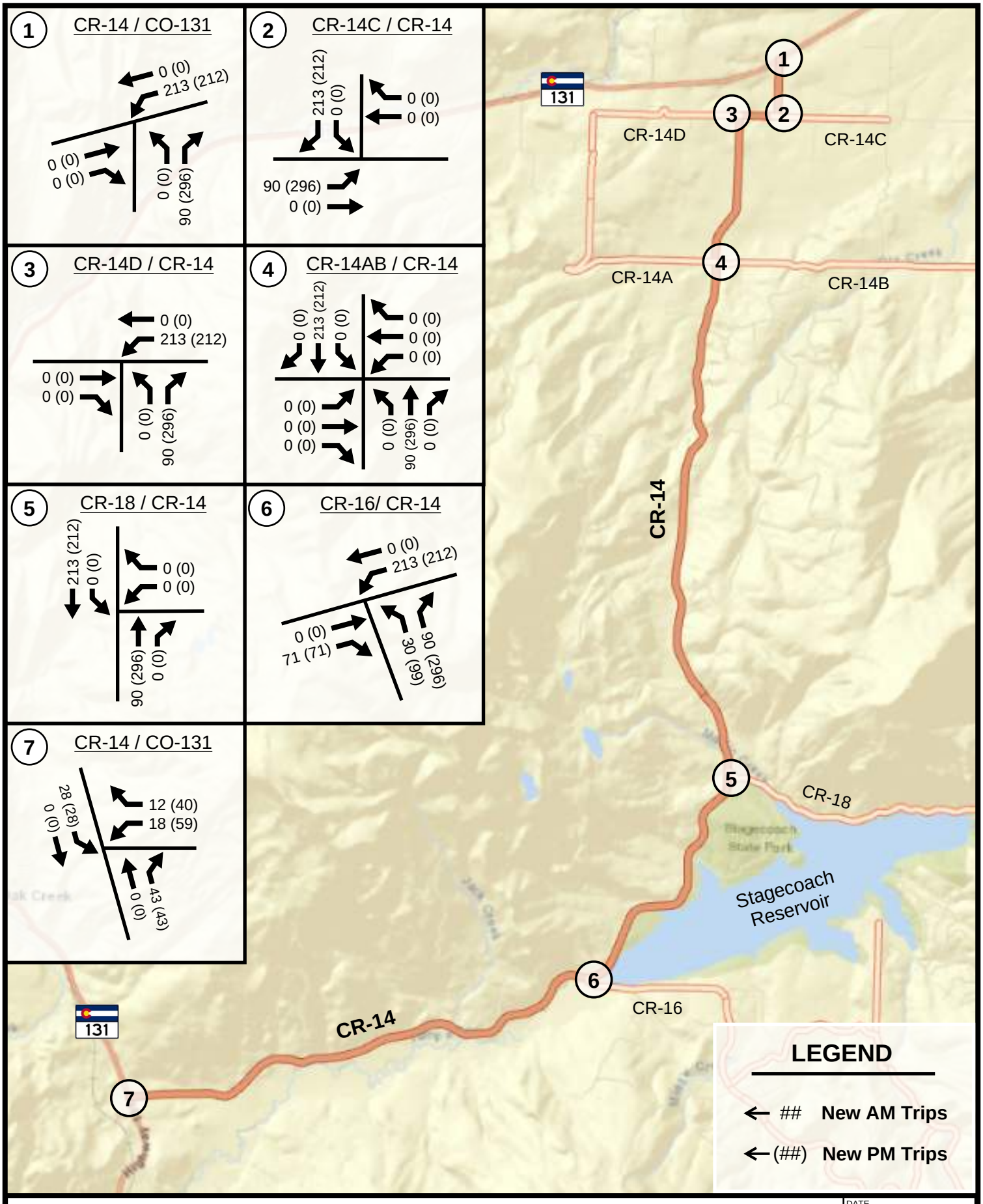
D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. The previous TIS reports provided guidance in distributing the trips generated from the Stagecoach Tailwaters and Landaulet View developments. Existing travel patterns observed during data collection also provide helpful guidance to establishing distribution percentages for the expected future developments and Stagecoach Mountain Resort. The resulting distribution of project generated trips during the morning and evening peak hour is shown in Table 7.

Table 7: Trip Distribution

Direction	% To/From Project
North	10%
South	15%
East	75%

These trip distribution assumptions were used to assign the morning and evening peak hour trip generation at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 5.



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Stagecoach Mountain Resort Trip Assignment

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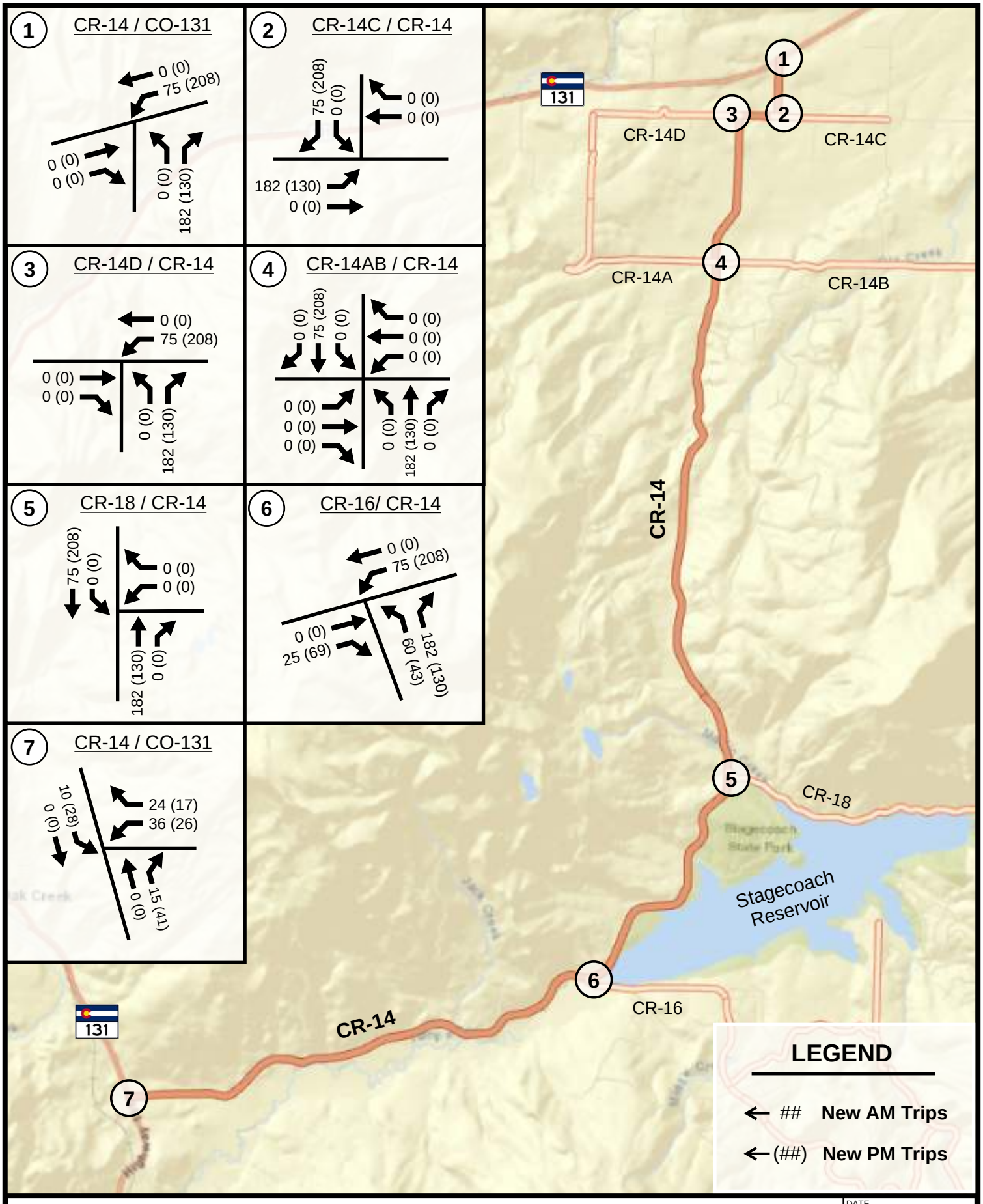
Figure 5a



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New Homes Trip Assignment

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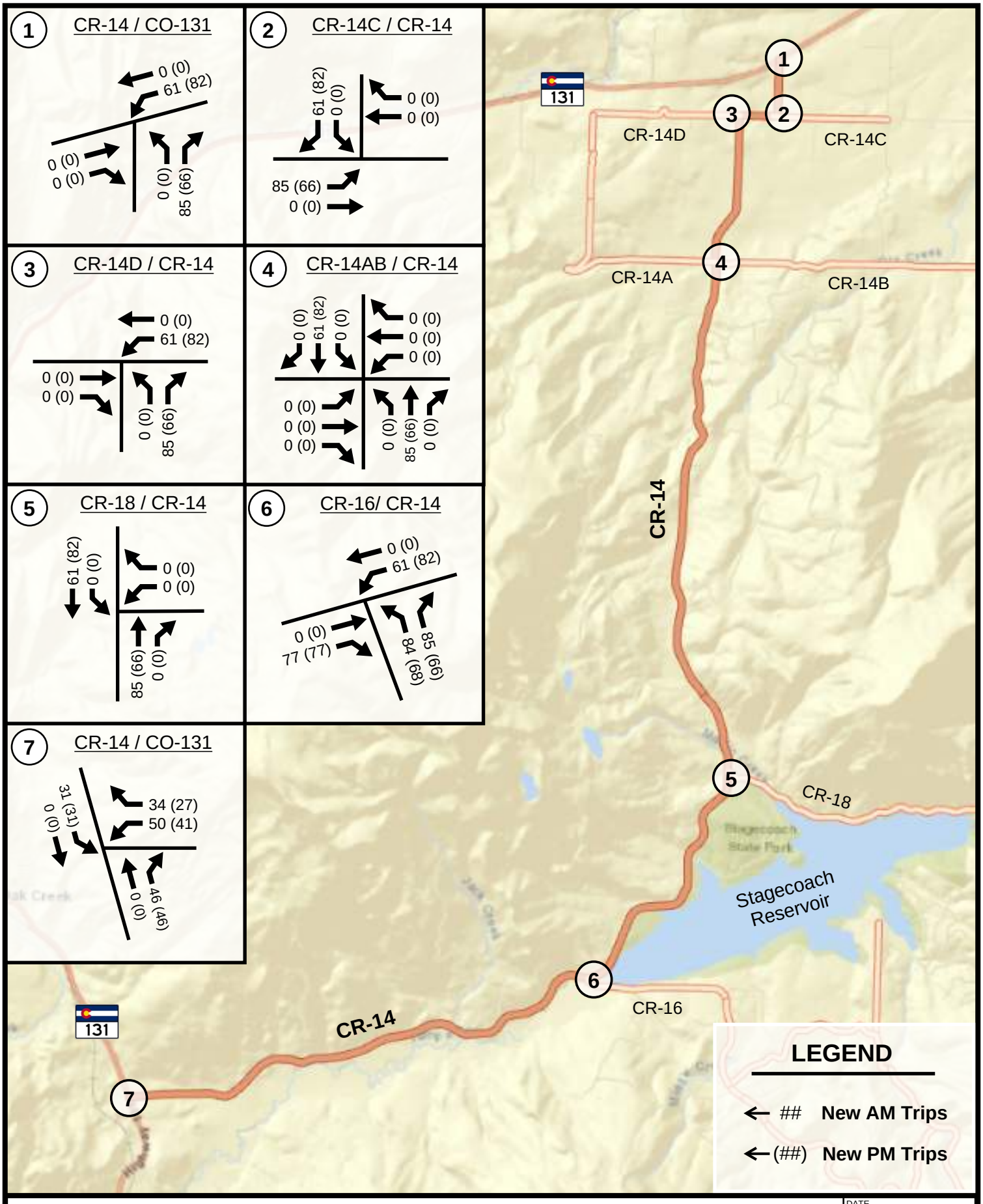
PROJECT UT24-2741

Figure 5b



HALES ENGINEERING
innovative transportation solutions

Stagecoach Tailwaters Trip Assignment

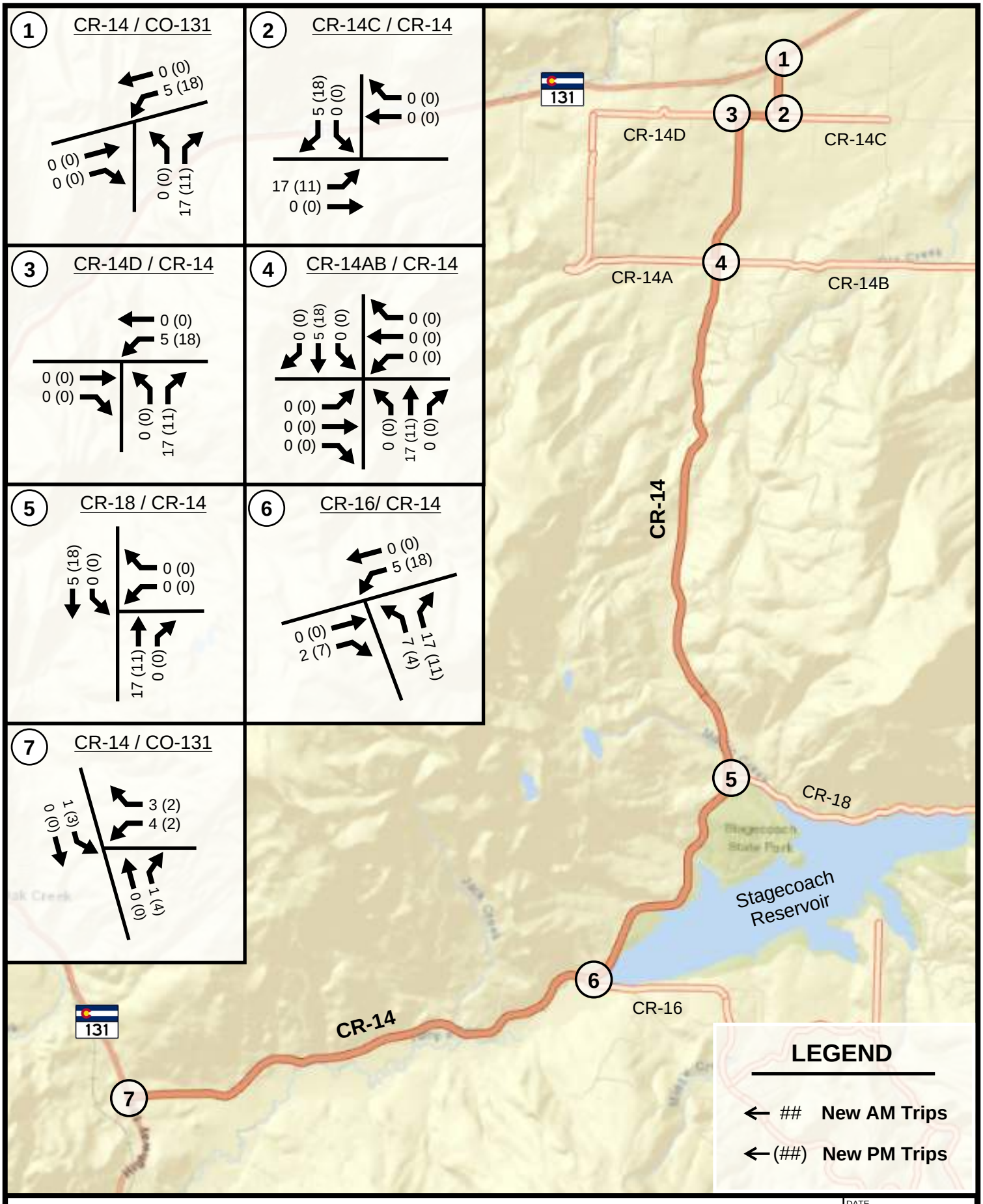
Routt County C.R. 14 TIS

N

DATE 06/05/2024

PROJECT UT24-2741

Figure 5c



HALES ENGINEERING
innovative transportation solutions

Landaulet View Trip Assignment

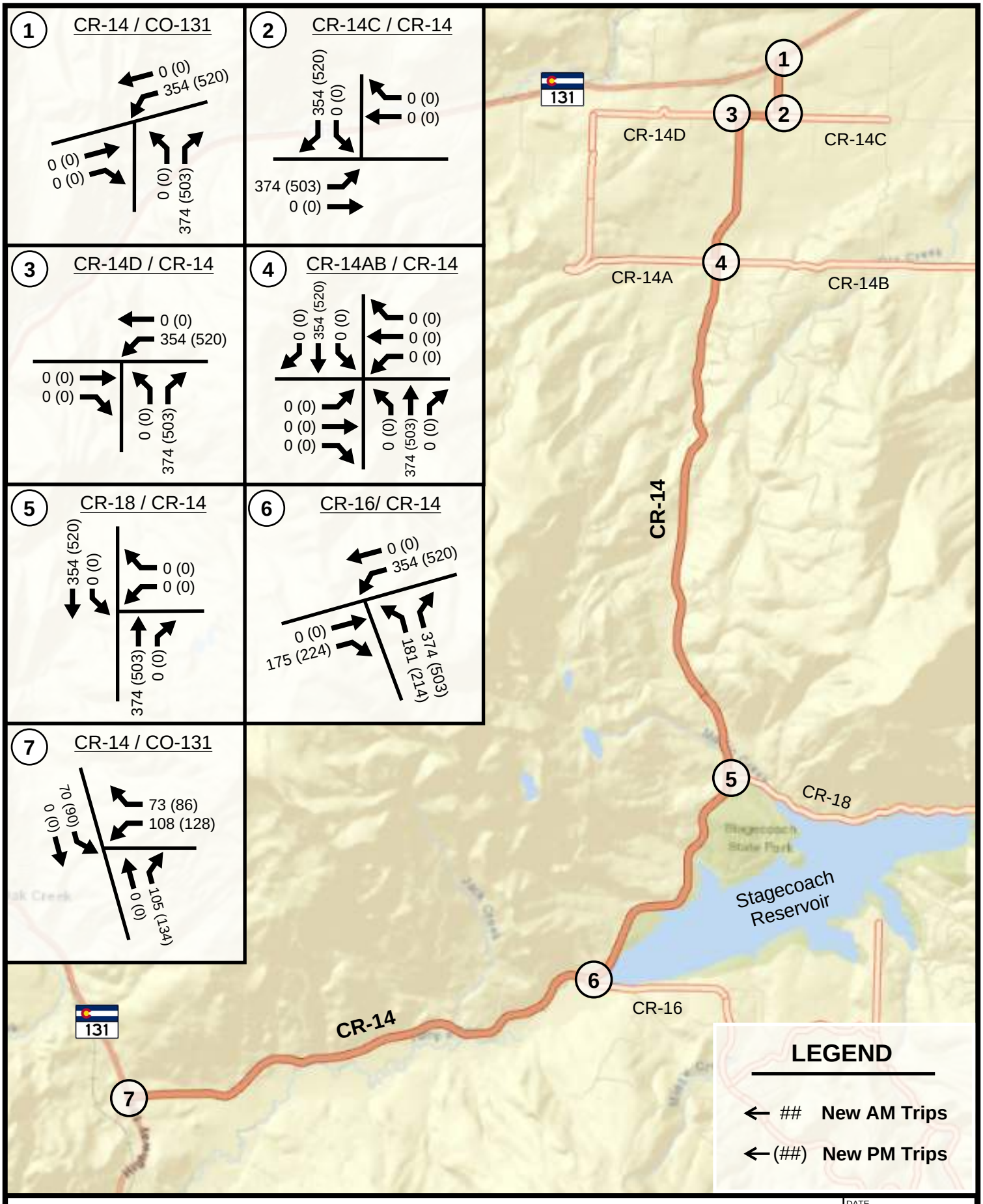
Routt County C.R. 14 TIS

N

DATE 06/05/2024

PROJECT UT24-2741

Figure 5d



HALES ENGINEERING
innovative transportation solutions

All Projects Combined Trip Assignment

Routt County C.R. 14 TIS

N

DATE 06/05/2024

PROJECT UT24-2741

Figure 5e

V. OPENING DAY (2040) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the opening day (2040) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for opening day background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on opening day background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the opening day (2040) background traffic volumes to predict turning movement volumes for opening day (2040) plus project conditions. Opening day (2040) plus project morning and evening peak hour turning movement volumes are shown in Figure 6.

C. Level of Service Analysis

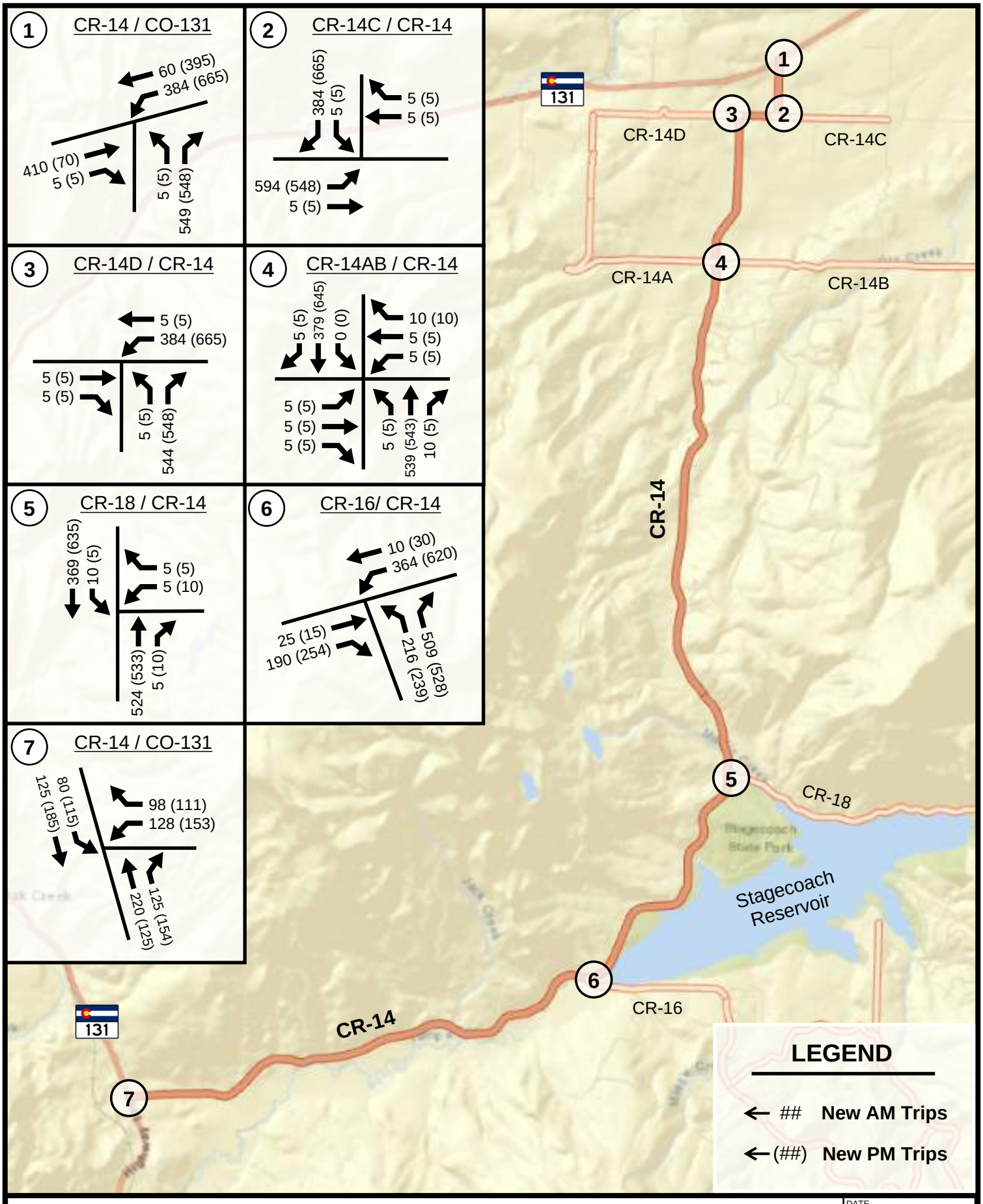
Hales Engineering determined that the CR-14 / CO-131 (North), CR-14AB / CR-14, CR-16 / CR-14, and CR-14 / CO-131 (South) intersections are anticipated to operate at a poor LOS during the evening peak hour in opening day (2040) plus project conditions, as shown in Table 8.

Table 8: Opening Day (2040) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
CR-14 / CO-131 (North)	NB Stop	f (>50) / NBL	f (>50) / NBL
CR-14C / CR-14	WB Stop	c (24.7) / WBT	d (33.7) / WBT
CR-14D / CR-14	EB Stop	a (8.6) / EBR	a (8.6) / EBR
CR-14A & CR-14B / CR-14	EB/WB Stop	d (29) / EBL	f (>50) / EBL
CR-18 / CR-14	WB Stop	c (19.5) / WBL	d (31.6) / WBL
CR-16 / CR-14	NB Stop	f (>50) / NBL	f (>50) / NBL
CR-14 / CO-131 (South)	WB Stop	f (>50) / WBL	f (>50) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, August 2024



HALES ENGINEERING
innovative transportation solutions

Future (2040) Plus Project Peak Hour Volumes

Routt County C.R. 14 TIS

N

DATE 06/05/2024

PROJECT UT24-2741

Figure 6

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the evening peak hour are summarized as follows:

- CR-14 / CO-131 (North):
  - Northbound: 540 feet
- CR-14 / CO-131 (South):
  - Westbound: 410 feet
- CR-16 / CR-14:
  - Northbound: 3,063 feet
  - Westbound: 158 feet

E. Mitigation Measures

Multiple mitigation measures are recommended based on the results of the safety and operation analyses at each intersection. Mitigation measures are ranked by low, medium, and high priority based on the collective safety risks and LOS results for each unmitigated intersection.

Table 9: Recommended Mitigation Measures

Mitigation Measures			
Intersection		**Mitigations**	**Priority**
1	CR-14 / CO-131 (North)	• Install an acceleration lane for northbound left-turn vehicles • Install separate left- and right-turn pockets on the northbound approach • Channelize the northbound right-turn pocket	High Medium Medium
4	CR-14A & CR-14B / CR-14	• Install northbound and southbound left-turn pockets	Low

6	CR-16 / CR-14	• Short Term
		  ○ Install an acceleration lane for northbound left-turn vehicles
		  ○ Install a channelized eastbound right-turn pocket (with added southbound receiving lane)
		• Long Term
		  ○ Install traffic signal with high-T design which allows westbound thru traffic to continue through the intersection without stopping
			High
			Medium
			Low

7	CR-14 / CO-131 (South)	• Install separate left- and right-turn pockets on the westbound approach • Install an acceleration lane for westbound left-turn vehicles • Install a northbound right-turn pocket • Install a southbound left-turn pocket	Medium High Low Medium

Source: Hales Engineering, August 2024

The LOS results with the proposed mitigations are shown in Table 10. Alternatively, if another connection is made to the area south of Stagecoach Reservoir (e.g. via CR-18), some of the above improvements may not be needed.

Table 10: Mitigated Opening Day (2040) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
CR-14 / CO-131 (North)	NB Stop	f (>50) / NBL	f (>50) / NBL
CR-14C / CR-14	WB Stop	c (24.7) WBT	d (33.7) / WBT
CR-14D / CR-14	EB Stop	a (8.6) / EBR	a (8.6) / EBR
CR-14A & CR-14B / CR-14	EB/WB Stop	d (28.8) / EBL	f (>50) / EBL
CR-18 / CR-14	WB Stop	c (19.5) / WBL	d (31.6) / WBL
CR-16 / CR-14	NB Stop	C (24.7)	D (48.9)
CR-14 / CO-131 (South)	WB Stop	d (30.4) / WBL	f (>50) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, August 2024

F. Recommended Storage Lengths

Hales Engineering determined recommended storage lengths based on the 95th percentile queue lengths given in the opening day (2040) plus project scenario. These storage lengths do not include the taper length. Recommended storage lengths for the study intersections are shown in Table 11.

Table 11: Recommended Storage Lengths

	Intersection	Recommended Storage Lengths (feet)															
		Northbound				Southbound				Eastbound				Westbound			
		LT		RT		LT		RT		LT		RT		LT		RT	
		E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
1	CR-14 / CO-131 (North)	-	-	-	100	-	-	-	-	-	-	650	-	500	-	-	-
4	CR-14A & CR-14B / CR-14	-	100	-	-	-	100	-	-	-	-	-	-	-	-	-	-
5	CR-18 / CR- 14	-	-	-	-	140	-	-	-	-	-	-	-	-	-	-	-
6	CR-16 / CR-14	-	-	-	225	-	-	-	-	-	-	-	100	120	350	-	-
7	CR-14 / CO-131 (South)	-	-	-	100	-	100	-	-	-	-	-	-	-	-	-	150

1. Storage lengths are based on 2040 95th percentile queue lengths and do not include required deceleration / taper distances
2. E = Existing storage length (approximate), if applicable; P = proposed storage length for new turn lanes or changes to existing turn lanes, if applicab

Source: Hales Engineering, August 2024

G. Improvement Opinion of Costs

Hales Engineering and Sunny Civil have estimated the cost for the recommended improvements on CR-14. It should be noted that these items are in addition to the current roadway construction plans by Routt County and do not include the costs associated with those planned construction projects. The estimated costs, by intersection and improvement, are included below:

1. CR14 / CR131 (North)	**$1,679,000**
○ NB LT Acceleration Lane	$1,506,000
○ Separate NB LT and RT Lanes	$160,000
○ Channelized RT Lane	$13,000
4. CR14AB / CR14	**$693,000**
○ NB and SB LT Pockets	$693,000
6. CR16 / CR14	**$2,478,000**
○ Speed Advisory Signage	$13,000
○ NB LT Acceleration Lane	$859,000
○ Channelized EB RT Pocket	$737,000
○ Separate NB LT and RT Lanes	$78,000
○ Increased WB LT Storage Length	$311,000
○ Install Signal with High-T Design	$480,000
7. CR14 / CO131 (South)	**$3,042,000**
○ Separate WB LT and RT Lanes	$625,000
○ WB LT Acceleration Lane	$777,000
○ SB LT Pocket	$889,000
○ NB RT Pocket	$751,000
9. CR14 & 0.9 Miles East of CR131 (South)	**$149,000**
○ Guardrail with Chevron Signs	$136,000
○ Speed Advisory Signage	$13,000

It is anticipated that the cost for installing rumble strips along the corridor will approximately $1.00 per linear foot. It is recommended that the County budget $150,000 for this work.

APPENDIX A

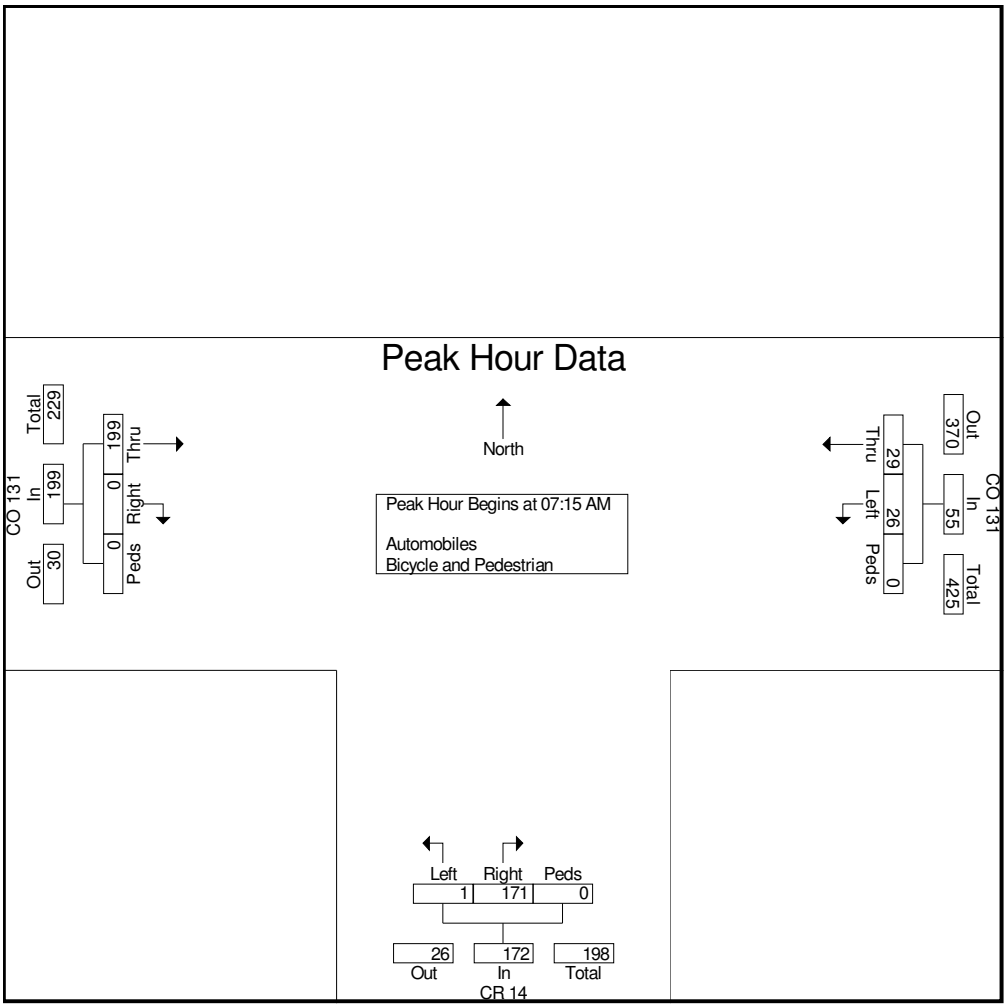
Turning Movement Counts

Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
AM Peak
CO 131 and CR 14 (East)

File Name : CO 131 and CR 14 (East) AM
Site Code : Hales
Start Date : 4/18/2024
Page No : 3

	CO 131 Eastbound				CO 131 Westbound				CR 14 Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	46	0	0	46	5	**12**	0	**17**	**1**	33	0	34	97
07:30 AM	**71**	0	0	**71**	6	6	0	12	0	52	0	52	**135**
07:45 AM	42	0	0	42	**9**	5	0	14	0	**59**	0	**59**	115
08:00 AM	40	0	0	40	6	6	0	12	0	27	0	27	79
Total Volume	199	0	0	199	26	29	0	55	1	171	0	172	426
% App. Total	100	0	0		47.3	52.7	0		0.6	99.4	0		
PHF	.701	.000	.000	.701	.722	.604	.000	.809	.250	.725	.000	.729	.789

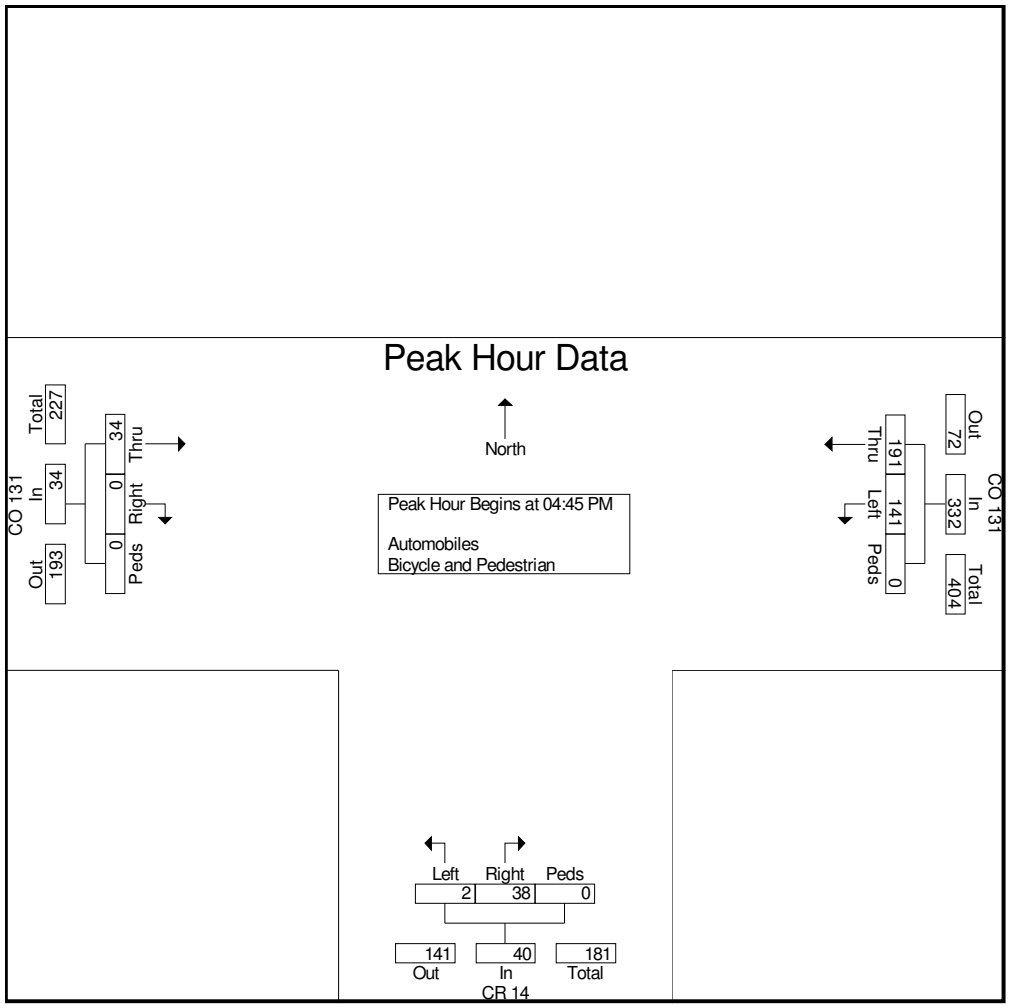


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
PM Peak
CO 131 and CR 14 (East)

File Name : CO 131 and CR 14 (East) PM
Site Code : Hales
Start Date : 4/18/2024
Page No : 3

	CO 131 Eastbound				CO 131 Westbound				CR 14 Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	**9**	0	0	**9**	**42**	41	0	83	**1**	9	0	10	102
05:00 PM	9	0	0	9	26	**54**	0	80	1	10	0	**11**	100
05:15 PM	7	0	0	7	40	53	0	**93**	0	8	0	8	**108**
05:30 PM	9	0	0	9	33	43	0	76	0	**11**	0	11	96
Total Volume	34	0	0	34	141	191	0	332	2	38	0	40	406
% App. Total	100	0	0		42.5	57.5	0		5	95	0		
PHF	.944	.000	.000	.944	.839	.884	.000	.892	.500	.864	.000	.909	.940

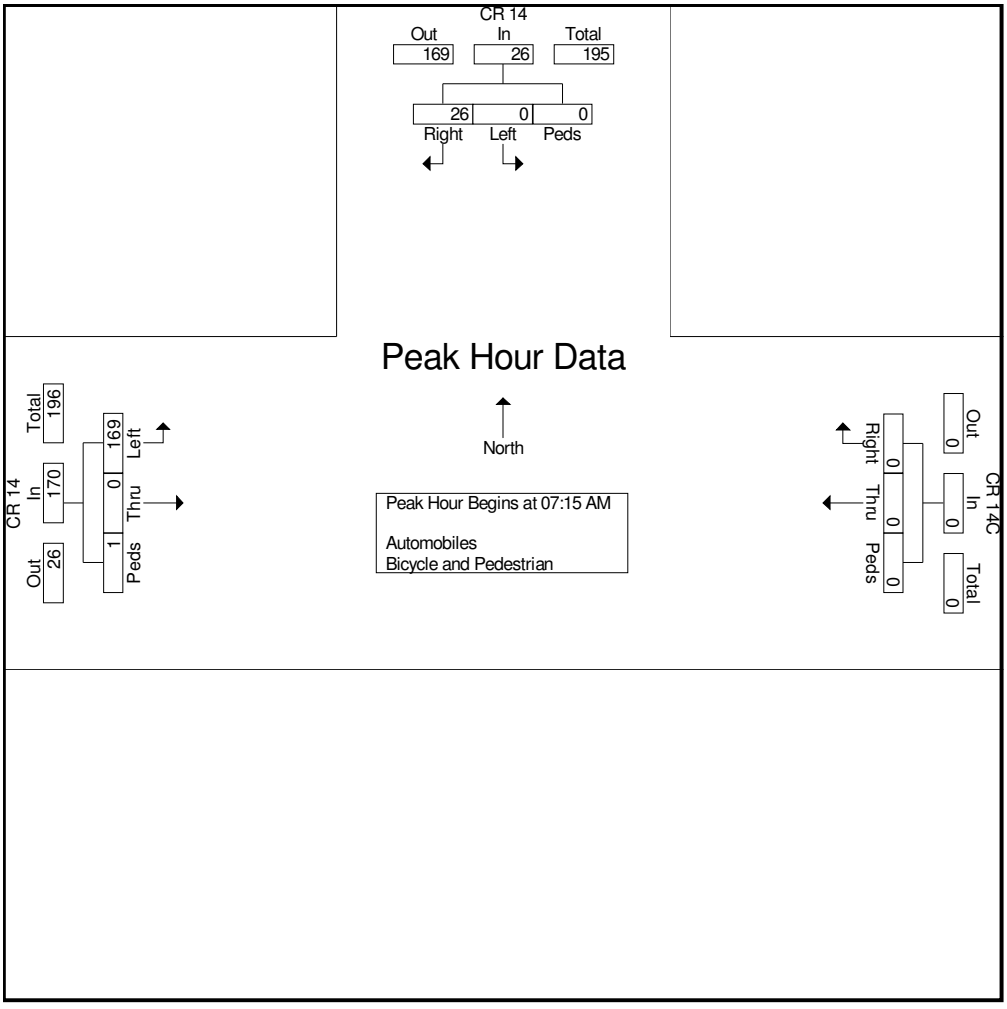


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
AM Peak
CR 14C and CR 14

File Name : CR 14C and CR 14 AM
Site Code : Hales
Start Date : 4/18/2024

	CR 14 Eastbound				CR 14C Westbound				CR 14 Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	35	0	0	35	0	0	0	0	0	5	0	5	40
07:30 AM	50	0	**1**	51	0	0	0	0	0	6	0	6	57
07:45 AM	**59**	0	0	**59**	0	0	0	0	0	**9**	0	**9**	**68**
08:00 AM	25	0	0	25	0	0	0	0	0	6	0	6	31
Total Volume	169	0	1	170	0	0	0	0	0	26	0	26	196
% App. Total	99.4	0	0.6		0	0	0		0	100	0		
PHF	.716	.000	.250	.720	.000	.000	.000	.000	.000	.722	.000	.722	.721



Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
PM Peak
CR 14C and CR 14

File Name : CR 14C and CR 14 PM
Site Code : Hales
Start Date : 4/18/2024

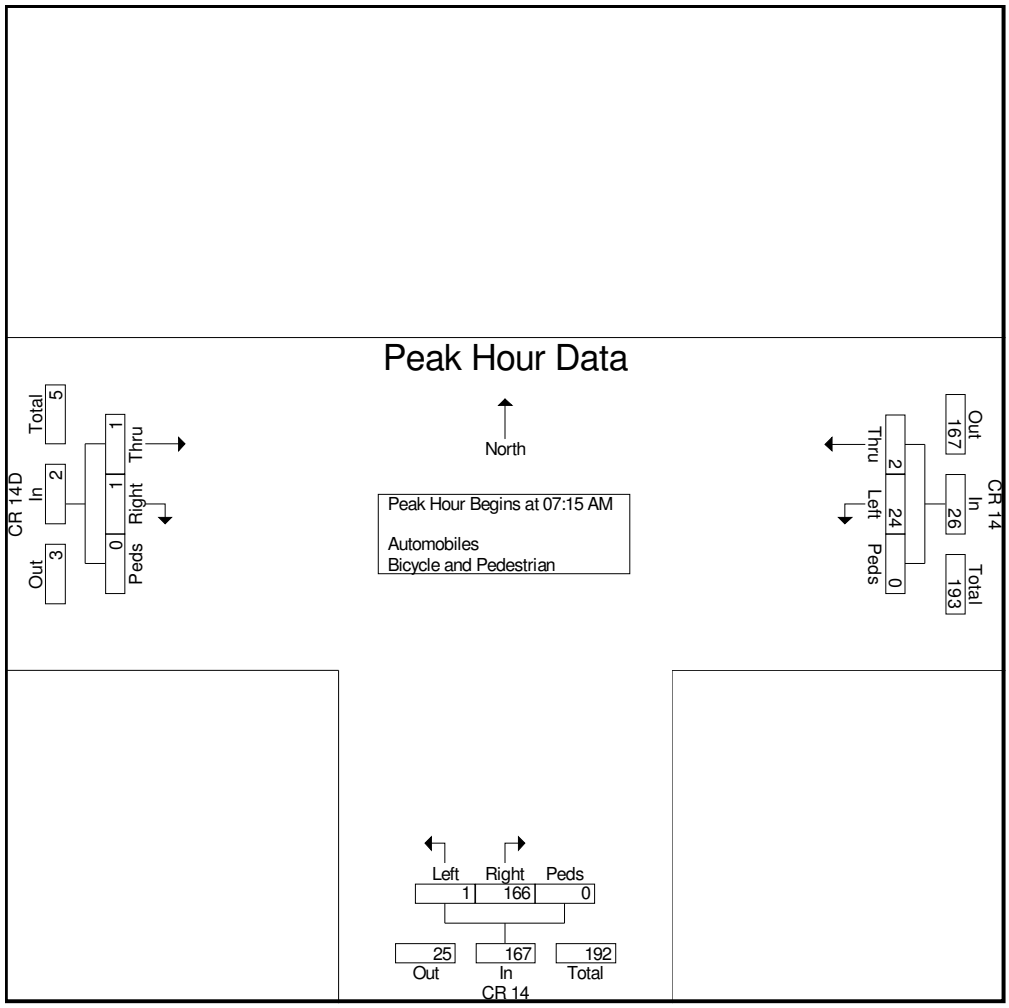
	CR 14 Eastbound				CR 14C Westbound				CR 14 Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	10	0	0	10	0	0	0	0	0	**41**	0	**41**	**51**
05:00 PM	**12**	0	0	12	**1**	0	0	1	0	27	0	27	40
05:15 PM	6	0	0	6	0	0	**2**	**2**	0	38	0	38	46
05:30 PM	11	**2**	0	**13**	0	0	0	0	0	34	0	34	47
Total Volume	39	2	0	41	1	0	2	3	0	140	0	140	184
% App. Total	95.1	4.9	0		33.3	0	66.7		0	100	0		
PHF	.813	.250	.000	.788	.250	.000	.250	.375	.000	.854	.000	.854	.902

Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
AM Peak
CR 14D and CR 14

File Name : CR 14D and CR 14 AM
Site Code : Hales
Start Date : 4/18/2024

	CR 14D Eastbound				CR 14 Westbound				CR 14 Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	0	0	0	4	**1**	0	5	0	34	0	34	39
07:30 AM	0	**1**	0	**1**	6	0	0	6	**1**	49	0	50	57
07:45 AM	0	0	0	0	**7**	1	0	**8**	0	**58**	0	**58**	**66**
08:00 AM	**1**	0	0	1	7	0	0	7	0	25	0	25	33
Total Volume	1	1	0	2	24	2	0	26	1	166	0	167	195
% App. Total	50	50	0		92.3	7.7	0		0.6	99.4	0		
PHF	.250	.250	.000	.500	.857	.500	.000	.813	.250	.716	.000	.720	.739

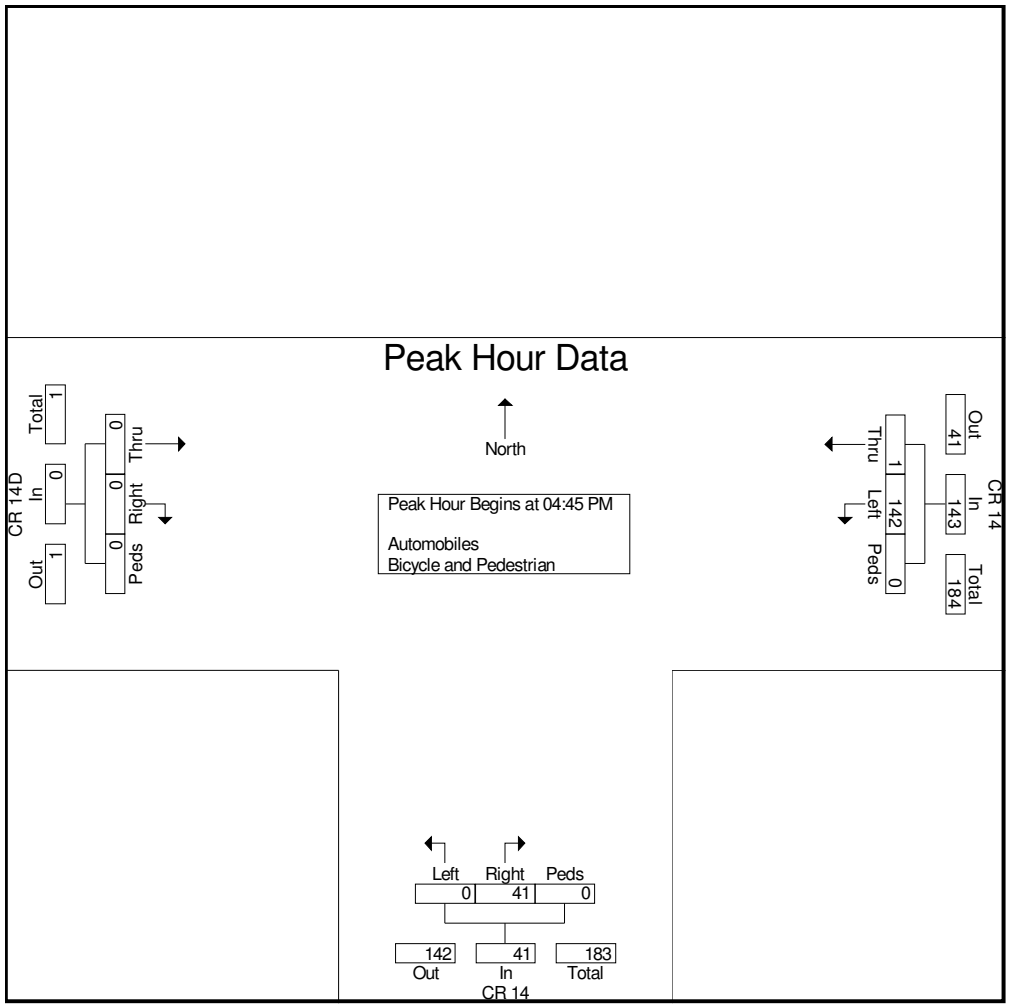


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
PM Peak
CR 14D and CR 14

File Name : CR 14D and CR 14 PM
Site Code : Hales
Start Date : 4/18/2024

	CR 14D Eastbound				CR 14 Westbound				CR 14 Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	0	0	0	0	**44**	0	0	**44**	0	10	0	10	**54**
05:00 PM	0	0	0	0	25	**1**	0	26	0	12	0	12	38
05:15 PM	0	0	0	0	42	0	0	42	0	6	0	6	48
05:30 PM	0	0	0	0	31	0	0	31	0	**13**	0	**13**	44
Total Volume	0	0	0	0	142	1	0	143	0	41	0	41	184
% App. Total	0	0	0		99.3	0.7	0		0	100	0		
PHF	.000	.000	.000	.000	.807	.250	.000	.813	.000	.788	.000	.788	.852

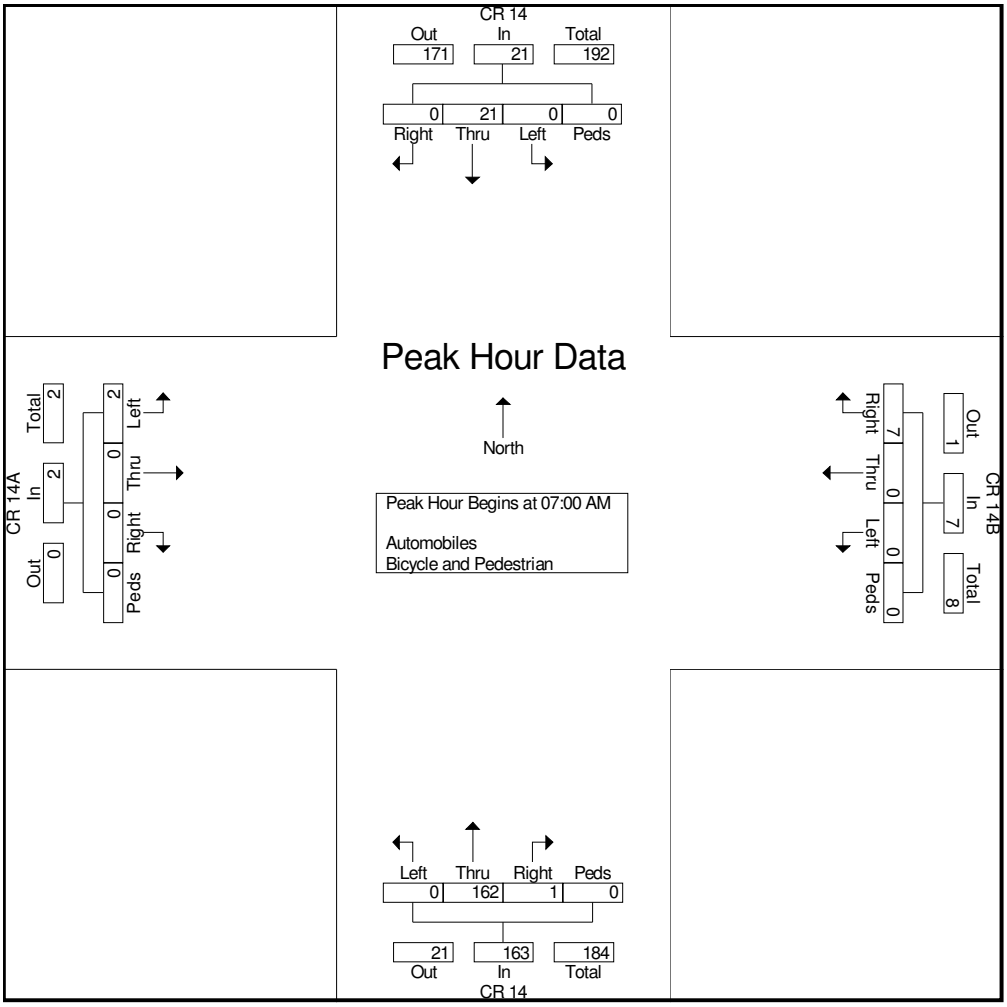


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
AM Peak
CR 14A CR 14B and CR 14

File Name : CR 14A and CR 14B and CR 14 AM
Site Code : Hales
Start Date : 4/18/2024
Page No : 3

	CR 14A Eastbound					CR 14B Westbound					CR 14 Northbound					CR 14 Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	23	0	0	23	0	2	0	0	2	25
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	33	0	0	33	0	6	0	0	6	39
07:30 AM	0	0	0	0	0	0	0	**5**	0	**5**	0	52	**1**	0	53	0	6	0	0	6	64
07:45 AM	**2**	0	0	0	**2**	0	0	2	0	2	0	**54**	0	0	**54**	0	**7**	0	0	**7**	**65**
Total Volume	2	0	0	0	2	0	0	7	0	7	0	162	1	0	163	0	21	0	0	21	193
% App. Total	100	0	0	0		0	0	100	0		0	99.4	0.6	0		0	100	0	0		
PHF	.250	.000	.000	.000	.250	.000	.000	.350	.000	.350	.000	.750	.250	.000	.755	.000	.750	.000	.000	.750	.742

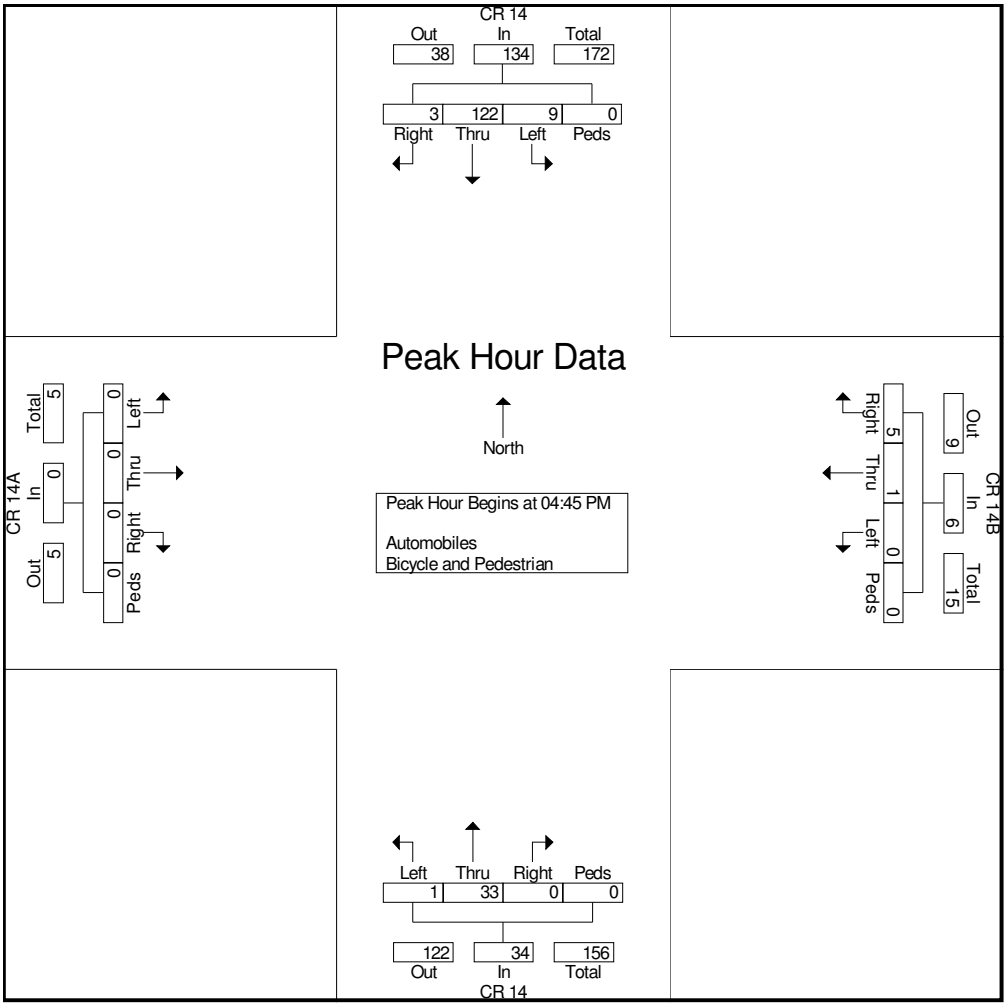


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
PM Peak
CR 14A CR 14B and CR 14

File Name : CR 14A and CR 14B and CR 14 PM
Site Code : Hales
Start Date : 4/18/2024
Page No : 3

	CR 14A Eastbound					CR 14B Westbound					CR 14 Northbound					CR 14 Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	1	**38**	1	0	**40**	**50**
05:00 PM	0	0	0	0	0	0	0	0	0	0	**1**	**12**	0	0	**13**	3	23	0	0	26	39
05:15 PM	0	0	0	0	0	0	**1**	1	0	2	0	4	0	0	4	1	37	**2**	0	40	46
05:30 PM	0	0	0	0	0	0	0	**4**	0	**4**	0	7	0	0	7	**4**	24	0	0	28	39
Total Volume	0	0	0	0	0	0	1	5	0	6	1	33	0	0	34	9	122	3	0	134	174
% App. Total	0	0	0	0		0	16.7	83.3	0		2.9	97.1	0	0		6.7	91	2.2	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.313	.000	.375	.250	.688	.000	.000	.654	.563	.803	.375	.000	.838	.870

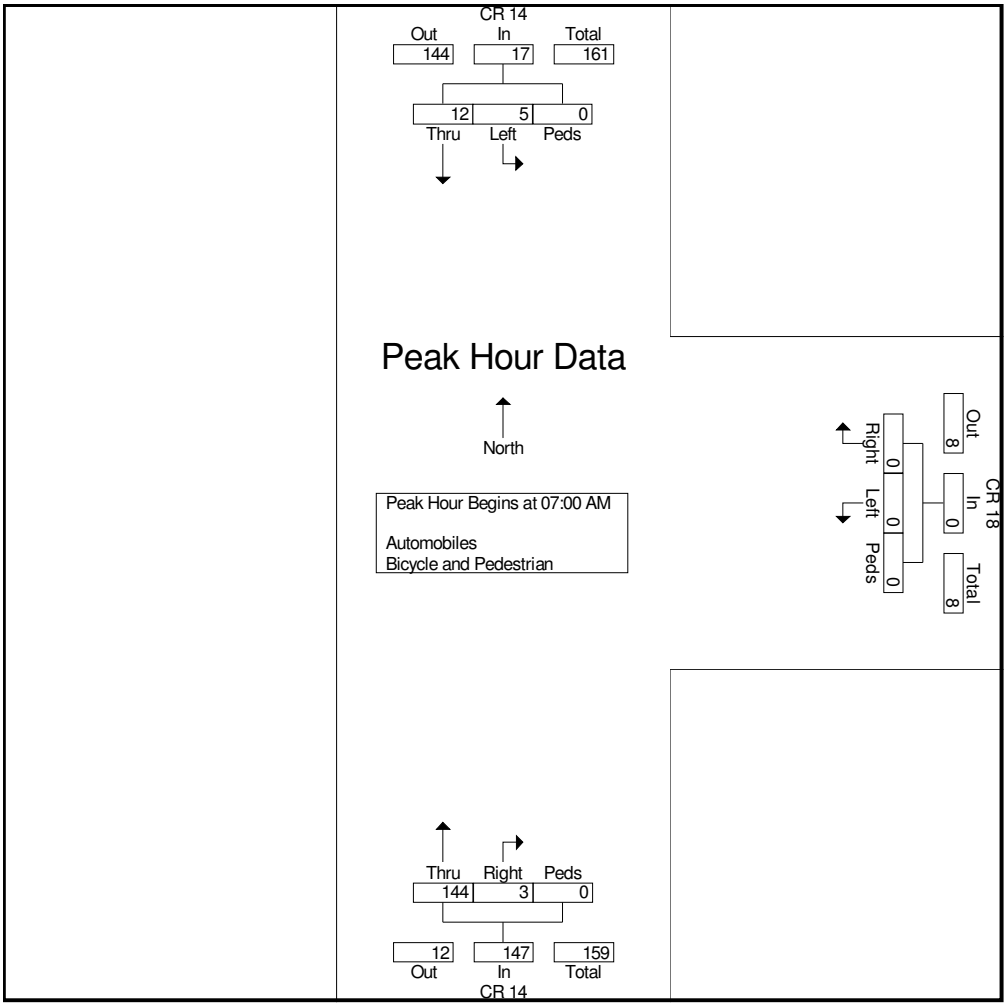


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
AM Peak
CR 18 and CR 14

File Name : CR 18 and CR 14 AM
Site Code : Hales
Start Date : 4/18/2024

	CR 18 Westbound				CR 14 Northbound				CR 14 Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	0	0	0	26	0	0	26	0	3	0	3	29
07:15 AM	0	0	0	0	36	0	0	36	1	2	0	3	39
07:30 AM	0	0	0	0	**47**	**2**	0	**49**	0	3	0	3	**52**
07:45 AM	0	0	0	0	35	1	0	36	**4**	**4**	0	**8**	44
Total Volume	0	0	0	0	144	3	0	147	5	12	0	17	164
% App. Total	0	0	0		98	2	0		29.4	70.6	0		
PHF	.000	.000	.000	.000	.766	.375	.000	.750	.313	.750	.000	.531	.788

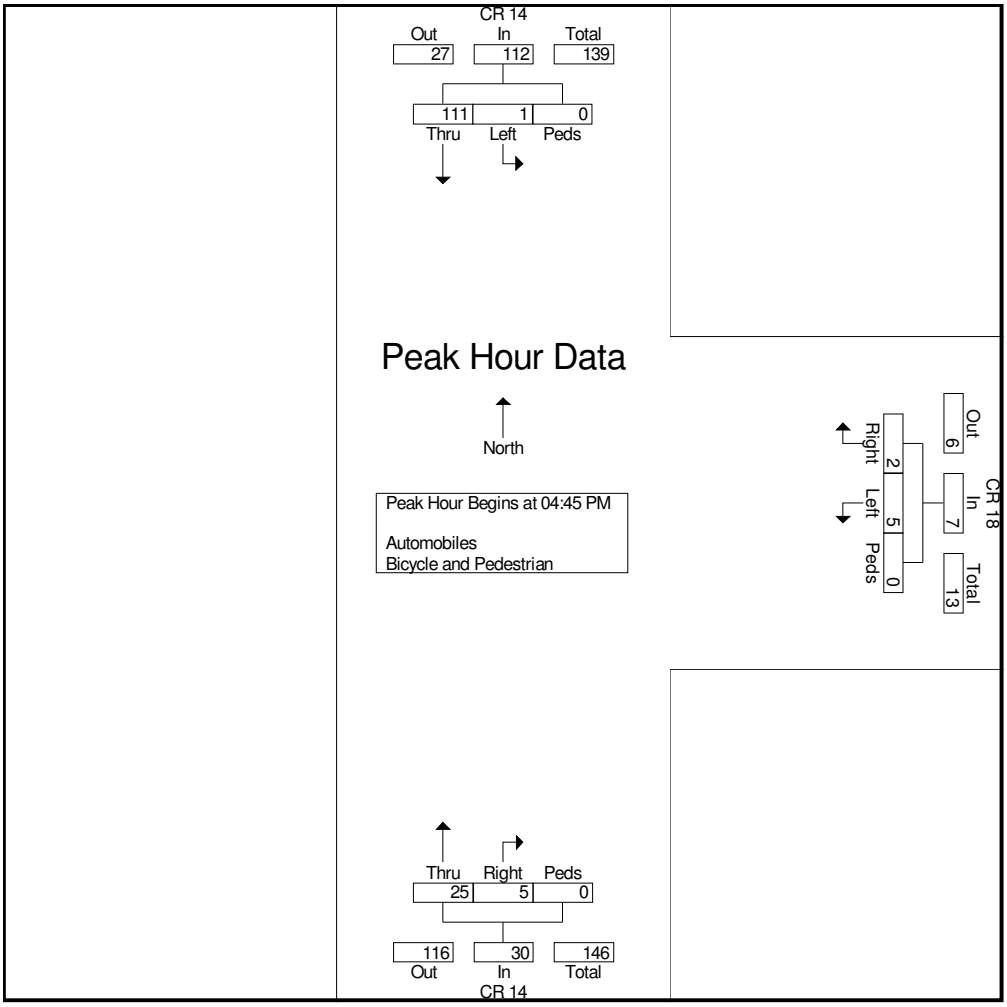


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
PM Peak
CR 18 and CR 14

File Name : CR 18 and CR 14 PM
Site Code : Hales
Start Date : 4/18/2024

	CR 18 Westbound				CR 14 Northbound				CR 14 Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	**2**	**1**	0	**3**	7	**2**	0	9	0	**35**	0	**35**	**47**
05:00 PM	2	0	0	2	**10**	2	0	**12**	**1**	25	0	26	40
05:15 PM	1	0	0	1	1	1	0	2	0	26	0	26	29
05:30 PM	0	1	0	1	7	0	0	7	0	25	0	25	33
Total Volume	5	2	0	7	25	5	0	30	1	111	0	112	149
% App. Total	71.4	28.6	0		83.3	16.7	0		0.9	99.1	0		
PHF	.625	.500	.000	.583	.625	.625	.000	.625	.250	.793	.000	.800	.793

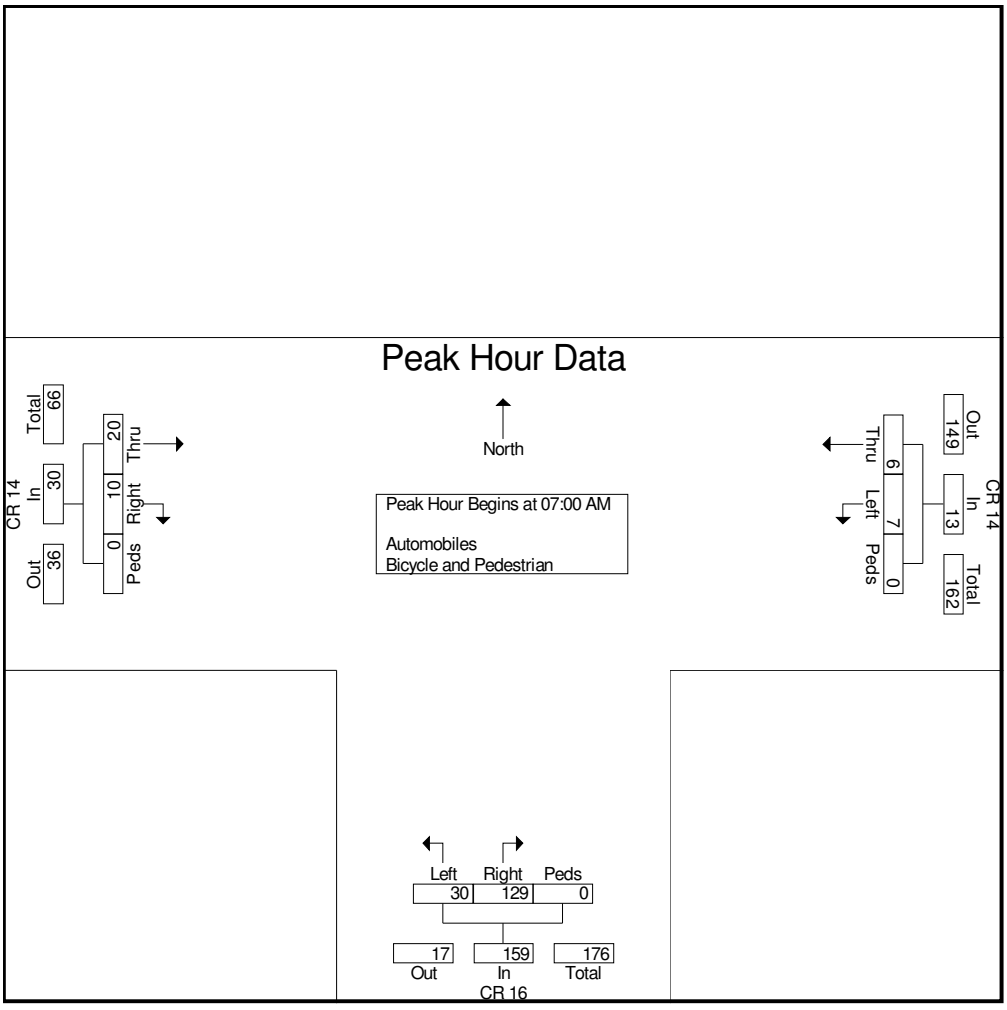


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
AM Peak
CR 16 and CR 14

File Name : CR 16 and CR 14 AM
Site Code : Hales
Start Date : 4/18/2024

	CR 14 Eastbound				CR 14 Westbound				CR 16 Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	3	2	0	5	0	**3**	0	3	3	24	0	27	35
07:15 AM	6	1	0	7	1	1	0	2	7	31	0	38	47
07:30 AM	4	**4**	0	8	**3**	1	0	**4**	9	**46**	0	**55**	**67**
07:45 AM	**7**	3	0	**10**	3	1	0	4	**11**	28	0	39	53
Total Volume	20	10	0	30	7	6	0	13	30	129	0	159	202
% App. Total	66.7	33.3	0		53.8	46.2	0		18.9	81.1	0		
PHF	.714	.625	.000	.750	.583	.500	.000	.813	.682	.701	.000	.723	.754

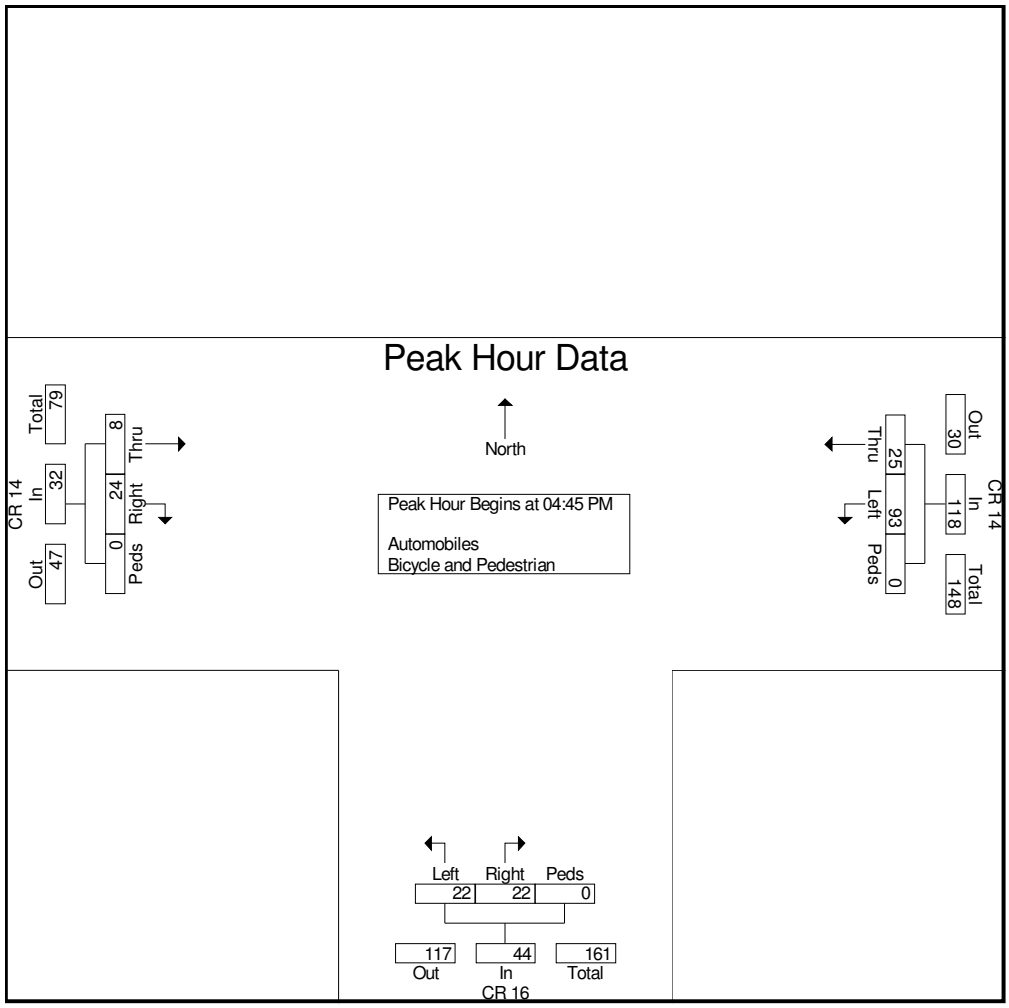


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
PM Peak
CR 16 and CR 14

File Name : CR 16 and CR 14 PM
Site Code : Hales
Start Date : 4/18/2024

	CR 14 Eastbound				CR 14 Westbound				CR 16 Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	**3**	6	0	**9**	24	7	0	31	4	7	0	11	51
05:00 PM	3	6	0	9	**26**	6	0	**32**	5	**9**	0	**14**	**55**
05:15 PM	0	**7**	0	7	19	**10**	0	29	4	2	0	6	42
05:30 PM	2	5	0	7	24	2	0	26	**9**	4	0	13	46
Total Volume	8	24	0	32	93	25	0	118	22	22	0	44	194
% App. Total	25	75	0		78.8	21.2	0		50	50	0		
PHF	.667	.857	.000	.889	.894	.625	.000	.922	.611	.611	.000	.786	.882

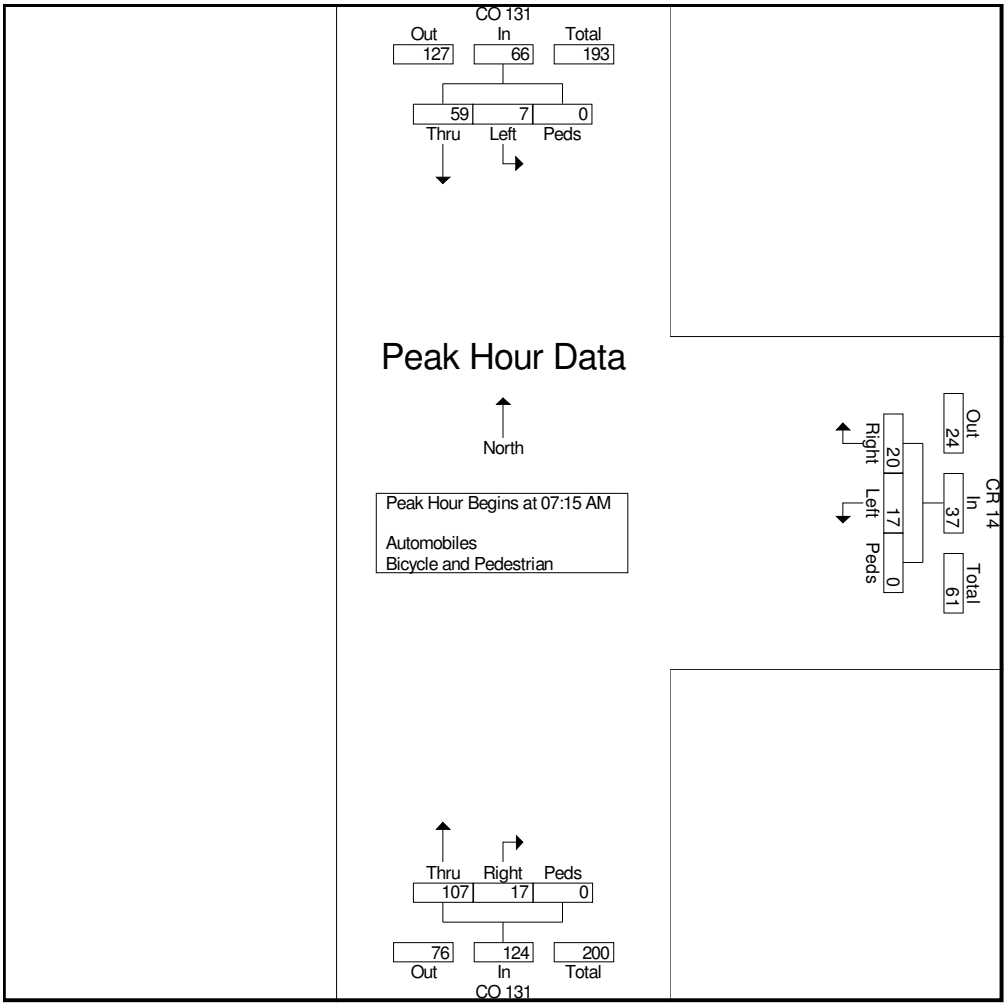


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
AM Peak
CO 131 and CR 14 (West)

File Name : CO 131 and CR 14 (West) AM
Site Code : Hales
Start Date : 4/18/2024
Page No : 3

	CR 14 Westbound				CO 131 Northbound				CO 131 Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	3	6	0	9	25	3	0	28	1	8	0	9	46
07:30 AM	3	5	0	8	22	**7**	0	29	**4**	**21**	0	**25**	62
07:45 AM	**8**	**8**	0	**16**	**44**	5	0	**49**	1	19	0	20	**85**
08:00 AM	3	1	0	4	16	2	0	18	1	11	0	12	34
Total Volume	17	20	0	37	107	17	0	124	7	59	0	66	227
% App. Total	45.9	54.1	0		86.3	13.7	0		10.6	89.4	0		
PHF	.531	.625	.000	.578	.608	.607	.000	.633	.438	.702	.000	.660	.668

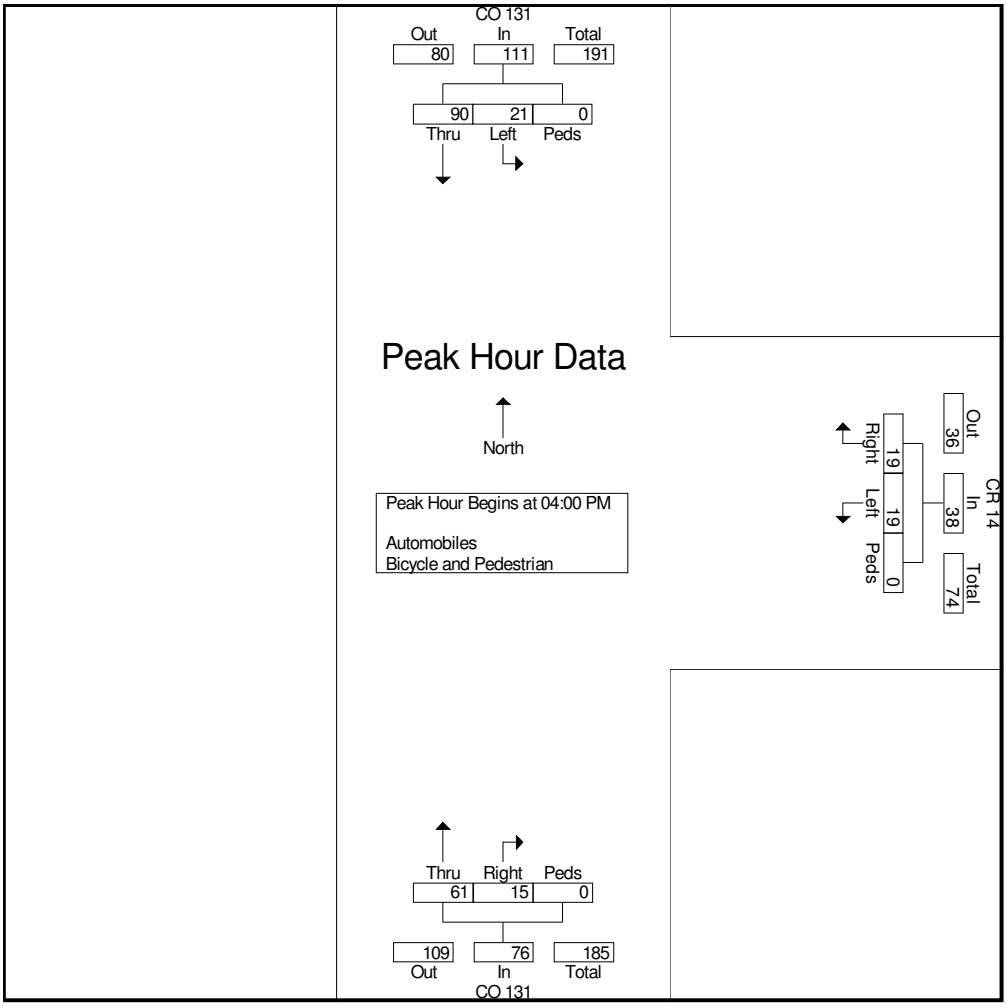


Ridgeview Data Collection

Steamboat, CO
Steamboat Springs
PM Peak
CO 131 and CR 14 (West)

File Name : CO 131 and CR 14 (West) PM
Site Code : Hales
Start Date : 4/18/2024
Page No : 3

	CR 14 Westbound				CO 131 Northbound				CO 131 Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	4	**6**	0	**10**	**21**	**6**	0	**27**	**7**	**30**	0	**37**	**74**
04:15 PM	4	5	0	9	13	3	0	16	5	17	0	22	47
04:30 PM	5	5	0	10	15	4	0	19	2	23	0	25	54
04:45 PM	**6**	3	0	9	12	2	0	14	7	20	0	27	50
Total Volume	19	19	0	38	61	15	0	76	21	90	0	111	225
% App. Total	50	50	0		80.3	19.7	0		18.9	81.1	0		
PHF	.792	.792	.000	.950	.726	.625	.000	.704	.750	.750	.000	.750	.760



APPENDIX B

LOS and Queueing Results

Intersection	
Int Delay, s/veh	5.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	199	0	26	29	1	171
Future Vol, veh/h	199	0	26	29	1	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	640	490	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	252	0	33	37	1	216

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	252	0	354	252
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	103	-
Critical Hdwy	-	-	4.37	-	6.67	6.47
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.443	-	3.743	3.543
Pot Cap-1 Maneuver	-	-	1181	-	596	730
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1181	-	580	730
Mov Cap-2 Maneuver	-	-	-	-	580	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	839	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.85	12.04
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	728	-	-	1181	-
HCM Lane V/C Ratio	0.299	-	-	0.028	-
HCM Control Delay (s/veh)	12	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	169	0	0	26
Future Vol, veh/h	0	0	169	0	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	0	0	235	0	0	36

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	271	235	0	0	235	0
Stage 1	235	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	668	746	-	-	1199	-
Stage 1	749	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	668	746	-	-	1199	-
Mov Cap-2 Maneuver	668	-	-	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	-	1199	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	1	24	2	1	166
Future Vol, veh/h	1	1	24	2	1	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	1	1	32	3	1	224

Major/Minor	Minor2		Major2	
Conflicting Flow All	68	3	0	0
Stage 1	68	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.77	6.47	4.37	-
Critical Hdwy Stg 1	5.77	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.243	3.543	2.443	-
Pot Cap-1 Maneuver	777	1013	-	-
Stage 1	792	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1013	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s/v	8.57	
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	WBL	WBT
Capacity (veh/h)	1013	-	-
HCM Lane V/C Ratio	0.003	-	-
HCM Control Delay (s/veh)	8.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	0	0	7	0	162	1	0	21	0
Future Vol, veh/h	2	0	0	0	0	7	0	162	1	0	21	0
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	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	27	27	27	27	27	27	27	27	27	27	27	27
Mvmt Flow	3	0	0	0	0	9	0	219	1	0	28	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	247	249	28	248	248	220	28	0	0	220	0	0
Stage 1	28	28	-	220	220	-	-	-	-	-	-	-
Stage 2	219	220	-	28	28	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.77	6.47	7.37	6.77	6.47	4.37	-	-	4.37	-	-
Critical Hdwy Stg 1	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.243	3.543	3.743	4.243	3.543	2.443	-	-	2.443	-	-
Pot Cap-1 Maneuver	657	613	979	657	614	761	1437	-	-	1214	-	-
Stage 1	928	824	-	729	677	-	-	-	-	-	-	-
Stage 2	730	677	-	928	824	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	649	613	979	657	614	761	1437	-	-	1214	-	-
Mov Cap-2 Maneuver	649	613	-	657	614	-	-	-	-	-	-	-
Stage 1	928	824	-	729	677	-	-	-	-	-	-	-
Stage 2	721	677	-	928	824	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.57	9.79	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1437	-	-	649	761	1214	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.012	-	-	-
HCM Control Delay (s/veh)	0	-	-	10.6	9.8	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	144	3	5	12
Future Vol, veh/h	0	0	144	3	5	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	135	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	0	0	182	4	6	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	212	184	0	0	186	0
Stage 1	184	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	724	798	-	-	1251	-
Stage 1	791	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	720	798	-	-	1251	-
Mov Cap-2 Maneuver	720	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	929	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	2.32
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1251	-
HCM Lane V/C Ratio	-	-	-	0.005	-
HCM Control Delay (s/veh)	-	-	0	7.9	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	10	7	6	30	129
Future Vol, veh/h	20	10	7	6	30	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	27	13	9	8	40	172

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	40	0	60	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	-	-	4.37	-	6.67	6.47
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.443	-	3.743	3.543
Pot Cap-1 Maneuver	-	-	1423	-	888	973
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	935	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1423	-	882	973
Mov Cap-2 Maneuver	-	-	-	-	882	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	929	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	4.06	9.85
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	954	-	-	1423	-
HCM Lane V/C Ratio	0.222	-	-	0.007	-
HCM Control Delay (s/veh)	9.8	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.8	-	-	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	20	107	17	7	59
Future Vol, veh/h	17	20	107	17	7	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	25	30	160	25	10	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	281	172	0	0	185	0
Stage 1	172	-	-	-	-	-
Stage 2	109	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	659	810	-	-	1253	-
Stage 1	801	-	-	-	-	-
Stage 2	857	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	653	810	-	-	1253	-
Mov Cap-2 Maneuver	653	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.34	0	0.84
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	730	191	-
HCM Lane V/C Ratio	-	-	0.076	0.008	-
HCM Control Delay (s/veh)	-	-	10.3	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	34	0	141	191	2	38
Future Vol, veh/h	34	0	141	191	2	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	640	490	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	36	0	150	203	2	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	539	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	503	-
Critical Hdwy	-	-	4.37	-	6.67	6.47
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.443	-	3.743	3.543
Pot Cap-1 Maneuver	-	-	1428	-	463	969
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	559	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1428	-	414	969
Mov Cap-2 Maneuver	-	-	-	-	414	-
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	500	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.32	9.16
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	908	-	-	1428	-
HCM Lane V/C Ratio	0.047	-	-	0.105	-
HCM Control Delay (s/veh)	9.2	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	-

Intersection	
Int Delay, s/veh	0.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	0	39	2	0	140
Future Vol, veh/h	1	0	39	2	0	140
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	1	0	43	2	0	156

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	200	44	0	0	46	0
Stage 1	44	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	735	959	-	-	1416	-
Stage 1	918	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	735	959	-	-	1416	-
Mov Cap-2 Maneuver	735	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	735	1416	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s/veh)	-	-	9.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	142	1	0	41
Future Vol, veh/h	0	0	142	1	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	0	0	167	1	0	48

Major/Minor	Minor2		Major2	
Conflicting Flow All	335	1	0	0
Stage 1	335	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.77	6.47	4.37	-
Critical Hdwy Stg 1	5.77	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.243	3.543	2.443	-
Pot Cap-1 Maneuver	547	1015	-	-
Stage 1	600	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1015	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s/v	0	
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	WBL	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	1	5	1	33	0	9	122	3
Future Vol, veh/h	0	0	0	0	1	5	1	33	0	9	122	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	27	27	27	27	27	27	27	27	27	27	27	27
Mvmt Flow	0	0	0	0	1	6	1	38	0	10	140	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	203	203	142	201	205	38	144	0	0	38	0	0
Stage 1	163	163	-	40	40	-	-	-	-	-	-	-
Stage 2	41	40	-	161	164	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.77	6.47	7.37	6.77	6.47	4.37	-	-	4.37	-	-
Critical Hdwy Stg 1	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.243	3.543	3.743	4.243	3.543	2.443	-	-	2.443	-	-
Pot Cap-1 Maneuver	704	651	844	706	650	967	1299	-	-	1425	-	-
Stage 1	784	718	-	915	814	-	-	-	-	-	-	-
Stage 2	914	814	-	786	717	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	692	646	844	700	644	967	1299	-	-	1425	-	-
Mov Cap-2 Maneuver	692	646	-	700	644	-	-	-	-	-	-	-
Stage 1	778	713	-	914	814	-	-	-	-	-	-	-
Stage 2	906	814	-	779	711	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	9.07	0.23	0.51
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	53	-	-	-	892	120	-	-
HCM Lane V/C Ratio	0.001	-	-	-	0.008	0.007	-	-
HCM Control Delay (s/veh)	7.8	0	-	0	9.1	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	2	25	5	1	111
Future Vol, veh/h	5	2	25	5	1	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	135	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	6	3	32	6	1	141

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	178	35	0	0	38	0
Stage 1	35	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	758	971	-	-	1425	-
Stage 1	927	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	757	971	-	-	1425	-
Mov Cap-2 Maneuver	757	-	-	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	826	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.51	0	0.07
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	808	1425	-
HCM Lane V/C Ratio	-	-	0.011	0.001	-
HCM Control Delay (s/veh)	-	-	9.5	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	24	93	25	22	22
Future Vol, veh/h	8	24	93	25	22	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	9	27	106	28	25	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	263	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	240	-
Critical Hdwy	-	-	4.37	-	6.67	6.47
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.443	-	3.743	3.543
Pot Cap-1 Maneuver	-	-	1427	-	676	986
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	745	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1427	-	626	986
Mov Cap-2 Maneuver	-	-	-	-	626	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	690	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.09	10.03
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	766	-	-	1427	-
HCM Lane V/C Ratio	0.065	-	-	0.074	-
HCM Control Delay (s/veh)	10	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	19	61	15	21	90
Future Vol, veh/h	19	19	61	15	21	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	25	25	80	20	28	118

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	264	90	0	0	100	0
Stage 1	90	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	675	903	-	-	1350	-
Stage 1	874	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	660	903	-	-	1350	-
Mov Cap-2 Maneuver	660	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.05	0	1.46
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	762	341	-
HCM Lane V/C Ratio	-	-	0.066	0.02	-
HCM Control Delay (s/veh)	-	-	10.1	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	5	30	60	5	175
Future Vol, veh/h	410	5	30	60	5	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	640	490	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	519	6	38	76	6	222

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	525	0	671	519
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	152	-
Critical Hdwy	-	-	4.37	-	6.67	6.47
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.443	-	3.743	3.543
Pot Cap-1 Maneuver	-	-	926	-	385	511
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	819	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	926	-	370	511
Mov Cap-2 Maneuver	-	-	-	-	370	-
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	785	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.02	17.85
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	505	-	-	926	-
HCM Lane V/C Ratio	0.451	-	-	0.041	-
HCM Control Delay (s/veh)	17.8	-	-	9.1	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	5	5	175	5	5	30
Future Vol, veh/h	5	5	175	5	5	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	7	7	243	7	7	42

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	302	247	0	0	250	0
Stage 1	247	-	-	-	-	-
Stage 2	56	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	640	735	-	-	1183	-
Stage 1	739	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	637	735	-	-	1183	-
Mov Cap-2 Maneuver	637	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	901	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	10.39	0	1.15
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	682	257	-
HCM Lane V/C Ratio	-	-	0.02	0.006	-
HCM Control Delay (s/veh)	-	-	10.4	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	5	30	5	5	170
Future Vol, veh/h	5	5	30	5	5	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	7	7	41	7	7	230

Major/Minor	Minor2		Major2	
Conflicting Flow All	88	7	0	0
Stage 1	88	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.77	6.47	4.37	-
Critical Hdwy Stg 1	5.77	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.243	3.543	2.443	-
Pot Cap-1 Maneuver	757	1007	-	-
Stage 1	776	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1007	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s/v	8.62	
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	WBL	WBT
Capacity (veh/h)	1007	-	-
HCM Lane V/C Ratio	0.013	-	-
HCM Control Delay (s/veh)	8.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	10	5	165	5	5	25	5
Future Vol, veh/h	5	5	5	5	5	10	5	165	5	5	25	5
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	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	27	27	27	27	27	27	27	27	27	27	27	27
Mvmt Flow	7	7	7	7	7	14	7	223	7	7	34	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	291	294	37	291	294	226	41	0	0	230	0	0
Stage 1	51	51	-	240	240	-	-	-	-	-	-	-
Stage 2	240	243	-	51	54	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.77	6.47	7.37	6.77	6.47	4.37	-	-	4.37	-	-
Critical Hdwy Stg 1	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.243	3.543	3.743	4.243	3.543	2.443	-	-	2.443	-	-
Pot Cap-1 Maneuver	615	578	968	615	578	755	1422	-	-	1204	-	-
Stage 1	903	806	-	711	663	-	-	-	-	-	-	-
Stage 2	711	661	-	903	803	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	590	571	968	597	571	755	1422	-	-	1204	-	-
Mov Cap-2 Maneuver	590	571	-	597	571	-	-	-	-	-	-	-
Stage 1	897	801	-	707	660	-	-	-	-	-	-	-
Stage 2	687	657	-	884	798	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.54	10.7	0.22	1.14
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	51	-	-	670	658	249	-	-
HCM Lane V/C Ratio	0.005	-	-	0.03	0.041	0.006	-	-
HCM Control Delay (s/veh)	7.5	0	-	10.5	10.7	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	150	5	10	15
Future Vol, veh/h	5	5	150	5	10	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	135	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	6	6	190	6	13	19

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	237	193	0	0	196	0
Stage 1	193	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	699	789	-	-	1240	-
Stage 1	783	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	692	789	-	-	1240	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	908	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.97	0	3.17
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	737	1240	-
HCM Lane V/C Ratio	-	-	0.017	0.01	-
HCM Control Delay (s/veh)	-	-	10	7.9	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	15	10	10	35	135
Future Vol, veh/h	25	15	10	10	35	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	33	20	13	13	47	180

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	83	43
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	-	-	4.37	-	6.67	6.47
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.443	-	3.743	3.543
Pot Cap-1 Maneuver	-	-	1406	-	860	960
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	922	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1406	-	852	960
Mov Cap-2 Maneuver	-	-	-	-	852	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	913	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.79	10.07
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	936	-	-	1406	-
HCM Lane V/C Ratio	0.242	-	-	0.009	-
HCM Control Delay (s/veh)	10.1	-	-	7.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	25	220	20	10	125
Future Vol, veh/h	20	25	220	20	10	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	30	37	328	30	15	187

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	560	343	0	0	358	0
Stage 1	343	-	-	-	-	-
Stage 2	216	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	450	646	-	-	1075	-
Stage 1	666	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	443	646	-	-	1075	-
Mov Cap-2 Maneuver	443	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	752	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.67	0	0.62
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	537	133	-
HCM Lane V/C Ratio	-	-	0.125	0.014	-
HCM Control Delay (s/veh)	-	-	12.7	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	5	145	395	5	45
Future Vol, veh/h	70	5	145	395	5	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	640	490	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	74	5	154	420	5	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	80	0	803	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	729	-
Critical Hdwy	-	-	4.37	-	6.67	6.47
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.443	-	3.743	3.543
Pot Cap-1 Maneuver	-	-	1374	-	320	922
Stage 1	-	-	-	-	889	-
Stage 2	-	-	-	-	435	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1374	-	284	922
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	889	-
Stage 2	-	-	-	-	386	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.13	10.14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	753	-	-	1374	-
HCM Lane V/C Ratio	0.071	-	-	0.112	-
HCM Control Delay (s/veh)	10.1	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	-

Intersection	
Int Delay, s/veh	0.6

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	5	5	45	5	5	145
Future Vol, veh/h	5	5	45	5	5	145
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	6	6	50	6	6	161

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	225	53	0	0	56	0
Stage 1	53	-	-	-	-	-
Stage 2	172	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	711	948	-	-	1404	-
Stage 1	910	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	708	948	-	-	1404	-
Mov Cap-2 Maneuver	708	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	797	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	9.5	0	0.25
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	811	60	-
HCM Lane V/C Ratio	-	-	0.014	0.004	-
HCM Control Delay (s/veh)	-	-	9.5	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	5	145	5	5	45
Future Vol, veh/h	5	5	145	5	5	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	6	6	171	6	6	53

Major/Minor	Minor2		Major2	
Conflicting Flow All	347	6	0	0
Stage 1	347	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.77	6.47	4.37	-
Critical Hdwy Stg 1	5.77	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.243	3.543	2.443	-
Pot Cap-1 Maneuver	538	1008	-	-
Stage 1	593	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1008	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s/v	8.61	
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	WBL	WBT
Capacity (veh/h)	1008	-	-
HCM Lane V/C Ratio	0.012	-	-
HCM Control Delay (s/veh)	8.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

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	5	5	5	5	5	10	5	40	5	15	125	5
Future Vol, veh/h	5	5	5	5	5	10	5	40	5	15	125	5
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	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	27	27	27	27	27	27	27	27	27	27	27	27
Mvmt Flow	6	6	6	6	6	11	6	46	6	17	144	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	241	244	147	241	244	49	149	0	0	52	0	0
Stage 1	181	181	-	60	60	-	-	-	-	-	-	-
Stage 2	60	63	-	181	184	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.77	6.47	7.37	6.77	6.47	4.37	-	-	4.37	-	-
Critical Hdwy Stg 1	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.243	3.543	3.743	4.243	3.543	2.443	-	-	2.443	-	-
Pot Cap-1 Maneuver	663	617	838	663	617	953	1293	-	-	1408	-	-
Stage 1	766	705	-	892	798	-	-	-	-	-	-	-
Stage 2	892	796	-	766	703	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	638	606	838	641	606	953	1293	-	-	1408	-	-
Mov Cap-2 Maneuver	638	606	-	641	606	-	-	-	-	-	-	-
Stage 1	756	695	-	888	794	-	-	-	-	-	-	-
Stage 2	871	792	-	744	693	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.43	9.93	0.78	0.78
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	176	-	-	680	753	185	-	-
HCM Lane V/C Ratio	0.004	-	-	0.025	0.031	0.012	-	-
HCM Control Delay (s/veh)	7.8	0	-	10.4	9.9	7.6	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	30	10	5	115
Future Vol, veh/h	10	5	30	10	5	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	135	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	13	6	38	13	6	146

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	203	44	0	0	51	0
Stage 1	44	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	733	959	-	-	1410	-
Stage 1	918	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	730	959	-	-	1410	-
Mov Cap-2 Maneuver	730	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	809	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.65	0	0.32
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	793	1410	-
HCM Lane V/C Ratio	-	-	0.024	0.004	-
HCM Control Delay (s/veh)	-	-	9.7	7.6	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	30	100	30	25	25
Future Vol, veh/h	15	30	100	30	25	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	17	34	114	34	28	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	51	0	295	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	-	-	4.37	-	6.67	6.47
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.443	-	3.743	3.543
Pot Cap-1 Maneuver	-	-	1409	-	646	972
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	728	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1409	-	594	972
Mov Cap-2 Maneuver	-	-	-	-	594	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	669	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	5.98	10.29
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	737	-	-	1409	-
HCM Lane V/C Ratio	0.077	-	-	0.081	-
HCM Control Delay (s/veh)	10.3	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	25	125	20	25	185
Future Vol, veh/h	25	25	125	20	25	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	27	27	27	27	27	27
Mvmt Flow	33	33	164	26	33	243

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	487	178	0	0	191	0
Stage 1	178	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	497	805	-	-	1246	-
Stage 1	796	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	482	805	-	-	1246	-
Mov Cap-2 Maneuver	482	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	670	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.7	0	0.95
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	603	214	-
HCM Lane V/C Ratio	-	-	0.109	0.026	-
HCM Control Delay (s/veh)	-	-	11.7	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Int Delay, s/veh	87.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	5	384	60	5	549
Future Vol, veh/h	410	5	384	60	5	549
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	640	490	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	5	27	27	11
Mvmt Flow	519	6	486	76	6	695

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	525	0	1567	519
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	1048	-
Critical Hdwy	-	-	4.15	-	6.67	6.31
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.245	-	3.743	3.399
Pot Cap-1 Maneuver	-	-	1026	-	107	~ 539
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	303	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1026	-	56	~ 539
Mov Cap-2 Maneuver	-	-	-	-	56	-
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	160	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	10.05	214.87
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	501	-	-	1026	-
HCM Lane V/C Ratio	1.401	-	-	0.474	-
HCM Control Delay (s/veh)	214.9	-	-	11.6	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	33	-	-	2.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	5	5	594	5	5	384
Future Vol, veh/h	5	5	594	5	5	384
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	27	27	11	27	27	5
Mvmt Flow	7	7	825	7	7	533

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1376	828	0	0	832	0
Stage 1	828	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	141	335	-	-	702	-
Stage 1	389	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	139	335	-	-	702	-
Mov Cap-2 Maneuver	139	-	-	-	-	-
Stage 1	389	-	-	-	-	-
Stage 2	525	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	24.67	0	0.13
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	197	23	-
HCM Lane V/C Ratio	-	-	0.071	0.01	-
HCM Control Delay (s/veh)	-	-	24.7	10.2	0
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	5	384	5	5	544
Future Vol, veh/h	5	5	384	5	5	544
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	27	27	5	27	27	11
Mvmt Flow	7	7	519	7	7	735

Major/Minor	Minor2		Major2	
Conflicting Flow All	1045	7	0	0
Stage 1	1045	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.77	6.47	4.15	-
Critical Hdwy Stg 1	5.77	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.243	3.543	2.245	-
Pot Cap-1 Maneuver	207	1007	-	-
Stage 1	277	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1007	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s/v	8.62	
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	WBL	WBT
Capacity (veh/h)	1007	-	-
HCM Lane V/C Ratio	0.013	-	-
HCM Control Delay (s/veh)	8.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	10	5	539	10	5	379	5
Future Vol, veh/h	5	5	5	5	5	10	5	539	10	5	379	5
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	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	27	27	27	27	27	27	27	10	27	27	5	27
Mvmt Flow	7	7	7	7	7	14	7	728	14	7	512	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1274	1284	516	1278	1281	735	519	0	0	742	0	0
Stage 1	529	529	-	749	749	-	-	-	-	-	-	-
Stage 2	745	755	-	529	532	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.77	6.47	7.37	6.77	6.47	4.37	-	-	4.37	-	-
Critical Hdwy Stg 1	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.243	3.543	3.743	4.243	3.543	2.443	-	-	2.443	-	-
Pot Cap-1 Maneuver	128	147	513	127	148	381	931	-	-	762	-	-
Stage 1	490	488	-	368	385	-	-	-	-	-	-	-
Stage 2	370	382	-	490	487	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	115	143	513	117	144	381	931	-	-	762	-	-
Mov Cap-2 Maneuver	115	143	-	117	144	-	-	-	-	-	-	-
Stage 1	484	482	-	363	380	-	-	-	-	-	-	-
Stage 2	346	377	-	471	481	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	29.01	26.71	0.08	0.13
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	16	-	-	170	193	23	-	-
HCM Lane V/C Ratio	0.007	-	-	0.119	0.14	0.009	-	-
HCM Control Delay (s/veh)	8.9	0	-	29	26.7	9.8	0	-
HCM Lane LOS	A	A	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.5	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	524	5	10	369
Future Vol, veh/h	5	5	524	5	10	369
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	135	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	10	27	27	4
Mvmt Flow	6	6	663	6	13	467

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1159	666	0	0	670	0
Stage 1	666	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	193	418	-	-	813	-
Stage 1	467	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	190	418	-	-	813	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	557	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	19.46	0	0.25
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	262	813	-
HCM Lane V/C Ratio	-	-	0.048	0.016	-
HCM Control Delay (s/veh)	-	-	19.5	9.5	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	503.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	190	364	10	216	509
Future Vol, veh/h	25	190	364	10	216	509
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	27	5	4	27	7	9
Mvmt Flow	33	253	485	13	288	679

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	287	0	1144	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	984	-
Critical Hdwy	-	-	4.14	-	6.47	6.29
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	-	-	2.236	-	3.563	3.381
Pot Cap-1 Maneuver	-	-	1264	-	~ 216	867
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	354	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	~ 133	867
Mov Cap-2 Maneuver	-	-	-	-	~ 133	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	~ 218	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	9.36	$ 908.41
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	328	-	-	1264	-
HCM Lane V/C Ratio	2.947	-	-	0.384	-
HCM Control Delay (s/veh)	$ 908.4	-	-	9.6	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	84.1	-	-	1.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	18.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	128	98	220	125	80	125
Future Vol, veh/h	128	98	220	125	80	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	7	9	27	7	6	27
Mvmt Flow	191	146	328	187	119	187

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	847	422	0	0	515	0
Stage 1	422	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Critical Hdwy	6.47	6.29	-	-	4.16	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.381	-	-	2.254	-
Pot Cap-1 Maneuver	326	617	-	-	1031	-
Stage 1	651	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	284	617	-	-	1031	-
Mov Cap-2 Maneuver	284	-	-	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	60.86	0	3.49
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	370	702	-
HCM Lane V/C Ratio	-	-	0.911	0.116	-
HCM Control Delay (s/veh)	-	-	60.9	9	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	9.4	0.4	-

Intersection	
Int Delay, s/veh	36.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	5	665	395	5	548
Future Vol, veh/h	70	5	665	395	5	548
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	640	490	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	8	27	27	5
Mvmt Flow	89	6	842	500	6	694

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	95	0	2272	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	2184	-
Critical Hdwy	-	-	4.18	-	6.67	6.25
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.272	-	3.743	3.345
Pot Cap-1 Maneuver	-	-	1462	-	37	961
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	78	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1462	-	16	961
Mov Cap-2 Maneuver	-	-	-	-	16	-
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	33	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.74	98.81
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	624	-	-	1462	-
HCM Lane V/C Ratio	1.122	-	-	0.576	-
HCM Control Delay (s/veh)	98.8	-	-	10.7	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	21.6	-	-	3.9	-

Intersection	
Int Delay, s/veh	0.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	5	5	548	5	5	665
Future Vol, veh/h	5	5	548	5	5	665
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	27	27	5	27	27	8
Mvmt Flow	7	7	761	7	7	924

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1702	765	0	0	768	0
Stage 1	765	-	-	-	-	-
Stage 2	938	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	88	366	-	-	744	-
Stage 1	418	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	86	366	-	-	744	-
Mov Cap-2 Maneuver	86	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	337	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	33.72	0	0.07
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	139	13	-
HCM Lane V/C Ratio	-	-	0.1	0.009	-
HCM Control Delay (s/veh)	-	-	33.7	9.9	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	5	665	5	5	548
Future Vol, veh/h	5	5	665	5	5	548
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	27	27	8	27	27	5
Mvmt Flow	7	7	899	7	7	741

Major/Minor	Minor2		Major2	
Conflicting Flow All	1804	7	0	0
Stage 1	1804	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.77	6.47	4.18	-
Critical Hdwy Stg 1	5.77	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.243	3.543	2.272	-
Pot Cap-1 Maneuver	69	1007	-	-
Stage 1	114	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1007	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s/v	8.62	
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	WBL	WBT
Capacity (veh/h)	1007	-	-
HCM Lane V/C Ratio	0.013	-	-
HCM Control Delay (s/veh)	8.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	10	5	543	5	15	645	5
Future Vol, veh/h	5	5	5	5	5	10	5	543	5	15	645	5
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	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	27	27	27	27	27	27	27	5	27	27	8	27
Mvmt Flow	7	7	7	7	7	14	7	734	7	20	872	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1666	1670	875	1666	1670	737	878	0	0	741	0	0
Stage 1	916	916	-	751	751	-	-	-	-	-	-	-
Stage 2	751	754	-	916	919	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.77	6.47	7.37	6.77	6.47	4.37	-	-	4.37	-	-
Critical Hdwy Stg 1	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.243	3.543	3.743	4.243	3.543	2.443	-	-	2.443	-	-
Pot Cap-1 Maneuver	67	84	315	67	84	380	673	-	-	763	-	-
Stage 1	295	320	-	367	384	-	-	-	-	-	-	-
Stage 2	367	382	-	295	319	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	55	78	315	56	78	380	673	-	-	763	-	-
Mov Cap-2 Maneuver	55	78	-	56	78	-	-	-	-	-	-	-
Stage 1	280	303	-	361	377	-	-	-	-	-	-	-
Stage 2	342	376	-	268	302	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	57.71	47.36	0.09	0.22
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	16	-	-	88	111	41	-	-
HCM Lane V/C Ratio	0.01	-	-	0.23	0.243	0.027	-	-
HCM Control Delay (s/veh)	10.4	0	-	57.7	47.4	9.8	0	-
HCM Lane LOS	B	A	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.9	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	533	10	5	635
Future Vol, veh/h	10	5	533	10	5	635
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	135	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	4	27	27	7
Mvmt Flow	13	6	675	13	6	804

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1497	681	0	0	687	0
Stage 1	681	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	118	410	-	-	801	-
Stage 1	459	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	117	410	-	-	801	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	391	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	31.62	0	0.07
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	154	801	-
HCM Lane V/C Ratio	-	-	0.123	0.008	-
HCM Control Delay (s/veh)	-	-	31.6	9.5	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	2928.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	254	620	30	239	528
Future Vol, veh/h	15	254	620	30	239	528
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	27	6	7	27	6	4
Mvmt Flow	20	339	827	40	319	704

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	359	0	1883	189
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	1693	-
Critical Hdwy	-	-	4.17	-	6.46	6.24
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.263	-	3.554	3.336
Pot Cap-1 Maneuver	-	-	1173	-	~ 76	847
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	~ 160	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1173	-	~ 22	847
Mov Cap-2 Maneuver	-	-	-	-	~ 22	-
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	~ 47	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	14.34	$ 6425.59
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	68	-	-	1173	-
HCM Lane V/C Ratio	15.026	-	-	0.705	-
HCM Control Delay (s/veh)	$ 6425.6	-	-	15	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	122.5	-	-	6.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	45.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	153	111	125	154	115	185
Future Vol, veh/h	153	111	125	154	115	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	7	8	27	6	8	27
Mvmt Flow	228	166	187	230	172	276

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	921	301	0	0	416	0
Stage 1	301	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Critical Hdwy	6.47	6.28	-	-	4.18	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.372	-	-	2.272	-
Pot Cap-1 Maneuver	294	724	-	-	1111	-
Stage 1	739	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	724	-	-	1111	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/veh	41.35	0	3.39
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	334	690	-
HCM Lane V/C Ratio	-	-	1.178	0.154	-
HCM Control Delay (s/veh)	-	-	141.3	8.8	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	16.4	0.5	-

Intersection	
Int Delay, s/veh	5.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	5	384	60	5	549
Future Vol, veh/h	410	5	384	60	5	549
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	-	640	490	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	5	27	27	11
Mvmt Flow	519	6	486	76	6	695

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	525	0	1567	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	1048	-
Critical Hdwy	-	-	4.15	-	6.67	-
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.245	-	3.743	-
Pot Cap-1 Maneuver	-	-	1026	-	107	0
Stage 1	-	-	-	-	550	0
Stage 2	-	-	-	-	303	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1026	-	56	-
Mov Cap-2 Maneuver	-	-	-	-	56	-
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	160	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	10.05	76.94
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	56	-	-	-	1026	-
HCM Lane V/C Ratio	0.112	-	-	-	0.474	-
HCM Control Delay (s/veh)	76.9	0	-	-	11.6	-
HCM Lane LOS	F	A	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	-	2.6	-

Intersection	
Int Delay, s/veh	0.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	5	5	594	5	5	384
Future Vol, veh/h	5	5	594	5	5	384
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	27	27	11	27	27	5
Mvmt Flow	7	7	825	7	7	533

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1376	828	0	0	832	0
Stage 1	828	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	141	335	-	-	702	-
Stage 1	389	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	139	335	-	-	702	-
Mov Cap-2 Maneuver	139	-	-	-	-	-
Stage 1	389	-	-	-	-	-
Stage 2	525	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	24.67	0	0.13
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	197	23	-
HCM Lane V/C Ratio	-	-	0.071	0.01	-
HCM Control Delay (s/veh)	-	-	24.7	10.2	0
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	5	384	5	5	544
Future Vol, veh/h	5	5	384	5	5	544
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	27	27	5	27	27	11
Mvmt Flow	7	7	519	7	7	735

Major/Minor	Minor2		Major2	
Conflicting Flow All	1045	7	0	0
Stage 1	1045	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.77	6.47	4.15	-
Critical Hdwy Stg 1	5.77	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.243	3.543	2.245	-
Pot Cap-1 Maneuver	207	1007	-	-
Stage 1	277	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1007	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s/v	8.62	
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	WBL	WBT
Capacity (veh/h)	1007	-	-
HCM Lane V/C Ratio	0.013	-	-
HCM Control Delay (s/veh)	8.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	5	5	5	5	5	10	5	539	10	5	379	5
Future Vol, veh/h	5	5	5	5	5	10	5	539	10	5	379	5
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	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	27	27	27	27	27	27	27	10	27	27	5	27
Mvmt Flow	7	7	7	7	7	14	7	728	14	7	512	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1274	1284	516	1278	1281	735	519	0	0	742	0	0
Stage 1	529	529	-	749	749	-	-	-	-	-	-	-
Stage 2	745	755	-	529	532	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.77	6.47	7.37	6.77	6.47	4.37	-	-	4.37	-	-
Critical Hdwy Stg 1	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.243	3.543	3.743	4.243	3.543	2.443	-	-	2.443	-	-
Pot Cap-1 Maneuver	128	147	513	127	148	381	931	-	-	762	-	-
Stage 1	490	488	-	368	385	-	-	-	-	-	-	-
Stage 2	370	382	-	490	487	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	116	145	513	118	145	381	931	-	-	762	-	-
Mov Cap-2 Maneuver	116	145	-	118	145	-	-	-	-	-	-	-
Stage 1	486	484	-	365	382	-	-	-	-	-	-	-
Stage 2	348	379	-	473	482	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	28.8	26.54	0.08	0.13
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	931	-	-	171	194	762	-	-
HCM Lane V/C Ratio	0.007	-	-	0.118	0.139	0.009	-	-
HCM Control Delay (s/veh)	8.9	-	-	28.8	26.5	9.8	-	-
HCM Lane LOS	A	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.5	0	-	-

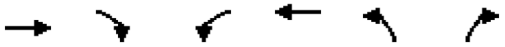
Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	524	5	10	369
Future Vol, veh/h	5	5	524	5	10	369
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	135	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	10	27	27	4
Mvmt Flow	6	6	663	6	13	467

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1159	666	0	0	670	0
Stage 1	666	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	193	418	-	-	813	-
Stage 1	467	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	190	418	-	-	813	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	557	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	19.46	0	0.25
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	262	813	-
HCM Lane V/C Ratio	-	-	0.048	0.016	-
HCM Control Delay (s/veh)	-	-	19.5	9.5	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	33	253	485	13	288	679
v/c Ratio	0.26	0.70	0.76	0.01	0.41	0.67
Control Delay (s/veh)	42.2	16.3	26.7	0.0	23.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.2	16.3	26.7	0.0	23.5	6.0
Queue Length 50th (ft)	18	0	204	0	112	0
Queue Length 95th (ft)	36	31	170	0	179	14
Internal Link Dist (ft)	612			613	879	
Turn Bay Length (ft)		200	300		300	
Base Capacity (vph)	282	495	743	1496	700	1012
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.51	0.65	0.01	0.41	0.67

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	190	364	10	216	509
Future Volume (vph)	25	190	364	10	216	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1496	1538	1736	1496	1687	1482
Flt Permitted	1.00	1.00	0.74	1.00	0.95	1.00
Satd. Flow (perm)	1496	1538	1344	1496	1687	1482
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	33	253	485	13	288	679
RTOR Reduction (vph)	0	232	0	0	0	397
Lane Group Flow (vph)	33	21	485	13	288	282
Heavy Vehicles (%)	27%	5%	4%	27%	7%	9%
Turn Type	NA	Perm	D.P+P	NA	Prot	Perm
Protected Phases	6		5	2!	4!	
Permitted Phases		6	6			4
Actuated Green, G (s)	7.5	7.5	34.6	90.0	37.4	37.4
Effective Green, g (s)	7.5	7.5	34.6	90.0	37.4	37.4
Actuated g/C Ratio	0.08	0.08	0.38	1.00	0.42	0.42
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	124	128	634	1496	701	615
v/s Ratio Prot	0.02		c0.23	0.01	0.17	
v/s Ratio Perm		0.01	c0.06			c0.19
v/c Ratio	0.27	0.16	0.76	0.01	0.41	0.46
Uniform Delay, d1	38.7	38.3	23.7	0.0	18.5	19.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	4.9	0.0	0.1	0.2
Delay (s)	39.1	38.6	28.6	0.0	18.7	19.2
Level of Service	D	D	C	A	B	B
Approach Delay (s/veh)	38.6			27.9	19.0	
Approach LOS	D			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Intersection	
Int Delay, s/veh	7.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	128	98	220	125	80	125
Future Vol, veh/h	128	98	220	125	80	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	7	9	27	7	6	27
Mvmt Flow	191	146	328	187	119	187

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	754	328	0	0	515	0
Stage 1	328	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Critical Hdwy	6.47	6.29	-	-	4.16	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.381	-	-	2.254	-
Pot Cap-1 Maneuver	370	697	-	-	1031	-
Stage 1	719	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	327	697	-	-	1031	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	22.2	0	3.49
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	327	697	1031	-
HCM Lane V/C Ratio	-	-	0.584	0.21	0.116	-
HCM Control Delay (s/veh)	-	-	30.4	11.5	9	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	3.5	0.8	0.4	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	5	665	395	5	548
Future Vol, veh/h	70	5	665	395	5	548
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	-	640	490	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	8	27	27	5
Mvmt Flow	89	6	842	500	6	694

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	95	0	2272	-
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	2184	-
Critical Hdwy	-	-	4.18	-	6.67	-
Critical Hdwy Stg 1	-	-	-	-	5.67	-
Critical Hdwy Stg 2	-	-	-	-	5.67	-
Follow-up Hdwy	-	-	2.272	-	3.743	-
Pot Cap-1 Maneuver	-	-	1462	-	37	0
Stage 1	-	-	-	-	876	0
Stage 2	-	-	-	-	78	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1462	-	16	-
Mov Cap-2 Maneuver	-	-	-	-	16	-
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	33	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.74	$ 341.33
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	16	-	-	-	1462	-
HCM Lane V/C Ratio	0.4	-	-	-	0.576	-
HCM Control Delay (s/veh)	$ 341.3	0	-	-	10.7	-
HCM Lane LOS	F	A	-	-	B	-
HCM 95th %tile Q(veh)	1.1	-	-	-	3.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	5	5	548	5	5	665
Future Vol, veh/h	5	5	548	5	5	665
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	27	27	5	27	27	8
Mvmt Flow	7	7	761	7	7	924

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1702	765	0	0	768	0
Stage 1	765	-	-	-	-	-
Stage 2	938	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	88	366	-	-	744	-
Stage 1	418	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	86	366	-	-	744	-
Mov Cap-2 Maneuver	86	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	337	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	33.72	0	0.07
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	139	13	-
HCM Lane V/C Ratio	-	-	0.1	0.009	-
HCM Control Delay (s/veh)	-	-	33.7	9.9	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	5	665	5	5	548
Future Vol, veh/h	5	5	665	5	5	548
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	27	27	8	27	27	5
Mvmt Flow	7	7	899	7	7	741

Major/Minor	Minor2		Major2	
Conflicting Flow All	1804	7	0	0
Stage 1	1804	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.77	6.47	4.18	-
Critical Hdwy Stg 1	5.77	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.243	3.543	2.272	-
Pot Cap-1 Maneuver	69	1007	-	-
Stage 1	114	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1007	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s/v	8.62	
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	WBL	WBT
Capacity (veh/h)	1007	-	-
HCM Lane V/C Ratio	0.013	-	-
HCM Control Delay (s/veh)	8.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	10	5	543	5	15	645	5
Future Vol, veh/h	5	5	5	5	5	10	5	543	5	15	645	5
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	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	27	27	27	27	27	27	27	5	27	27	8	27
Mvmt Flow	7	7	7	7	7	14	7	734	7	20	872	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1666	1670	875	1666	1670	737	878	0	0	741	0	0
Stage 1	916	916	-	751	751	-	-	-	-	-	-	-
Stage 2	751	754	-	916	919	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.77	6.47	7.37	6.77	6.47	4.37	-	-	4.37	-	-
Critical Hdwy Stg 1	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.77	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.243	3.543	3.743	4.243	3.543	2.443	-	-	2.443	-	-
Pot Cap-1 Maneuver	67	84	315	67	84	380	673	-	-	763	-	-
Stage 1	295	320	-	367	384	-	-	-	-	-	-	-
Stage 2	367	382	-	295	319	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	57	81	315	58	81	380	673	-	-	763	-	-
Mov Cap-2 Maneuver	57	81	-	58	81	-	-	-	-	-	-	-
Stage 1	287	311	-	363	380	-	-	-	-	-	-	-
Stage 2	344	379	-	275	310	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	55.71	45.82	0.09	0.22
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	673	-	-	91	115	763	-	-
HCM Lane V/C Ratio	0.01	-	-	0.223	0.236	0.027	-	-
HCM Control Delay (s/veh)	10.4	-	-	55.7	45.8	9.8	-	-
HCM Lane LOS	B	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.9	0.1	-	-

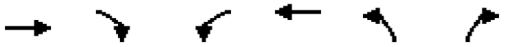
Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	533	10	5	635
Future Vol, veh/h	10	5	533	10	5	635
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	135	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	27	27	4	27	27	7
Mvmt Flow	13	6	675	13	6	804

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1497	681	0	0	687	0
Stage 1	681	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Critical Hdwy	6.67	6.47	-	-	4.37	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.543	-	-	2.443	-
Pot Cap-1 Maneuver	118	410	-	-	801	-
Stage 1	459	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	117	410	-	-	801	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	391	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	31.62	0	0.07
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	154	801	-
HCM Lane V/C Ratio	-	-	0.123	0.008	-
HCM Control Delay (s/veh)	-	-	31.6	9.5	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	20	339	827	40	319	704
v/c Ratio	0.15	0.77	1.10	0.03	0.56	0.71
Control Delay (s/veh)	37.8	16.5	84.4	0.0	30.9	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.8	16.5	84.4	0.0	30.9	7.0
Queue Length 50th (ft)	11	0	~506	0	141	0
Queue Length 95th (ft)	25	29	335	0	209	14
Internal Link Dist (ft)	612			613	879	
Turn Bay Length (ft)		200	300		300	
Base Capacity (vph)	282	562	753	1496	569	988
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.60	1.10	0.03	0.56	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	15	254	620	30	239	528
Future Volume (vph)	15	254	620	30	239	528
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1496	1524	1687	1496	1703	1553
Flt Permitted	1.00	1.00	0.74	1.00	0.95	1.00
Satd. Flow (perm)	1496	1524	1322	1496	1703	1553
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	20	339	827	40	319	704
RTOR Reduction (vph)	0	309	0	0	0	469
Lane Group Flow (vph)	20	30	827	40	319	235
Heavy Vehicles (%)	27%	6%	7%	27%	6%	4%
Turn Type	NA	Perm	D.P+P	NA	Prot	Perm
Protected Phases	6		5	2!	4!	
Permitted Phases		6	6			4
Actuated Green, G (s)	7.9	7.9	41.9	90.0	30.1	30.1
Effective Green, g (s)	7.9	7.9	41.9	90.0	30.1	30.1
Actuated g/C Ratio	0.09	0.09	0.47	1.00	0.33	0.33
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	131	133	753	1496	569	519
v/s Ratio Prot	0.01		c0.41	0.03	c0.19	
v/s Ratio Perm		0.02	c0.10			0.15
v/c Ratio	0.15	0.22	1.10	0.03	0.56	0.45
Uniform Delay, d1	38.0	38.2	23.3	0.0	24.5	23.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.3	63.0	0.0	0.8	0.2
Delay (s)	38.2	38.5	86.3	0.0	25.3	23.7
Level of Service	D	D	F	A	C	C
Approach Delay (s/veh)	38.5			82.3	24.2	
Approach LOS	D			F	C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	48.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Intersection	
Int Delay, s/veh	11.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	153	111	125	154	115	185
Future Vol, veh/h	153	111	125	154	115	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	7	8	27	6	8	27
Mvmt Flow	228	166	187	230	172	276

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	806	187	0	0	416	0
Stage 1	187	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Critical Hdwy	6.47	6.28	-	-	4.18	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.372	-	-	2.272	-
Pot Cap-1 Maneuver	344	840	-	-	1111	-
Stage 1	833	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	291	840	-	-	1111	-
Mov Cap-2 Maneuver	291	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	446	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	33.76	0	3.39
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	291	840	1111	-
HCM Lane V/C Ratio	-	-	0.784	0.197	0.154	-
HCM Control Delay (s/veh)	-	-	50.8	10.3	8.8	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	6.1	0.7	0.5	-